SUSTAINABLE DEVELOPMENT AND ENVIRONMENTALISM

AN ETHICAL FRAMEWORK FOR POLICY AND DECISION MAKING IN DEVELOPING COUNTRIES, WITH SPECIAL REFERENCE TO BANGLADESH

by

Mohammad Kamrul Ahsan

A thesis submitted to Cardiff University in
fulfilment of the requirements for the degree of
Doctor of **Philosophy**

SCHOOL OF ENGLISH, COMMUNICATION AND PHILOSOPHY
CARDIFF UNIVERSITY
AUGUST 2012

DECLARATION AND STATEMENTS

DECLARATION

This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is being submitted concurrently in candidature for any degree or other award.

Signed ……(candidate) Date ……

STATEMENT 1

This thesis is being submitted in fulfilment of the requirements for the degree of PhD.

Signed ……(candidate) Date …….

STATEMENT 2

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. The views expressed are my own.

Signed ……(candidate) Date……..

STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photocopying and for interlibrary loan, and for the title and summary to be made available to outside organisations.

Signed …… (candidate) Date…….

ACKNOWLEDGEMENTS

First and foremost, my sincere gratitude is due to my supervisor Professor Robin Attfield, who has taught me environmental philosophy and led to my developing a lasting passion for applied philosophy. I wish to express my gratitude to Professor Attfield again for his outstanding and unfailing supervision, invaluable insights, innovative ideas, constructive criticism, support, encouragement and advice at all times throughout the duration of my study. My heartfelt appreciation all over again extends to Professor Attfield for his inexhaustible patience in helping me to successfully contact grant-making organisations and individuals to cover my fees. Professor Attfield's constant attention to me and his willingness to solve various problems I have had during my stay in Cardiff has touched me so deeply in my heart that this will never be wiped out from my remembrance.

Over the study period, the postgraduate reading group has been a brainstorm of the best kind. I especially thank Professor Christopher Norris for running this group and enlightening me with countless infuriating and illuminating conversations. I am indebted to several other individuals in the philosophy section, who have assisted me in making this thesis a fruitful and valuable endeavour. I especially thank Professor Alessandra Tanesini, Dr. Jonathan Webber, Dr. Andrew Edgar, Dr. Nicholas Shackel, Dr. Richard Gray, Dr. Peter Sedgwick, and Mr. Barry Wilkins for their helpful comments on my papers, which I presented to Postgraduate Seminars on several occasions. Their comments have contributed to the completion of this thesis. Furthermore I thank postgraduate students, in particular Dr. Rebekah Humphreys and Dr. Ryo Chonabayashi, with whom I have had invaluable opportunities to discuss

moral philosophy. I am grateful to the staff of the Cardiff Philosophy Section, Alison Venables and Rhian Rattray, for their pleasant manner and constant assistance.

An enormous debt of gratitude is also due to my wife, Kamrun Nessa Khondher Munni, for encouragement as well as performing most of our parental duties to our only son Tabib Ivtesam, at the same time as studying for an MPhil in Archaeology at Cardiff herself. Acknowledgement must also be made to my beloved son Tabib Ivtesam, who has always been patient and less demanding of immediate attention than he might have been during my doctoral study.

ABSTRACT

There is a growing consensus that the currently dominant economic practices, which excessively rely on incessant 'profitability', fails appropriately to value ethical components of environmental problems: valuation of bearers of intrinsic value (e.g. all creatures), or again bearers of inherent and instrumental value (e.g. species and ecosystems). This has led to a systematic defect in relevant decision-making with diverse associated economic, social and environmental disbenefits.

Although the UN formulation of sustainable development (as opposed to the currently dominant development paradigm) provides us with guidance on formulating an alternative framework for sustainable development, it involves some serious problems. Some of these problems suggest the need for revisions, while others seem fatal to the definitions as they stand. This study argues that a different revision, suggested by the basic needs approach, can surmount the various problems, and present and defend a revised definition accordingly.

The revised account recognises economic inequality and social injustice as the underlying causes for environmental injustice and thus appropriately focuses on the principles of environmental justice. This conveys a framework for corresponding systemically the interconnectedness between the seemingly competing aspects of sustainable development, the dynamic flux between development needs and environmental limits. I defend Attfield's version of biocentric consequentialism, which supplies a strong theoretical basis for such an ethically informed and comprehensive policy framework for sustainable development. Furthermore, I tackle different approaches to security and argue that it is hardly possible to attain a sustainable future,

while disregarding the human security view in its wider sense.

The study examines in close detail the applicability of the proposed policy framework for sustainable development to developing countries, with special reference to Bangladesh. It offers a list of recommendations for Bangladesh and concludes that a sustainable future for Bangladesh (and developing countries at large) is for the most part reliant on the successful implementation of recommendations of the broad general kind made in this study.

TABLE OF CONTENTS

Introduction

What are the problems with the dominant economic practice of development? How are these problems related to environmental problems? What kind of possible solution does the policy of sustainable development offer to them? What role do ethical principles play in realizing a sustainable future - the key objective of sustainable development? It is the forgoing questions that much of the work in recent ethics and political theory has been concerned with addressing. While the replies may seem unproblematic, these queries benefit from critical analysis. Firstly, 'development', 'sustainability' and 'sustainable development' are formulated differently according to different viewpoints; secondly, the effect of sustainable development on human security and various aspects of justice (intra-generational justice, intra-generational justice, interspecies justice and our duties to protect biodiversity and ecosystems) are being omitted, arguably unwittingly, from the prevailing paradigm of development and related policies.

From the reflections of the preceding paragraph, it is apparent that in attaining the key objective of sustainable development, it is important in the first place to reach an explicit and robust definition of sustainable development; secondly, a defensible normative value theory is called for with the help of which to reflect upon various moral questions and our responses (or judgments) to them as regards sustainable development. As such, a defensible comprehensive value theory provides the theoretical basis of a plausible framework for sustainable development, which satisfactorily addresses the bearings of sustainable development on pertinent issues of justice.

The central topics of this dissertation are development, environmental sustainability and human security. This dissertation is therefore organized around the interpretation of these topics and reasoning about related issues. I have chosen to discuss these topics because the continued

existence of life including human beings on Earth and their security depends in large measure on success in formulating and operationalizing a policy framework for sustainable development or environmental decision-making that meets human basic needs and provides opportunities for other creatures to survive and flourish without undermining environmental limits. However, no common consensus has yet been reached on the part of the relevant scholars and researchers as regards the policy framework in question.

My dissertation, therefore, addresses the need for a new policy vision for development, incorporating sustainability, suggesting a 'joined up' policy approach. This would incorporate solutions to philosophical and ethical issues surrounding sustainable development, and would tackle economic, social and environmental problems together, to help close the gap between where we are now and where our aims for sustainable development imply that we ought to be. By drawing together viewpoints chosen from many different and varied sources, it will initially contrive to bring out the complexities of sustainable development, together with its contested nature; secondly, it will succeed in distinguishing the meaning and the justification of the topic in question. Furthermore, this study attempts to expose some of the crucial problems facing any attempt, in particular the dominant economic practice of development (characterised as it is by disparities of resources and control, and determined on the whole by high economic growth), to procure various aspects of justice and to protect the environment. This study is ultimately devoted to the study of sustainable development and to shaping a comprehensive framework for sustainable development which can be applied to a developing country like Bangladesh.

A broad range of thoughts of leading researchers and scholars in the field of development and environment will be discussed to illustrate the topics in question; this discussion will attempt to contribute to a plausible clarification of these topics, and to defend a plausible biocentric value theory so that a comprehensive framework for sustainable development and its application

to policies and decision making in developing countries may be supplied, with special reference to Bangladesh. The project aims to:

- offer a comprehensive framework for sustainable development, striking the proper balance between development needs and environmental limits.
- examine the prospect of applying the proposed framework for sustainable development to developing countries, using Bangladesh as a case of reference.

With a view to realizing these specified aims, the objectives of this study are to:

- explore the meaning and justification of topics, such as 'development', 'sustainability', 'sustainable development', 'human security' and 'environmental (ecological) problems';
- address the ethical assumptions that underlie different uses of these thoughts;
- repair the prevailing UN formulation of sustainable development and offer a supplemented version of sustainable development;
- give an account of the origin and development of environmentalism and consider philosophical problems for environmentalism;
- introduce and defend a broad value theory that advocates taking into account the full range of values in all creatures (sometimes regarded as intrinsic value), species and ecosystems(sometimes regarded as inherent and instrumental values);
- consider problems pertaining to the practice of a capitalistic political economy, and limitations of the prevailing ideas, such as economic democracy and ecological modernization, in remedying these problems.

Bearing in mind the aims and objectives, over and above an introduction and conclusion, this dissertation comprises four parts. In the first chapter of Part One, the attitudes and arguments which recur most commonly concerning development are introduced and

illustrated. The second chapter of this part illustrates the issue of sustainability, taking into account the range of opinions held on it in all its key diversity. In the third and fundamental chapter of this part, a critical analysis is offered to investigate the implications of the concept of sustainability for development. Following an analysis on the various competing definitions of sustainable development, this chapter is devoted to the discernment of its basic meanings, and also the justification of its operationalisation.

Chapter one of Part Two contains an account of the origin and development of environmentalism. Chapter two of this part expounds some philosophical problems for environmentalism outlined by Elliott Sober. Following Attfield, this chapter refutes the alleged philosophical objections through appealing to a modified approach to environmentalism (without abandoning the traditional ethical principles). This modified approach to environmentalism is based on Attfield's normative ethical theory – biocentric consequentialism. The third chapter of this part is devoted to a critical pursuit of Attfield's version of biocentric consequentialism. The objectives of this chapter include clarifying the methodology of decision-making with reference to developmental and environmental issues with a bearing on both present and future generations of non-human creatures as well as species and ecosystems. Here, it will be argued that Attfield's version of biocentric consequentialism is a strong contender for a normative foundation for environmental ethics, and hence should be considered as a strong theoretical basis for a comprehensive policy framework for sustainable development. It is also argued here that the cogency of this stance (as an operational means to realizing the objective of sustainable development) speaks for itself.

Part Three discusses environmental impacts of development activities and their implications for human security (in its wider sense) and sustainable development. Here, issues considered include the genesis and contours of the wider approach to the concept of human security, the impacts of the existing development paradigm and how human security is affected

by it, and the range of values we bring to them. It also explain how over-reliance on the dominant economic paradigm of development and overuse, misuse and inefficient uses of resources have resulted, in countries all over the world, in a continuing deterioration of human security conditions, with special reference to Bangladesh. It is revealed here that the impacts of the lack of security from 'wants' as well as of security from 'fear' are evident in the ongoing intensification of poverty, violence, social vulnerability (especially in developing countries) and massive economic instability. The last chapter of this part discusses and justifies the view that while inefficient and excessive human interventions with insufficient supply of natural resources are among the main internal (local) sources of human insecurity in Bangladesh, the problem of water sharing of the cross-border rivers, excessive exploitation of natural resources and emissions of greenhouse gasses (GHGs) by the affluent (which cause global warming and climate change) are among the major external (regional and global respectively) sources of human insecurity. Finally it is argued here that a sustainable future of Bangladesh chiefly relies on her ability to successfully address all these sources of human insecurities which in turn suggests a radical change in the currently dominant paradigm of development (in other words economic practice).

Chapter one of Part Four deals with two prevailing approaches to realizing sustainable development: ecological modernization and economic democracy. This seeks a means of accommodating environmental objects within the framework (or the operation) of the dominant global economic practice. But, as I shall argue, the dominant economic practice to support command and control mechanisms - tending as it does to be managerial in style - and to take an instrumental view of environmental resources, is unable to realize the objectives of sustainable development. This chapter questions how well the objectives of sustainable development can be achieved within the traditional framework of the prevailing version, and also how far substantial progress depends upon the adaptation of our thoughts to some more satisfactory version.

In chapter two of Part Four, in contrast with the dominant economic practice, I highlight an alternative framework for sustainable development that tends to involve a decentralized, ethically informed and less managerial approach. It has long been thought that economics is our best hope for formulating policy choices but that, to deliver on this promise, it must involve diverse values that are not purely economic and hence not invariably measurable. This chapter, therefore, explores where and how non-economic values (such as intrinsic value of non-human creatures and instrumental and inherent values of species and ecosystems) are involved in environmental policies. It explores various issues of justice - economic, social and environmental - that stem from these values, and also explores the role the issues of justice play at the heart of such policies.

Chapters three and four of Part Four involve an attempt to apply the new framework for sustainable development, as proposed and defended in the previous chapter, to the specific situation of Bangladesh - the country of whose problems I have most experience and am most particularly concerned to help to alleviate. A list of broad common types of recommendations for Bangladesh will be offered here, on which a sustainable future for Bangladesh is largely dependent. Chapter four ends with recommendations for future research. Overall, Part Four involves one of the most vital concerns of my dissertation. This may well be envisaged as a considerable contribution to Bangladesh in realizing her goals for sustainable development. In so doing, this dissertation focuses on one of the most challenging issues, the socio-economic emancification of the society that the government of Bangladesh has been trying to address since the country's political independence in 1971.

The methodology I have employed in my study is (1) partly conceptual analysis with particular emphasis on normative reflection, together with sifting the best known and more cogent theories; (2) and partly inquiry into existing socioeconomic and environmental challenges in societies to identify various relevant empirical facts and to consider relevant theories.

Besides the conceptual analysis, a less formal kind of inquiry is adopted to find empirical information in order to make appeal to this in redefining development, environmental problems and human security and analyse other related issues. The appropriateness of adopting this approach is implicit in the thought that suggesting satisfactory revised definitions of the above mentioned issues is hardly possible through merely doing a series of conceptual analyses. It is instead crucial to appeal to empirical facts (such as what has happened to developing countries, such as Bangladesh) in the process of redefining them.

Having discussed and defended Attfield's variety of biocentric consequentialism, which is a non-anthropocentric value theory, I have adopted this theory in this study to offer a fresh theoretical and interpretative approach, facilitating a revised framework for sustainable development. This normative value theory has a link with modern western ethics, as it adheres to the methodology of modern consequentialism. However, biocentric consequentialism modifies some of the standard themes of consequentialism. Among the major points of Attfield's modified reading of consequentialism are: the relevant units are not single actions but practices; the relevant consequences are not confined to human interests but also include non-human interests; and as opposed to the standard reading of consequentialism, his readings take into account the long term consequences of human activities for living creatures in general. Biocentric consequentialism seems to be more reasonable in addressing environmental problems at both local and global levels, for developing and developed countries, and the well-being both of humans and non-human creatures. This normative value theory is compatible with (and also supportive of) the ethical theory of many scholars in developing countries that environmental egoism and environmental imperialism are the main ideological origins of current environmental

problems (e.g. as claimed in environmental ethical theories devised in developing countries, such as those that are discussed by Joan Martinez-Alier[1] and Ramachandra Guha [2]).

This study is not intended to give details of sustainability used in the discourses of science and technology. Examples include sustainable forestry, sustainable agriculture, sustainable engineering and so on. The current study is limited to the study of sustainability pertaining to economic and social development and aiming at shaping a comprehensive framework for sustainable development which overall can be applied to developing countries like Bangladesh. By offering a comprehensive approach, which incorporates ethical issues (i.e. various issues of justice) as the crucial part of its policy solutions, this study can be envisaged as a pioneering attempt in the field of policy decisions for Bangladesh as regards her development becoming sustainable, without undermining the prospect of global solutions to those problems, which are global in nature and scope.

The policy framework for sustainable development proposed in this study seems to justify itself as a framework that is ethically informed and comprehensive. It achieves this by being sensitive to a range of challenges pertaining to developmental and environmental issues in Bangladesh, such as cross-border rivers, water sharing problems and problems that stem from the existing Farakka Barrage and Tipaimukh Dam (the construction work on this Dam is now just a matter of time since the agreement has already been signed by the relevant parties). Other issues include problems of salinity, deforestation, river bank erosion, global warming and climate change. The proposed framework is also supportive of the incorporation of ethical values into decision-making. Over and above the people in environmental decision-making positions in Bangladesh, the intended readership of this dissertation includes people in decision-making

[1] Martinez-Alier is one of the proponents of this view. For more, see Martinez-Alier, J., *The Environmentalism of the Poor: a Study of Ecological Concepts and Valuation*, Northampton: Edward Elgar Publishing Ltd., 2002.

[2] Guha, R., 'Radical American Environmentalism and Wilderness Preservation: a Third World Critique', *Environmental Ethics* , 11.1(1989), 71-83.

positions in developing countries as a whole. What is more, the overall undertaking of this study, in particular the suggested framework for sustainable development, is intended to help motivate researchers in the relevant fields to conduct further research on sustainable development, with due focus on wider ethical values, and its application to specific countries.

PART ONE

THE ANATOMY OF SUSTAINABLE DEVELOPMENT

Chapter One

1.1 Development

There exists hitherto no broad agreement about when the concept of (social and economic) 'development' originated. Indeed, available stances relating to the genealogy of this concept seem to be quite conflicting. While some proponents, for example, agree that development is closely bound up with the evolution of capitalism and the demise of feudalism (which on a historical time line covers the period between the early 13th century and the late 18th century[1]), others maintain that it emerged in the late 18th century, bearing a sense similar to that of the unfolding of a plot.[2]Nevertheless, most people appear to maintain a common view about its use throughout the 19th century. In this view, it is held that the concept of development was associated with natural or evolutionary matters and used to mean all the episodes of progress that were taking place within those areas.[3] Here, 'development' via progress means moving upward directly towards a peak. The 19th century Western narratives - whether literary, scientific or historical - involve progress 'in a straight line' or in other words 'linearity' as the central trait of the concept of development.

About one century later, at the beginning of the 20th century, this concept underwent another major shift in its meaning and began to be used to refer to the economic

[1]Conteras, R., 'How the Concept of Development Got Started' in Enrique, *The E-Book on International Finance and Development,* The University of Iowa Center for International Finance and Development (1999), http://blogs.law.uiowa.edu/ebook/uicifd-ebook/part-1-i-how-concept-development-got-started>[accessed 1 July 2009] (p.1). In this article, Conteras argues that development is a concept that is tied to the evolution of capitalism.
[2] This strand of thinking was expressed in a recent essay from an anonymous student.
[3] Progress is used here to mean the linear self fulfilment of something.

advancement of a people or region; this, in effect, resonates with the current understanding of the concept in question, and its dominance all over the world, especially in the West. A further source of variation about the meaning of the concept of development is the fact that the concept of development is bound up with the particular period in time when the concept is being uttered or used by the individual in question. Thus, for them, one must place this concept in a historical context in order to understand the diverse theories about it. [4]

Despite its existence for centuries in the West, the concept of development has begun to be used extensively by researchers, experts and practitioners (and also by people in general) across a wide range of disciplines for just over half a century.[5] But no distinctive form or uniform approach has been found hitherto for its pursuit by the users, concerning its characterization and operationalisation; hence, there is still intense disagreement and uncertainty about what is the precise meaning of this concept. As a result, we hardly find any single meaning and/or distinctive definition of the term 'development' thus far. As Des Gasper in his controversial book *The Ethics of Development* presents it:

> Development is a term ubiquitous in daily language. It can refer to the emergence or elaboration or evolution or improvement of almost anything.[6]

---

[4] Contreras, p.15.

[5] Despite differences of opinions about the nature and/or definition of development, a number of thinkers have agreed on the point that the concept and practice of development dates from the end of Second World War. To be more specific, the view that 'development dates from 1940s theory' has become quite popular, as is stated in Des Gasper, *The Ethics of Development*, 2004. However, Gasper traces it differently to other writers such as Sun Yat-Sen (the founder of republican China and the writer of the book *International Development of China*, published in 1922) and the work of Marshall Berman (who cites the character 'Protagonist' in Johann Wolfgang von Goethe's drama *Faust* as discussing the 'desire for development', in his, *All That Is Solid Melts into Air,* (London: Verso, 1983)), in which they show that the concept of development has been in extensive use from the early nineteenth century. For details, see Cowen, M. P. and Shenton, R.W. 'The Invention of Development', in *Power of Development*, ed. by Crush, J. (London: Routledge, 1995), pp. 27-43.

[6] Gasper, D. *The Ethics of Development* (Edinburgh: Edinburgh University Press, 2004), p.27.

And he also states:

> Even a single person is likely to use the term [development] in several ways, and across people we see further variation.[7]

This observation is further recognized by Andrew Reed, who writes that:

> Development is a very general concept; ask any three experts to say what they mean by 'development' and the likelihood is that you would be given three different definitions. [8]

Both Gasper and Reed in these passages eloquently reveal that there is no agreed precise meaning and/or definition of the concept of development. For Gasper, the concept of development can be considered and employed by a single person in several ways. Besides, Reed's account specifies that the definition of development might differ from person to person. Both Gasper's and Reed's remarks seem to imply that the central components in definitions of development are subjective judgments. The force of these remarks, however, diverges from the five diverse meanings of development mentioned at the outset: (1) development is a concept that is closely bound up with the evolution of capitalism and the demise of feudalism; (2) development bears a sense similar to the unfolding of a plot; (3) development means an optimal evolutionary tendency of an entity; (4) development is a continuous economic advancement of a people or region; (5) development is a historically comprehensible concept. They are different in the sense that, in line with these narratives, elements in the definition of development are objective. Despite this conflict or

[7] Ibid.p.25.

[8] Reed, A., *Inequality and Development* (London: Bell & Hyman Limited, 1985), p.21.

disagreement about objectivity, proponents of these narratives seem to share one thing about the concept of development, namely that it has positive connotations.

In contrast, some other scholars, such as Gustavo Esteva and Vandana Shiva, entirely reject any positive connotations of the concept of development. For them, such connotations express the bias of relevant speakers, and typically stem from the dominant Western narratives of the concept. They mainly appear to condemn the self-proclaimed positive connotations of development due to its coercive and imperialistic implications for societies. Derived from the Enlightenment notion of inevitable progress, as has been illustrated by Esteva, this concept was devised in the 1940s to prevent upheaval and extend science and technology throughout the underdeveloped world. The implication of such an understanding of the concept of development for two-thirds of the world's population, according to Esteva, is:

> … a reminder of what they are not…a reminder of an undesirable, undignified condition.[9]

Esteva spots that central elements in the U.S. President Truman's inaugural speech, delivered on January 20, 1949, are the dominant Western narratives of development. For him, Truman introduced the concept of underdevelopment in his speech to classify two thirds of the people on earth as defective. And soon after Truman's speech, the concept of 'developed', as Esteva claims, became the euphemistic synonym for 'rich' or 'civilized', and 'underdeveloped' for 'poor' or 'uncivilized'. Furthermore, the use of this concept, according

[9] Esteva, G., 'Development', in *The Development Dictionary*, ed. By Sachs, W. (London and Atlantic Highlands, NJ: Zed Books, 1992), p.10.

to Esteva, is nothing but cultural neo-colonialism on the part of the West, while through Truman's use of these terms, 'underdeveloped' became simply another word for 'poor'.

Basing her stance on feminist concerns, the Indian feminist Vandana Shiva criticizes the dominant Western narratives of development and holds the view that these narratives have been generated and relentlessly practised so as to dominate women and nature and subjugate and destroy indigenous culture. For her, all this represents the modern dominant patriarchal economic category that focuses only on profit, not life. The current dominant paradigm of development, for her, also dismisses forms of work that do not produce capital or profit, being non-productive. This so-called 'non-productive' or 'marginalized' work is typically women's. Hence, according to Shiva, 'development', as conventionally understood, renders women's work invisible. But this invisible work, she says, is expected to be performed alongside 'productive' work, and hence women become the most oppressed section of already oppressed societies. Thus the dominant Western narratives of 'development' have been relabeled 'maldevelopment' by Shiva. Criticizing this, Shiva also writes:

> More commodities and more cash means less life - in nature (through ecological destruction) and in society (through denial of basic needs).[10]

Here it is apparent that both Esteva and Shiva reject the dominant narratives of development, but for marginally different reasons. While Esteva rejects such narratives for their imperialist overtones (because development has historically oppressed groups, such as

[10] Shiva, V., *Staying Alive: Women, Ecology and Development* (London: Zed Book, 1989), p.7.

aboriginal people and women, and hence, for him, its use is a neo-colonialist extension of those forces or oppressions), Shiva rejects such narratives on feminist grounds.

Going back to Gasper's perspective mentioned earlier, development has no single meaning but rather multiple meanings. This claim has been clearly and widely illustrated by Gasper in his book *The Ethics of Development*. There he discerns 'ahistorical' and 'historical' conceptualizations of the concept of development as two major categories, and asserts that dozens of possible meanings and definitions of 'development' could be listed under these categories. As he illustrates, the 'ahistorical' category includes those definitions that identify, for instance, industrialization, urbanization, globalization, modernization, economic growth or progress as development. Conversely, the historically specific conceptualization category includes explicit historical reference, for instance, to the rise and expansion of Western European cultures from the 15th century. There again, in terms of different usages of the concept of development, he classifies the ahistorical and historical categories into two sub-streams, which he illustrates as neutral (non-evaluative) and evaluative usages of development:

A. More neutral ('positive', non-evaluative) usages

1. Development as fundamental or structural change

2. Development as intervention, action

B. More evaluative usages

1. Development as improvement, good change; or as the good outcome

2. Development as the platform for improvement, that which enables or allows improvement. [11]

[11] Gasper, p.28.

In its neutral usages, such as type A1, development is perceived as change, especially fundamental/structural change. Besides, type A2 considers development as action, intervention or something that is consciously aimed at improvement, which Gasper calls the transitive usage of 'development'. But no prefixes, such as 'good' or 'bad', 'real' or 'unreal' are added to the concept of 'development' in these usages, which entails that scholars or practitioners here do not have to offer or imply any judgment as to whether the action or intervention is good or bad. Usages do not have to imply ethical values in order for their users to agree on applications of the concept. The typical example of this type of usage of the concept of development, according to Gasper, is the one that compares development with economic growth and measures it by gross national product (GNP) per capita.

In contrast, 'development', in its evaluative usages such as type B1, means improvement, good change, or an achieved improvement, a good state or situation. Here, 'development' refers to a desired or end state and this type is known as the achievement or end state definition of development. Besides, the evaluative usage of development in the form of type B2 distinguishes development as a platform for improvement, which facilitates or allows improvement. In other words, this type of usage refers development to the preconditions (such as opportunities, capacities, and/or choices), which permit what is desired. In this sense, anything that is instrumental towards improvement is development, and therefore usages of development here become value and theory relative.[12] This variety is known as the opportunity or instrumental definition of development. Unlike neutral usages, people here (in types B1 and B2) do need, according to Gasper, to share ethical values in order to agree on their applications.

[12] Ibid. p.31.

Gasper identifies types B1 and B2 (evaluative definitions) as the predominant branch and distinguishes it as the central focus of development ethics in comparison to the alternative approach - the neutral usages of development (types A1 and A2). But at the same time he also argues that there are lots of contrasts between evaluative definitions, such as between the 'end-state' and the 'opportunity' definitions. And these uncertainties and disagreements on the meaning of development most likely direct him to assert:

> There is no such precise, single meaning [of development]. Instead, we can increase our sensitivity to the types and range of meanings.[13]

Gasper's classification of the concept of development and understanding of the notion of commonality in development warrant criticism. As has been observed, Gasper has distinguished development into two categories (in terms of its usages): 'neutral' and 'evaluative', which involve, to say the least, three mutually exclusive meanings of development, such as 'structural change', 'intervention' and 'improvement'. Nevertheless, the fact of the matter is that the difference between seeing development as 'intervention' and as 'improvement' is not one of mutual exclusivity. There is at least one aspect where they are found to overlap each other. For example, in both types of usages, practitioners, users and the people overall share a common perspective: 'they aim towards improvement'. Thus, listing 'intervention' under 'A' category (neutral usages) seems to be a misrepresentation.

Gasper's interpretation of the evaluative usages of development as 'improvement' is also questionable. He argues that, in the evaluative usage of this concept, everyone who uses or understands the term has to share the ethical values that it embodies. But the examples

[13] Ibid. p.25.

considered below attest that things are otherwise. For an improvement of a very partial kind, which fails to merit appreciation of each and every individual of a given society, is also seen to be envisaged as an instance of development.

Example 1: There are some instances of development as so-called 'improvement' of a partial kind, that have occurred in the past, examples which suggest that such 'development' need not invariably be praised either by the users of the concept of 'development' or by the people of the society in question. For example, from some perspectives, development occurred in Singapore and South Korea in the mid 1990s, which was of a partial kind; it underwent a collapse in 1998, because it did not occur on a secure or sustainable basis and could have been planned for better, and is often criticized for these reasons. Thus, the concept of development as transformation that is often applied to the Singapore and South Korea of this period as an improvement of a very partial kind suggests that Gasper's view that development, in its evaluative usage, invariably requires everyone's recognition is an illicit generalization.

Example 2: The Farakka Barrage[14]commissioned by the government of India on the River Ganges could be held to have promoted development in the state of West Bengal in India through diverting its water into the Hooghly River during the dry season, from January to June, in order to flush out the accumulating silt which in the 1950s and 1960s was a problem at the major port of Kolkata on the River Hooghly. This might be envisaged as 'development' by the Indian government or the policy makers in question, but this has not

[14] Located in India, this barrage is 10 km from the border between India and Bangladesh, is the largest barrage in the world, and has recently been entered in the Guinness Book of World Records.

been praised at all by the people collectively, especially by the people of Bangladesh who have been directly affected due to living alongside the distributaries of the River Ganges.[15] Also, it is obvious that the people of West Bengal, who live in the area alongside the Ganges River between the Farakka barrage point and the Bangladesh border, might oppose the so-called development initiative, being affected by that same initiative. This example further justifies the conclusion that Gasper's view that development, in its evaluative-usage, invariably requires everyone's recognition is an illicit generalization.

Gasper's critical view about commonality in development discourse now may well raise a question: is Gasper right in saying that there is no commonality in the divergences of meaning and definition of development? Michael Edwards' view is worth mentioning here; for him, among the major universal objectives of the concept of development are:

> • to be free from poverty and violence and the servitude these bring in their wake;
> • to be loved and enjoy a sense of belonging;
> • to feel more in control and less vulnerable to the vagaries of unaccountable power;
> • and to be subjects of their own destiny rather than objects of intentions of others.[16]

In a variety of ways, Denis Goulet's[17]idea of a good life and John Finnis's[18] concepts of well being share the same spirit and provide lists of universal values regarding development.

---

[15] There are certain reasons behind this dissatisfaction and disagreement. Foreseeably, the Farakka Barrage cuts off Bangladesh's water supply, especially during the dry season when it is of the highest necessity. The diversion of the flow of the Ganges has caused serious damage to the down-stream area, i.e. in Bangladesh, through contributing to the rise of salinity in water, contaminating fisheries, hindering navigation and posing a threat to water quality and public health. More seriously, lower levels of soil moisture along with increased salinity have also led to desertification of the northern region of Bangladesh, which has been discerned as the prime reason behind the abject poverty of the people of that region and an irreparable threat to their livelihood.

[16] Edwards, M., *Future Positive: International Co-operation in the 21st Century* (London: Earth scan, 1999), p.4.

[17] Goulet, D., *Development Ethics* (London: Zed Books, 1995), p.4.

[18] Finnis, John (1987), 'The Basic Value', in *Ethics*, ed. by Singer, P. (Oxford: Oxford University Press, 1994), pp. 229-235.

These perspectives seem to suggest that diverse narratives of development share some objectives in common, which amount to commonality in development discourse. But Gasper's question 'are the identified commonalities necessary or just coincidental amongst the subjectivisms?' makes the issue again debatable and more subject to varieties of perspective.

Robin Attfield's analysis of the concept of development has been found to be supportive of their being a common concept of development. With a view to asserting such a stance, Attfield starts his argument by depicting the relationship between 'disagreement' and 'agreement':

> ...there can only be disagreements where the parties agree about something too; otherwise they would not be disagreeing… [And] our uncertainties and disagreements [about development] make sense only because we share a common concept of development and of underdevelopment.[19]

Attfield's understanding is that the one phenomenon (disagreement) does not make any sense without the other (agreement), which seems analogous to the relationship of two opposite sides of a coin. Further, he argues, agreement arises as a precondition of disagreement in some cases, while as a result of different ideological responses to the same facts or problems in other cases. He also argues that uncertainty and disagreement about development are not total, but rather:

[19] Attfield, R., 'Development: Some Areas of Consensus', *Journal of Social Philosophy*, XVII (1986), p.36.

> …a sense of uncertainty is generated solely by concentrating on those questions which are left unresolved when many other questions have been answered already. These other questions may be for that reason less interesting. [20]

The 'other questions', according to Attfield, can provide a sufficient basis for the area of agreement or for the common concepts of development and also their implementation. This idea, according to Attfield, is important as the implementation of the answers to those questions would enhance millions of people's lives and secure a fairer deal for the world's poor.

In the light of this understanding, Attfield approaches 'development' through the contrasting notion of 'under-development'. He illustrates under-development as a state of a society where various evils, such as poverty, disease, illiteracy, malnutrition, high rates of infant morality, low life expectancies, low average productivity, and very poor medical and educational facilities underpin one another. By contrast, for him, development is a state of a society where these evils are:

> …alleviated and replaced by the attainment of health, literacy, low rates of infant morality, high levels of life expectancy, high levels of productivity per head, good medical and educational facilities, and a sufficient spread of wealth in the population to allow the evils of underdevelopment to be avoided. [21]

Here, Attfield's understanding is that these are among the common elements by which social development can be determined. These common elements basically relate to humans' 'basic needs', and for Attfield, fulfillment or realization of humans' 'basic needs' is a qualification

[20] Ibid. p.4.
[21] Ibid.

for development. In addition, he has pointed out that there is a conceptual connection between development and some other notions, such as self determination, participation and self-help. These notions involve humans' 'autonomous participation' (in all their undertakings towards development) as another important prerequisite condition for development. Elimination of significant economic inequalities is also considered by him as a crucial condition to be fulfilled for a society concerned with its development. Besides, by 'development' he means both the 'processes' (courses of action towards alleviation of the evils in question) and the states to which they lead (attainments).

With reference to the relationship between economic growth and development, Attfield maintains that to define development as merely economic growth is to clearly under-define it. For example, he argues, an oil-rich country with a high GNP (economic growth is measured by GNP) might have a high and sluggish illiteracy rate (which is one of most vital obstacles for development). Another problem with the practice of the GNP method, as has been mentioned by Attfield, is that it avoids taking into account those economic activities where no money changes hands.

Instead of a teleological assertion of what development is, Attfield seems to interpret development by what it is not, i.e. by 'underdevelopment'. As he suggests, development is both (1) a process of moving away from a range of evils including a vicious circle of poverty and health insecurity towards a more satisfactory level of productivity, health and so on, and (2) the condition of a society which has largely attained more satisfactory levels. Furthermore, he argues that there are various interpretations of development, but among the various issues of debate and disagreement there is a commonality in them; this in turn generates a broad area of agreement about social and economic development. In addition,

Attfield's view maintains that development has to involve some degree of autonomy and self -help on the part of the society in question. In so doing, his view seems to tackle social and political issues of development over and above economic ones.

Attfield has been found to interpret the concept of development on a broader cross-disciplinary discourse level. At this point, he suggests that the concept of development has a 'core' meaning, which stems from its substantive core and from which there emerges a notion of commonality amongst the divergence of interpretations and practices of development across the disciplines and across societies; about this core meaning, he states:

> … [It] is that of something changing in the direction of the fulfilment or realisation of its good. [22]

Attfield suggests that the sense of the 'core' meaning of 'development' remains unchanged irrespective of its diversified usages in different areas of studies (such as psychology, biology and different branches of social science), despite the fact that the criteria on the basis of which 'development' is determined across the disciplines may clearly be different. For instance, he states, in the case of humans (in terms of social development), the 'core' meaning of 'development' is that of something changing in the sphere of human endeavour towards the direction of the 'fulfillment or realisation of their good', whilst the criteria used here in order to determine 'development' are the fulfillment or realisation of humans' 'basic needs', and 'autonomous participation' in the process of development by the members of the respective society. Likewise, in the case of children (in terms of cognitive development), the

[22] Attfield, R. & Hattingh, J., 'Ecological Sustainability in a Developing Country Such as South Africa? A Philosophical and Ethical Inquiry', *The International Journal of Human Rights*, 6. 2 (2000), p.70.

core meaning of 'development' is that of something changing towards the direction of the 'fulfillment or realisation of the children's good', although the criteria being used here are different (from the above mentioned criteria being used in the case of humans' social development), which involve children's overall progression issues, such as children's growth, speaking, walking and playing abilities, and capacities for interacting with their surroundings and their fellows with less difficulty, more independence and more self-confidence than before.

Attfield seeks to allege here that there is a common core to the concept of development that endorses a common meaning amongst its various usages across the disciplines, such as social science, psychology and so forth (not only amongst social and economic usages), and also that over and above a common core of the concept of development, there can still be 'specialised interpretations'[23] or 'divergent conceptions'[24] of development, depending on diverse interpretations.

What if we now compare Attfield's interpretation (or conceptualization) of development with that of other philosophers of development, especially Gasper? We then

[23] Ibid., pp.70-74.

[24] For Attfield, the term 'concept' can have two different senses. It is, in one sense, used (sometimes) to mean the rough equivalent of 'picture' or 'cluster of beliefs' (empirical), which Attfield names as *conception;* in the other sense, it is used to imply the meaning (non empirical) of the term 'concept', for which he reserves the term *concept*. He discerned these two senses of 'concept' in view to clarifying the concept of 'man', back in 1974, in his article, 'On Being Human'. However, this 'taxonomy' can similarly be functional for the concept of 'development' in order to analyze and clarify its meaning. Given this resemblance, the 'core' concept of development can be specified by the term 'concept', while the 'specialised interpretation' of the concept of 'development' might be designated by the term 'conception'. For details about the distinction between 'concept' and 'conception', refer to Attfield, R., 'On Being Human', *Inquiry: an Interdisciplinary Journal of Philosophy* 17 (1974), 175–192.

observe that there are some aspects of development about which they agree and others about which they disagree. Both Attfield and Gasper hold the same view about its relationship with economic growth. They claim that development is not identical with economic growth. As has been observed earlier, Gasper characterises 'economic growth' as the most typical kind of morally neutral usage of the concept of development, while Attfield criticises it by saying that in many cases growth does not take place in step with development. A number of development theorists can be found who would agree with Attfield and Gasper regarding this issue and reject the view of development as economic growth.

At this point both Gasper and Attfield seem to have got the point right because, in effect, it is hardly possible to attain goals of development merely through attaining (higher) economic growth. One of the things needed for accomplishing goals of development is the equitable distribution of the benefits that come from that of economic growth. Without the implementation of equitable distribution of economic growth (i.e. the principle of distributive justice), a society can hardly be able to alleviate its poverty. For the distribution of wealth within a country is more important that its average per person. For instance, Brazil has been heralded as an 'economic miracle', yet this is not representative of the ongoing poverty of the majority of its people. The relationship between development in terms of economic growth in India and its ongoing poverty matches the scenario of Brazil. This suggests that the dominant development narrative that defines development as merely economic growth is defective. Thus, if there was ever a time to focus on an alternative interpretation and paradigm for development, that time is now. Otherwise, the pursuit of a high economic growth model of development by developed and rapidly growing developing

countries will ensure different causes of immense social deprivation for the world's poor through contributing in different ways to the ever expanding economic gap between the rich and the poor all over the world.

On the other hand, what mainly distinguishes Attfield's view from Gasper (and Reed as well) is the commonality in development and its core meaning. As has been observed earlier, Attfield's view about 'commonality' and/or 'agreement' pertaining to social development appears to be indispensable, because none can reject any of the points (which he mentions in defining or characterising social development) as unnecessary or undesirable (for such development) or incompatible with the type of development in question. Also, his characterisation of the concept of development, in terms of its 'core' meaning, deserves greater attention. The 'core' meaning of development, as Attfield states, entails fulfillment or realisation of something's 'good' through a process of change; this also seems defensible, since development, so to say, apparently can only be used of those changes in an entity that bring about good in it, or else it would clearly be counterintuitive if it is distinguished by those 'changes' which bring about bad transformations in the entity in question. In contrast, Gasper, as has been mentioned earlier, is suspicious about commonality in development as well as arguably about its core meaning, and states that there is no such agreement, or precise (or single) meaning, of the concept of development. Such discrepancy, holds Gasper, can only increase our sensitivity to the types and range of meanings of development.

From the forgoing discussion, it seems that Gasper's view on development is open to criticism; and as opposed to his view, Attfield's view (as discussed above) merits recognition. Firstly, I find no logical reason to reject views supportive of a broad area of agreement about social development. However, one might ask two questions here: (1) are

the supplied points truly supportive of a broad area of agreement about social development? and (2) are these the only important aspects of development?. Reasonably, the answer, in my view, should be 'yes', as no practitioner or theory can reject any of the concepts (such as attainment of health or literacy) as unnecessary or undesirable for social development of a society anywhere around the world. In answering the second question, Attfield's logic can be considered here. Attfield argues that if it so happens that this illustration has omitted any important aspects of development, then his case becomes stronger that we actually share a reasonably clear-cut notion of social development. The cogency of this argument speaks for itself.

Secondly, I also find no logical reason to reject views supportive of 'core' and 'specialised interpretation' meanings of the concept of development. As Attfield says, while the 'core' meaning of development (i.e. something changing towards the direction of the fulfillment of its good) concerns one key aspect of development, the 'specialised interpretation' meaning of it concerns another key aspect. The cogency of the idea of the core meaning of the concept of development in social contexts also speaks for itself. The 'specialised interpretation' meaning of development stems from various applications of the concept of 'development' by different societies, cultures or interest groups in their own different ways. This point also seems sound. For example[25], on socio-economic development, there will be Islamic interpretations, some involving Islamic banking, and there again the interpretations prevalent in Kerala (a Marxist interpretation) and in South Africa (where interpretations would be neither Islamic nor Marxist).

[25] Attfield .R, *Environmental Ethics*: *An Overview for the Twenty-First Century* (Cambridge, UK: Polity Press, 2003), pp. 152-3.

Like the 'core' meaning of development, the 'specialised interpretation' meaning of development is also essential for right understanding and operation of the concept of development, as the values of a certain society or culture (on which specialised interpretations are grounded) are important elements of criteria for defining the 'well being' or 'good life' of its members. Development policies or initiatives that do not respect local cultural or social values of the society in question often fail to achieve their development-goals. For example, as Peter Coleridge mentions, attempts in Afghanistan to 'modernise' (or develop) the society by various rulers (especially by changing the role and status of women), including the Communists in the 1970s, have not only been unsuccessful but have also been the main cause of conflict (one of the key causes of underdevelopment) in that country.[26]

Coleridge's view is based on the understanding that people generally act or behave in accordance with the values [27] (such as cultural, social or religious values) that they have respect for and that they feel threatened when their values are attacked or start to disappear. Thus, development goals (democracy, autonomy, literacy, health and so forth), according to Coleridge, have to be attained through changing peoples' perceptions (where transformation of peoples' understanding on a particular issue is really essential for achieving their 'well-being' or 'quality of life'), not their social, cultural or other traditional values.

---

[26] Coleridge, P. 'Development, Cultural Values and Disability: The Example of Afghanistan', in *Disability and Development: Learning from Action and Research on Disability in the Majority World,* ed. by Stone, E. (Leeds: The Disability Press, 1999), pp.149–167 (p.158) <http://disability-studies.leeds.ac.uk/files/archiveuk/stone-chapter-10.pdf> [accessed 18 January 2008]

[27] For example, the 'veil system' is in practice among the Pushtun (an ethnic group of Afghanistan) women in Afghanistan, and they have already internalised this system (as religious value) into themselves. Likewise, disabled people in Afghan society accept an inferior position in the social hierarchy 'as the normal state of things' and they have internalized this segregation for themselves. Therefore, the process of any so called development programme, say in Afghanistan, must start with bringing about changes in the perceptions of the persons being segregated. The same is true of Pushtun women's faith in the veil system.

The social or cultural values of a society fundamentally involve what the people of the relevant society understand, practise and own. Hence, people's well-being, in effect, require their own values (for some,[28]indigenous knowledge also) to be practised in order to accomplish various developmental goals, which in turn justifies people's self- participation in their own decision-making processes. Hattingh and Attfield designate this as 'autonomous participation'. The issue of specialised interpretations, as a result, opens up different 'paths' or 'roads' or 'means' to development; while a development-goal itself can still be seen as the same or 'homogeneous' [29], which Attfield distinguishes as the core meaning and the area of the common concept or agreement about development.

Along the lines of Attfield's arguments and overall findings above, the concept of development, where it is short for social and economic development, is thus now to be defined as a state or condition of a society in which something is changing in the direction of the fulfilment or realisation of the wellbeing or basic needs, to say the least, of its members, ensuring their autonomous participation in the changes in question.

The proposed definition of development warrants further attention in order to verify its capabilities of resolving queries, such as 'Could development as thus defined here be endorsed by scholars such as Esteva and Shiva?'; or in other words 'Does Attfield's view on development complement the views of Esteva and Shiva?' Part of the answer to this

[28] See, for example, Ellen, R., 'Local knowledge and Sustainable Development in Developing Countries', in *Global Sustainable Development in the 21st Century*, eds. Lee, K., Holland, A. and McNeill, D. (Edinburgh: Edinburgh University Press, 2000), pp. 162-186.
[29] Gasper, D., 'Culture and Ethics of Development', Paper for *Nationale Unesco Commissie Studiedag* (The Hague, 1993 (unpublished)), p.1.

question, however, may well derive from a statement made by Esteva himself, which is as follows:

> My people are tired of development. They just want to live'[30]

The implication of this statement is quite apparent. Through this statement he aims at representing the thought that commonly a person's minimal demand is simply to survive, not for luxury. But the dominant Western development narratives, as they have been criticized or characterized by Esteva, fail to meet the minimal demands of individuals. Rather, these narratives create multifaceted socio-economic and political challenges for all. These detrimental bearings of the dominant paradigm of development have eventually made Esteva reject the entire concept of development.

Although Attfield does not reject the positive connotation of the concept of development, he clearly rejects its meaning and practice in the conventional sense, which, in turn, reinforces Esteva's objectives. And, foreseeably, with a view to achieving the same goal, Attfield seems to have offered an alternative version of development, where he maintains that neither evils nor economic growth made following the guidelines of the dominant paradigm constitute 'development'. Rather, it is something else which means moving away from evils towards a satisfactory level of life expectancy, health, literacy, productivity and so on, where some degree of autonomy and self-help are also exercised on the part of the population of the society in question throughout the whole process of achieving those satisfactory levels. The aspiration implicit in Esteva's above mentioned statement is the

[30] Gustavo Esteva, 'Development', in Wolfgang Sachs (ed.), *The Development Dictionary*, London and Atlantic Highlands, NJ: Zed Books,1992, pp. 6-25 (p. 23).

realization of human basic needs, which, in practice, looks congruous with the main aspiration of Attfield's view.

Shiva's feminist concerns could also be alleviated through a combination of improvements in various development-goals, and enhancement of the autonomous and meaningful participation of the entire population, which involves women alongside men in decision-making processes and would therefore eradicate gender discrimination. Furthermore, Attfield's view seems to address issues of social justice through advocating an equal share of the benefits for both women and men resulting from their collective development-efforts.

Thus it can be alleged, presumably, that ultimately it is not development that Esteva and Shiva oppose, but rather its imperialistic and paternalistic imposition. A form of development that withstands the above mentioned criticisms must therefore be unconventional. It must not be imposed from the West i.e. should not be directed from above, but rather should emerge from the community or the local inhabitants of the society in question. So far so good.

As has been observed earlier, over and above her feminist concerns, Shiva also expresses her concern about the extinction of life in nature because of humans' excessive intervention with nature for economic benefit. A question may well be asked at this juncture: does Attfield's version of development address the environmental (or ecological) issues of development? It seems that although Attfield's alternative definition of development seems adequate to address Esteva's concern about the imperialist overtones of dominant western narratives of development and Shiva's concerns about gender discrimination, this definition

says nothing about the environmental limits to development. Thus, his version of development is not beyond criticism.

Recognizing socio-economic, political and cultural aspects of development, the United Nations declared 'the right to development' in 1986, which reads as follows:

> Development is a comprehensive economic, social, cultural and political process, which aims at the constant improvement of the well-being of the entire population and of all individuals on the basis of their active, free and meaningful participation in development and in the fair distribution of benefits resulting therefrom.[31]

This is in many ways an admirable definition, but unfortunately circular, since it includes the term (development) being defined in the definition itself. [32] However, this flaw with the UN definition of development could readily be removed through eliminating the circularity. Making a change in the UN definition of development, with a view to removing its circularity, we might readjust it as follows: 'Development is a comprehensive economic, social, cultural and political process, which aims at the constant improvement of the well-being of the entire population and of all individuals on the basis of their active, free and meaningful participation in this *process* and in the fair distribution of benefits resulting therefrom'.

Although the adjusted version of UN definition of development is free from circularity, it still warrants criticism because of maintaining salience about the environmental issues of development. This criticism is taken further by Nigel Dower; as he puts it:

---

[31] United Nations, *Declaration on the Right to Development*, Preamble, Paragraph 2

[32]Attfield, R., 'Development Ethics' (Cardiff University: ENCAP, Philosophy Section (unpublished)), p.1.

> This is a rich 'definition' in many ways, though lacking perhaps because it has no reference to the priority of poverty-reduction or to environmental constraints.[33]

In the light of this understanding, it seems that over and above the dominant Western narratives of development, Attfield's version of development and the UN definition of development as well as its adjusted version supplied here seem to be inadequate. A further study on the concept of development is thus needed with appropriate focus on the omitted but crucial dimension of development: environmental issues of development. The environmental dimension is crucial for the concept of development in the sense that without tackling environmental limits to development no human efforts in pursuit of development can be sustainable. This suggests a thorough study of concept of 'sustainability' to facilitate a justified version of sustainable development. This suggested study comprises the two following interconnected chapters.

[33] Dower, N., *World Ethics: the New Agenda* (Edinburgh: Edinburgh University Press, 1998), p.153.

Chapter Two

1.2 Sustainability

The concept of sustainability, like 'development', is used frequently and in diverse ways in everyday discourse. As every discourse uses its own selective vocabulary, they embody differences in thought, thus making definition of a single meaning of sustainability complex, and interdisciplinary collaboration far from straightforward. For instance, while 'sustainability' as envisaged by traditional neoclassical economics considers a short period of time, and while new classical economists consider their discipline adequate to the task of tackling the issue of sustainability (Nobel laureate economist Robert Solow's approach[1] is an example), it generally requires a longer time horizon in its applications in ecological or environmental discourses.[2]

Similarly, sustainability may involve different extents of the space horizon, ranging from the local sustainability of a bioregion, a city, or a food or water source to the globe itself.[3] Also, sustainability is found embedded in engineering technologies – at the level of their own disciplinary matrix and selective focus – under special nomenclature such as 'green engineering', engineering for 'design and disassembly', or 'life cycle' engineering.[4]

---

[1] For details, see Solow, R., 'Sustainability: An Economist's Perspective', in *Economics of the Environment*, ed. by Drofman, R. and Dorman, N., 3rd edn (New York: W.W. Norton and Co, 1991), pp. 179-187

[2] This aspect of sustainability is thoroughly studied in Costanza, R. N. B. and Haskell, B., eds, *Ecosystem Health: New Goals for Environmental Management*, (Washington DC: Island Press, 1992).Norton, along with Costanza and Haskell, in this context notes that "An ecological system is healthy…if it is stable and sustainable – that is, if it is active and maintains its organization and autonomy over time …" p.9.

[3] Carpenter, S. R., ' Sustainability', *Encyclopedia of Applied Ethics* (Volume 4, Academic Press, 1998), p.276

[4] Ibid., p.280.

'Sustainability' is, on occasion, found to be understood as statements of fact, intent, or value to mean variously either a 'journey' or 'destination'.[5] This way of defining and expounding sustainability is complex, and has been described as a 'dialogue of values' that confronts a 'consensual definition' of it.[6] Concerning the challenges about the nature of sustainability and its goals, the notion of sustainability appears to have been interpreted from a range of perspectives in various discourses. While for some it is an important but unfocused concept like 'liberty' or 'justice',[7] for others it is a feel-good buzzword with little meaning or substance.[8] For some it is a call to action, and is therefore open to various political perspectives on possible routes to the goal of sustainability.[9]

Myerson and Rydin's approach to sustainability has further added to the prevailing disagreement about the shared meaning of sustainability, by maintaining that 'sustainability' is culturally creative and ambiguous, and that it is more diverse than is suggested by the usual definition. This ambiguity, according to their view, originated from the common root 'to sustain', which has a range of uses and diverse meanings. Of these meanings, some are in

---

[5]*Between a Rock and a Hard Place: the Science of Geosequestration* (Australia: the House of Representatives Standing Committee on Science and Innovation, 2007) <http://www.aph.gov.au/house/committee/environ/chapter/report/chapter2.pdf.> [accessed 12 March 2012]

[6] Ratner, B.D., 'Sustainability as a Dialogue of Values: Challenges to the Sociology of Development', *Sociological Inquiry,* 74.1 (2004), pp. 50-69

[7] Pearce, D., Barbier, E. and Markandya, A., *Sustainable Development Economics and Environment in the Third World* (London: Earthscan, 2000)

[8] For more see Dunning, B., *Sustainable Sustainability* (California: Skeptoid, 2006) < http:// skeptoid.com/episodes/4005>[Accessed 12 March 2009]; Marshall, J.D. and Toffel, M.W., 'Framing the Elusive Concept of Sustainability: A Sustainability Hierarchy', *Environmental* & *Scientific Technology*, 39.3 (2005), 673–682; and also Huddelson, B., *Sustainability*: *The Overtly Ambiguous Buzzword*, (Madrid: Mustang Daily, 2008)

[9] Markus J., Milne M.K., Kearins, K., & Walton, S., 'Creating Adventures in Wonderland: The Journey Metaphor and Environmental Sustainability', in *Organization*, 13.6 (2006), pp. 801-839 < http://www.uniondelosoceanos.com/ > [accessed 16 February, 2009]

frequent use; for instance, 'to keep alive', 'to maintain', 'to receive an injury', and so forth.[10] The Oxford English Dictionary (OED) defines the word 'sustainable' as:

> 1. Capable of being borne or endured; supportable.
> 2. Capable of being upheld or defended; maintainable. [11]

The concept of sustainability has moved to the forefront of development policy discussions in the recent past (for nearly two decades). The indecisiveness concerning the (common) meaning of 'sustainability', as described in the paragraphs above, warrants further analysis and clarification of the concept in question in order to determine its common meaning (if it has one at all) before utilizing it in the context of development and discerning its implications for various development plans and policies .

The proponents of economic and social development as well as environmentalists have sought a general consensus about the meaning of 'sustainability' in the context of 'development'[12]. They assert that 'sustainability' is an essential factor in development plans or policies, which are expected to have the capacity of continuing into the future, and also have the capacity to serve a great many purposes in the future.

Nigel Dower – a seminal thinker in this field – argues that 'sustainability' supplies moral justification of a policy or a plan both for its current practice and continuation into the

---

[10] Myerson, G. and Rydin, Y., *The Language of Environment: A New Rhetoric* (London: UCL Press, 1996), p.103.
[11] Ibid
[12] The proponents of economic, social development and also the environmentalists often have a tendency to refer the concept of 'sustainability' to the issues of 'development' with a view to discerning a crucial quality of acceptable development policies or plans for many future purposes. Stanley R. Carpenter mentions that "'sustainability" is sometimes used interchangeably with "sustainable development"'. For more see, Carpenter. S. R., 'Sustainability', in *Encyclopaedia of Applied Ethics*, ed. by Chadwick, R. (San Diego: Academic Press, 1998), vol. IV, pp. 275-293 (p.276)

future. For Dower, when somebody endorses a practice as 'sustainable', in addition to protecting the future, it is clearly expected to satisfy a range of moral criteria (whatever they may be) which the person/practitioner in question accepts. As Dower puts it:

> A form of development worth sustaining will at the very least not only protect the future, but also be : (a) just in terms of present social structures and practices of society; (b) non-damaging to the natural environment; (c) non-damaging to people in other countries; and (d) fair in relation to the like aspirations of other countries'.[13]

Sustainability is, as envisaged here by Dower, inevitably a quality crucial for desirable development practices, mainly because it satisfies moral conditions (such as the four proposed in the preceding quotation), and without which (or in the event of violation of any one of the proposed conditions) a form of development would be relatively unsustainable. Here, Dower seems to consider 'sustainability' as a necessary condition for the desirability of a particular form (or a practice) of development.

The similarity between Dower and many other proponents of economic and social development as well as environmentalists is that they all recognise a further requisite condition for 'sustainability' besides its meaning as a 'capability of being sustained'. The dissimilarity between them is that while Dower seems to categorically refer to 'desirability' as a necessary condition for sustainability, the environmentalists and the proponents of economic and social development refer to the capacity to serve a great many future purposes as a requisite condition for sustainability without making any precise reference to any specific purpose. However, it seems that there is no difficulty considering one or another of the

[13] Dower, N., 'Sustainability and the Right to Development', in *International Justice and the Third World*, ed. by Attfield, R. and Wilkins, B. (London and New York: Routledge, 1992), pp. 93-116 (p.112).

moral aspects of sustainability listed by Dower as a future purpose, thus suggesting that their approaches to sustainability can be mutually supportive.

At least two important questions, according to Robin Attfield and Barry Wilkins, could arise from Dower's approach to sustainability: firstly, do the concepts of 'sustainability' and 'desirability' bear the same meaning, or is one (sustainability) logically similar to the other (desirability)? Secondly, cannot a practice be both sustainable and either bad or indifferent (valuationally or morally)? Attfield, along with Wilkins, replied to the first query by considering what is for them the problematic case of 'sustainable arguments':

> …where sustainable arguments are sound or successful ones…their sustainability could thus be held to put them on a par with desirable entities in respect of their being fit to be desired. But where sustainable arguments are merely ones which are defensible, they may fail to be fit to be credited. [14]

Hence, sustainable arguments are not essentially desirable ones. Attfield and Wilkins turn next to sustainable processes:

> Often, of course, their very capacity for indefinite continuation itself makes sustainable processes or practices desirable; but this is far from invariably true, and thus, importantly, not a necessary truth. [15]

At this point, Attfield and Wilkins are not denying 'sustainability' as a merit, rather pointing out that to have this merit is not necessarily to have all possible merits for a desirable practice or process.

On another question, 'cannot a practice be both sustainable and either bad or indifferent (valuationally or morally)?' Attfield and Wilkins's reply involves a positive answer to this question. Taking an example from an area which is considered a paradigm of

[14] Attfield, R. and Wilkins, B., 'Sustainability', *Environmental Values*, 3. 2 (1994), 155-158 (p.156)
[15] Ibid

sustainability (i.e. policies that are applicable to forestry or fisheries) they state (especially about policies of Maximum Sustainable Yield) that:

> …resources [e.g. of forestry or of fisheries] are harvested up to the point where a greater yield would undermine self-replenishment; and resources thus remain available at this level for every succeeding generation… [But] such practices sometimes strike at the interests of other nonhuman species (of the ocean or of the forests), and are thus open to ethical objection.[16]

Attfield and Wilkins attempt here to emphasise the possibility of some decisive ethical objections (which might stem from their eventual bearing on the practice of existing policies on nonhuman lives and their interests) against policies of Maximum Sustainable Yield. This issue of moral vulnerability, as indicated by Attfield and Wilkins, characterises those policies as 'undesirable' or 'unjustified' (arguably being detrimental to nonhuman species) albeit 'sustainable' (in the sense that those policies could be practiced for the sake of the continuation of constant benefit for humanity, ignoring the interests of nonhuman life, into the indefinite future). For them 'such a characterization would seem no less coherent than phrases (used of other practices) such as "courageous but foolish" (e.g. whistling in the dark)'.[17] To justify their stance Attfield and Wilkins also refer to the instance of slavery and raise the question 'was not slavery such?' [18]

They go further to remind us that sustainability is, fundamentally, reliant on its scope or range, not on its good or bad bearings (while Dower maintains just the opposite and

[16] Ibid. p.157
[17] Ibid.
[18] Ibid. Here the key point is that slavery, as a system, can be practiced for an indefinite period of time, albeit undesirable.

recognises a necessary link between the norm of sustainability and morality). As they put this issue:

> …(in general) the broader the scope of a self reinforcing process, the greater is the likelihood of its remaining unassailed or intact…[T]ruly sustainable processes are liable to operate or be capable of operating worldwide – whether for better or for worse. [19]

In this part of the argument they try to argue that the issue of universalisability is also relevant to the concept of sustainability, not morality or desirability. To summarise their whole argument, a development policy or practice, although sustainable and capable of being operative world-wide (e.g., the policies of Maximum Sustainable Yield), can be undesirable or immoral.

Based on Attfield and Wilkins's stance, potential patterns in our practices with regard to sustainability could be divided into three categories: (1) sustainable, but unjust and undesirable; (2) sustainable, just and desirable; (3) sustainable, but morally indifferent. Presumably, the multiplicity of the form of sustainability practices led Attfield and Wilkins to assert the connection between issues of morality or desirability and the concept of sustainability.

By contrast, Dower's view, as mentioned earlier, sees fulfillment of a 'moral criterion' as inseparably linked to the concept of sustainability. In so doing he appraises 'sustainability' as a normative concept (i.e. sustainability, in terms of this connection, is an essential quality of desirable practices, or, in other words is seen as a morally loaded concept). From the aforementioned three patterns of sustainable practices, Dower might agree to endorse the second category of sustainability (sustainable, just and desirable) as the only option for a

[19] Ibid., p.158

'truly' sustainable practice. Wilfred Beckerman, however, maintains that it is misleading to envisage 'sustainability' as a moral concept:

> 'Sustainability' should be interpreted purely as a technical characteristic of any project, programme or development path, not as implying any moral injunction or over-riding criterion of choice.[20]

Here Beckerman straightaway rejects any possibility of a necessary connection between 'sustainability' and 'morality' or 'value'. This directly contests Dower's view and seems to support Attfield and Wilkins's stance, in a broad sense, though not utterly (because Attfield and Wilkins recognise that sustainability, in the context of a sound sustainability argument, may well play a role as one of the merits of the desirable practice in question).

Given the diversity of construal, sustainability could now be divided into three specific categories: the first type could be labelled the 'moral conception of sustainability' (e.g. Dower's approach to sustainability and also, in a sense, the approach of some proponents of economic and social development and some environmentalists fall into this category, which upholds the view that sustainability and morality are linked); the second type might be labelled the 'contingent conception of sustainability' (e.g. Attfield and Wilkins's approach to sustainability, which maintains that the connection between 'sustainability' and 'morality' or 'desirability' is contingent); and the third could be labelled the 'technical conception of sustainability' (e.g. Beckerman's approach to sustainability, which maintains that the link between sustainability and morality is neither critical nor contingent, but rather negligible, sustainability being itself a technical matter).

[20] Beckerman, W., "Sustainable Development': is it a Useful Concept?', *Environmental Values*, 3.3 (1994), 191-209 (p. 205).

Looking back to the preceding discussion, the points of agreement (i.e. 'capable of being sustained' and 'capable of being operated world-wide') between the thinkers here seem to be less crucial than the point they are disagreeing about (i.e. whether or not sustainability and morality are necessarily connected).

Now a question may well be asked: is the three-fold classification of sustainable practices plausible? Should it be sound, it may well direct us to the assumption that sustainability involves a contingent link to morality, which, in turn, confronts all other approaches considered here except for that given by Attfield and Wilkins. An example may be considered here, at the risk of simplification, in the Bangladesh Liberation War of 1971 against Pakistan (the then west wing of Pakistan). While most of the then west wing-based Pakistan military government's policy initiatives and their implementation (during the pre-liberation period) in the east wing of Pakistan (now Bangladesh) could arguably be considered compatible with the interests of the government and the people (of the west wing) themselves, and in that sense desirable to them, those policy initiatives may well be envisaged as hostile to the people of the east wing of Pakistan in terms of their socio-economic well-being, rights and autonomy, and hence being undesirable to them (the population of the east wing of Pakistan). To confront this fraught and discriminatory situation, the people of the east wing of Pakistan engaged in a war (or civil war, lasting for about nine months) against the west wing-based government of Pakistan and their military force, which eventually resulted in the independence of the east wing of Pakistan (i.e. the birth of People's Republic of Bangladesh) in 1971. Here, policy practices of the west wing-based government of Pakistan applied to the east wing could be envisaged as 'sustainable' in terms of their perceived ability to be continued into the indefinite future, and also for

their ability to serve the interests of the people in the west wing, however undesirable to the people of the east wing of Pakistan. The undesirability of those policy initiatives, as has been mentioned here, was substantiated through a civil war.

This example, however, supplies a further basis for the claim that a policy or practice could concurrently be sustainable and undesirable, which, in turn, seems to support Attfield and Wilkins' approach to sustainability. By the same token it appears to support the interpretation of sustainability that I have offered here through categorising sustainable practices into three types and arguing for the one defended by Attfield and Wilkins. A remark from Peter G. Brown concerning sustainability also seems to reaffirm the contingent-conception approach to 'sustainability', hence supporting my reading of the concept in question. In substantiating his understanding about the concept of sustainability Brown states that:

> The proliferation of modern weapons may be sustainable, but undesirable, nevertheless. [21]

There again the idea is that 'sustainability' could be comprehended as a characteristic of a starkly debatable practice or policy, and one far from desirable.

Let us return to Attfield and Wilkins's reply to the question 'cannot a practice be both sustainable and either bad or indifferent (valuationally or morally)?' Their reply seems to be plausible. Consider the example of tuna fishing which, as a practice of Maximum

[21] Brown, P.G., *Ethics, Economics and International Relations: Transparent Sovereignty in the Commonwealth of Life* (Edinburgh: Edinburgh University Press, 2000), p.85.

Sustainable Yield, may well be continued into the indefinite future, fulfilling human needs for generation after generation, and hence be sustainable. But it would also be immoral to continue with this, as tuna-fishing is a mortal threat to dolphins. Thus, the fishing of tuna can be seen to conflict with moral practice, despite being sustainable.

Likewise, a Maximum Sustainable Yield policy or practice with regard to forestry may well be sustainable in the sense that it is 'capable of being continued into the indefinite future' (allowing for some desirable practices of a society, such as fostering the scope of education, expanding medical facilities, and so forth), but undesirable in that it is not in the interests of animals in the forest. Consider the example. A policy of 'cutting down a certain proportion of trees in the forest' – a policy or practice of Maximum Sustainable Yield – could be sustainable (in the sense that it could be continued into the indefinite future and be able to serve human interests over the generations) being a promoter of some desirable practices, such as education and health facilities of a society, yet immoral or undesirable as detrimental to the safety and survival of the animals in the forest, for example monkeys who need deep forest for their normal movement and continued existence. These two examples are arguably capable of substantiating the claim that a practice could be sustainable without being moral, thus defending the contingent-conception approach to sustainability.

It now seems that the sustainability of a practice means it is able to be continued for an indefinite period of time as well as being able (where appropriate) to be operated worldwide. The concept of sustainability, indeed, remains a crucial (descriptive) characteristic of a system or a practice. However, it is misleading to maintain the view that being sustainable is synonymous with being desirable. The concepts of sustainability and morality are not inseparable; at times they can be overlapping, and at other times they confront each

other. The link between sustainability and morality is contingent (but not merely technical). The view of those normative ethicists, social theorists and environmentalists who maintain the view that they are inseparable is thus redundant. Separate concepts are therefore required to allow distinctive judgments to be made about the sustainability of a relevant practice, and about its justice. The next chapter involves an illustration of the meaning and implication of the concept of sustainability with regard to development.

Chapter Three

1.3 Sustainable Development: Contrasting Views, Meaning and Justification

1.3.1 Introducing Sustainable Development

There was a tendency in the environmental literature of the 1970s and the 1980s to refer to the concept of sustainability purely in issues of environmental concern.[1] Its use relating to development was initiated in the recent past (a little more than two decades ago) and since then hundreds of definitions of sustainable development have been made. The growing tendency to use the concept of sustainability in the context of development assumes explicit form in Stanley R. Carpenter's observation that 'it [sustainability] is sometimes used interchangeably with "sustainable development"'[2].

The official use of the concept of sustainable development began with the publication of the World Commission on Environment and Development's (WCED) report of 1987, *Our Common Future*[3] (widely known as the Brundtland Report). This report offers a definition of sustainable development, which has hitherto been the most extensively used and the most often quoted definition. Also this report received

[1] The Club of Rome, the first user of this concept of sustainability in its modern sense, used it as 'environmental sustainability' and brought it to extensive public attention in 1972 in its book *The Limits to Growth*. The core message of the book is that an ecological collapse would occur within the next hundred years owing to the rapid growth of the human population and uncontrolled increase in prosperity. For more see, Meadows, D. H., et al, *The Limits to Growth: Report For The Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972). Also see Attfield, R., 'Sustainability', forthcoming in: LaFollette, H. ed. *International Encyclopaedia of Ethics* (Oxford: Blackwell, 2013) p. 1.
[2] Carpenter. S. R., 'Sustainability', in *Encyclopaedia of Applied Ethics*, ed. by Chadwick, R. (San Diego: Academic Press, 1998), vol. IV, pp. 275-293 (p. 276).
[3] World Commission on Environment and Development (WCED), *Our Common Future* (Oxford: Oxford University Press, 1987), p. 43.

widespread attention from practitioners and scholars and sustainable development became an issue of lively debate after the adoption of various measures, which were not a direct interpretation of the report but embodied a weakened version of it, as agreed by the leaders of 192 countries from all over the world at the United Nations Conference on Environment and Development in 1992, which was known as the Earth Summit and whose findings have been published in Agenda 21.[4]

1.3.2 The Brundtland Definition of Sustainable Development

The definition of the concept of sustainable development, set out by the World Commission on Environment and Development in its report (i.e. the Brundtland Report), is:

> development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[5]

The underpinning of this pioneering definition is the importance of consideration for the needs of future generations above and beyond the needs of present generations. This theme has emerged as the core element in this definition of sustainable development. The underlying reason behind this is the consideration that human interventions in the environment have great implications for future generations.

The Brundtland definition of sustainable development has not only been employed 'throughout Agenda 21 and its supporting documents, but also in numerous

[4] United Nations Conference on Environment and Development, *Agenda 21*(UNCED: New York, 1992) <http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf> [accessed 15 March, 2012]
[5] WCED, p. 43.

documents published by governments and the private sector'[6]. As Johan Hattingh remarks on this definition:

> This dominant definition [the Brundtland Definition] is a major point of convergence in the world today within the environmental debate. [7]

A similar assertion is found in the reaffirmation of the principles of sustainable development adopted in 1992 at the Rio summit by the UN Millennium Declaration of 2000.[8] Furthermore, the same spirit has been repeated in the starting paragraph of the Johannesburg Declaration on Sustainable Development of 2002.[9]

Although the repeated affirmations of the spirit or the principles of the Brundtland definition of sustainable development (adopted at the Rio summit in 1992) in different subsequent summits obviously launched the concept of sustainable development on its path to wide popularity, relevant researchers into the field of development have been found to disagree about its adequacy. While for many it is a canonical definition[10], the dominant model[11] or the most frequently quoted classic

---

[6] Hattingh, J., 'The State of the Art in Environmental Ethics as a Practical Enterprise: a View from the Johannesburg Documents', in *Environmental Ethics and International Policy*, ed. by ten Have, H.A.M.J. (Paris: UNESCO Publishing, 2006), pp. 191-216 (p. 201).
[7] Ibid, pp. 200-201.
[8] United Nations, *United Nations Millennium Declaration*, General Assembly Resolution A/RES/55/2-55/2 (New York: United Nations, 2000) <http://www.un.org/millennium/declaration/ares552e. Html > [accessed 21 April 2009]

[9] World Summit on Sustainable Development (WSSD), *Johannesburg Declaration on Sustainable Development*, (Johannesburg: United Nations, 2002) <http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.> [accessed 21 April 2009]

[10] Sachs, W., 'Sustainable Development and the Crisis of Nature: On the Political Anatomy of an Oxymoron', in *Living with Nature, Environmental Politics as Cultural Discourse*, ed., by Fiseher, F. and Hajer, M. (Oxford: Oxford University Press, 1999), p. 28.
[11] Hattingh, J., 'The State of the Art in Environmental Ethics as a Practical Enterprise: a View from the Johannesburg Documents', in *Environmental Ethics and International Policy*, ed. by ten Have, H.A.M.J. (Paris: UNESCO Publishing, 2006), pp. 191-216 (p. 200).

formulation[12], for others it is an unsatisfactory definition and open to a variety of criticisms.

One of the main criticisms of the Brundtland Commission's definition of sustainable development is that, while economic sustainability, social sustainability and environmental sustainability are broadly recognised as the three main pillars of sustainable development in the current-relevant-literatures, there are no references to them in the definition of the Brundtland Commission. Hence, the suspicion arises how far sustainable development as defined by the Brundtland Commission will be able to proceed towards its professed goal. To begin with, the central point of advocacy of a sustainable form of society was the significance of limits to certain forms of growth, including ecological limits.[13] This idea was presumably grounded in the belief that the concept of 'growth' and that of 'development' (prone to involve qualitative aspects) are not identical. For instance, while the concept of development, as defended in chapter one, involves attainments of various economic and social goals and recognition of ecological limits, the concept of economic growth entirely skips over these goals and limits. As the Brundtland definition does not involve any explicit recognition of such limits, it has been criticised.

However, upon closer inspection, one might notice that although the Brundtland Commission does not overtly refer to the social and environmental aspects of sustainability, non-anthropocentric value issues or any form of limits to growth within the definition, it discusses those very issues on several other occasions at different stages of the report (e.g. the Brundtland report touches on the issue of limits to growth on page

[12]Holland, A., 'Must We Give up Environmental Ethics?', in *Environmental Ethics and International Policy*. ed. by ten Have, H.A.M.J. and others (Paris: UNESCO Publishing, 2006), pp. 191-216 (p. 119).
[13] Herman Daly and Dennis Clark Pirages belong to the group of proponents of sustainable forms of society. For details see Pirages, D. C., ed., *The Sustainable Society*, (New York: Praeger Publishers, 1977).

8; social and environmental aspects of sustainable development are discussed on page 75; page 57 of the report involves recognition of non-anthropocentric values). In a passage that makes the point explicit, Attfield says,

> There is no overt recognition of limits [in the Brundtland definition], even though the report goes on to show such recognition in the next sentence, and there is no overt recognition of environmental aspects of sustainability, although the report goes on to discuss 'socially and environmentally sustainable development', and even to recognize non-anthropocentric values.[14]

Thus it may well be argued that, despite recognition of issues of social and environmental sustainability and non-anthropocentric values in several places in the report, and also despite the good intent of the authors of the Brundtland commission, the definition in question under-defines the concept of sustainable development as a result of not expressing concern about ecological limits and non-anthropocentric value-issues (or through remaining silent about such issues) in the definition. Besides, the Brundtland commission's definition of sustainable development seems to serve only to articulate concern about meeting the needs of contemporaries and their descendants as opposed to introducing benevolent practices which contemporaries could endorse and convey to their descendants.[15]

A further limitation of the Brundtland definition is the use of the criterion of 'needs' in defining the concept of sustainable development: the criterion of 'needs', used in the definition, is vague and misleading. Wilfred Beckerman in this context argues that 'such a criterion is totally useless since "needs" is a subjective concept'[16]. He adds that:

---

[14] Attfield, R., *Environmental Ethics*: An *Overview for the Twenty-First Century* (Cambridge, UK: Polity Press, 2003), p. 128.
[15] Ibid.
[16] Beckerman, W., "Sustainable Development': is it a Useful Concept?', *Environmental Values*, 3.3 (1994), 191-209 (p. 194).

> People at different points in time, or at different income levels, or with different cultural or national backgrounds will differ about the importance they attach to different "needs". Hence the injunction to enable future generations to meet their needs does not provide any clear guidance as to what has to be preserved in order that future generations may do so. [17]

Here Beckerman tries to clarify that the desirability of 'needs' (e.g. for a particular stuff) may well differ from time to time, place to place and person to person. What is crucial to a person now could be trivial afterwards; also what is a 'need' to someone could be unnecessary to somebody else. Beckerman here seems to have got the point right. For it has not been clarified in the definition which needs – crucial or trivial, survival or luxury – are essential to the realisation of sustainable development.

Wolfgang Sachs goes along with Beckerman's observation, suggesting that the Brundtland definition leaves two crucial questions -- 'What needs?' and 'Whose needs?' -- open or unanswered; and it resolves the dilemma 'nature versus justice' in favour of nature by sidestepping the crisis of justice. As Sachs formulates the questions and responds to them:

> Is sustainable development supposed to meet the needs for water, land, and economic security or the needs for air travel and bank deposits? Is it concerned with survival needs or with luxury needs? Are the needs in question those of the global consumer class or those of the enormous numbers of have-nots? The Brundtland report remains undecided throughout and therefore avoids facing up to the crisis of justice. [18]

---

[17] Beckerman, W., 'The Chimera of Sustainable Development', *The Electronic Journal of Sustainable Development,* 1.1(2007)< http://173-45-244-96.slicehost.net/docs/The_Nature_of_Sustainable_Development.pdf>[accessed 22 April 2009]

[18] Sachs, W., 'Sustainable Development and the Crisis of Nature: On the Political Anatomy of an Oxymoron', in *Living with Nature, Environmental Politics as Cultural Discourse*, ed., by Fiseher, F. and Hajer, M. (Oxford*:* Oxford University Press, 1999), pp. 23-41 (p. 29).

Here Sachs attempts to clarify that, in the key area of justice[19], the Brundtland definition is unlikely to play any role or be operative. Furthermore the definition in question entirely omits issues of environmental limits (i.e. environmental sustainability).

Given this, searching for an alternative to the criterion 'needs' seems to be essential in order to tackle the challenge posed by its ambiguous use in the Brundtland definition. Our needs are of various kinds, but all the varieties are not equally crucial. Thus, specifying our needs and then prioritising them could be an alternative solution to the challenge in question. The need of a malnourished individual for basic nutrition is clearly more important and urgent than the need of a rich individual for an expensive meal. The meeting of the basic needs of every individual, therefore, should be the priority in development. Specifying the basic needs is also not impossible because basic needs foreseeably remain almost the same (or hardly differ) across people all over the world irrespective of their colour, shape, race, period or place of birth, culture, education and so forth. What may differ widely here are the satisfiers of the basic needs, not the basic needs themselves. For example, a need to be without disease and a need for satisfactory shelter can be specified as basic needs without consultation of the relevant people in all races, classes and political orientations. And such specifications of basic needs are not representative of any particular metaphysical standpoint, or rigidly prescriptive view or specification.[20] Thus the challenges (specifically the problem of ambiguity with the criterion 'needs') may well be tackled through replacing the criterion 'needs' with the criterion 'basic needs'.

---

[19] Justice is used here to mean a state where questions, such as 'What needs?' and 'Whose needs?' are tackled in a clear and decisive manner.

[20] For details see Alkire, S., 'Dimensions of Human Development', *World Development,* 30. 2 (2002), 181-205.

Now an essential question may well be asked: is the 'basic needs' approach to sustainable development capable of addressing all three of the main pillars of economic, social and environmental sustainability? One might say that it only addresses issues of economic and social sustainability, not environmental sustainability. In my view, the answer is promising (i.e. it addresses all three pillars) for two reasons. Firstly, through the practice of the basic needs approach, the gap between available resources and resources required can significantly be lessened, and consequently the target of economic sustainability can be achieved. The basis of this optimism is the view that fewer resources are needed for lessening the gap in question in a given period if meeting basic needs is the main objective, and also more resources become available with the practice of such a theory of the controlled use of resources as the basic needs approach.[21] Secondly, through encompassing non-material needs (such as self-determination, self reliance, political freedom and security, participation in making the decisions that affect citizens and a sense of purpose in life and work[22]), the basic needs approach seems to be capable of addressing various challenges of social sustainability (such as huge illiteracy, gender discrimination and the like). Thirdly, over and above economic sustainability, the practice of the basic needs approach is also capable of addressing issues of environmental sustainability by reduced use of resources and the availability of more resources.

Although resolving the conflict between the satisfying of the basic needs of some and the affluent lifestyle of others is not entirely difficult, resolving conflicts between finely balanced needs and desires is more difficult. Despite the advantages mentioned above, the use of basic needs criteria might not be unequivocally operational in such a case. In this case institutions, tempered by reason, can offer guidance for making

[21] Streeten, P., 'The Distinctive Features of a Basic Needs Approach to Development', *International Development Review*, 19.3 (1997), pp. 8-16.
[22] Ibid

priorities between conflicting needs. In order to meet 'basic needs' it may well be necessary temporarily to pursue projects that might not essentially be in line with sustainable development. Now a question may well be asked: is it acceptable to pursue a project that does not go directly in line with sustainable development? The answer is yes. For although such a project cannot be called a sustainable project, it would be expected to be adopted with a super-ordinate aim of reaching sustainability, eventually becoming supportive of the main objective of sustainable development, fulfilment of the basic needs of individuals. For example, a famine relief project is not a policy in line with sustainable development itself, but it would certainly be a good project to be undertaken before starting off a development activity which is sustainable. Projects that involve measures for making humans free from various diseases would also qualify as examples of good but not always sustainable projects.

One might not, however, be convinced by this adjustment (by virtue of the proposed new criterion 'basic needs') and may well have doubts about the accuracy and or adequacy of this adjusted formulation. The proponents of the capabilities approach (which has been often recognised as one of the most promising contributions to the discourses on development) present a thorough critique of the basic needs approach. Among the most famous critics are Amartya Sen and Martha C. Nussbaum. While the capability approach was pioneered within economics by Amartya Sen, Martha C. Nussbaum initiated the same approach within philosophy.

Amartya Sen, criticising the basic needs approach, notes that:

> …certainly, people have 'needs', but they also have values, and in particular, they cherish their ability to reason, appraise, act and

> participate. Seeing people in terms of their needs may give us a rather meagre view of humanity. [23]

Thus Sen argues that (sustainable) development is not to be defined either as an increase in GDP per capita, or in consumption, education, or health measures alone, or even as the fulfilment of (basic) needs, but rather as something else (i.e. expansion of capabilities[24]). In 'The Concept of Development'[25], Sen focuses on the valuational aspects of development and redefines the concept so that the concerned people get clearer about what changes they want to bring about or at least promote.

As a value laden concept, development, for Sen, encompasses human well being, quality of life and standard of living, and thus it aims at improving the types of life human beings are living. He also asserts that development is not all about theory and it is a matter of practice as well, which is why it is very important to define or conceptualise development in relation to what humans can and should be and do (beings and doings). To cover beings and doings Sen employs the term 'functionings'. In light of this understanding, he then defines 'development' as improvement of certain human functionings and the expansion of human capabilities to so function. Capabilities, as he states, are a person's or group's freedom[26] to achieve or promote functioning. They are also promoters of reasonable/real choices. But the selection of capabilities, he says, is a matter of value judgment, although he maintains that selection has to be done explicitly, and through a process of public debate, where possible.

---

[23] Sen, *A.,* 'Why We Should Preserve the Spotted Owl', *London Review of Books,* 26.3(2004), pp. 164-184 (p. 164).

[24] Capabilities are functionings that may relate to our existence (capability to drink clean water) or may not (those doings that are less crucial in term of our existence, such as capability to eat rich sweets or to visit relations). For details see Alkire**,** pp.181-205

[25] Sen, A., 'The Concept of Development', in *Handbook of Development Economics*, ed. by Chenery, H. and Srinivasan, T. N. (Amsterdam: Elsevier, 1988), pp. 9-26.

[26] The concept of 'capability', as has been explained by Sen, involves expansion of freedoms (substantive freedom). The word 'freedom' has been re-established and construed by Sen as referring to the enhancement of 'human capabilities' which entail decision making processes, plus prospects to attain desired results, in other words, the substantive freedom and enhancement of real choices that surely people have reason to value.

Sen suggests that, for a satisfactory analysis or definition of the concept of sustainable development, it is necessary to shift away from our focus on Brundtland's definition to one which concerns:

> the capabilities of people in the present without compromising the capabilities of people in the future. [27]

Here Sen's interpretation seeks to remedy a supposed failing of the Brundtland definition which is rooted in the Brundtland Commission's over-reliance on the criterion 'needs' in expounding the meaning of the concept of sustainable development.

Sen's capability approach, however, is not beyond criticism either. Firstly his approach seems to be non-operational. For the range of functioning of basic human capabilities in Sen's approach is not precise. And absence of specificity and direction as to what sorts of capabilities are central is what makes Sen's approach non operational. Being indecisive, it also fails to determine the nature of the good life.

Secondly, Sen's capability approach is anthropocentric[28] by being restricted to the analysis of human-related development issues alone (i.e. by advocating the expansion of human capabilities alone), not those of non-human living creatures. And being anthropocentric, his view will not be appropriate to define sustainable development adequately, because non anthropocentric values (such as the intrinsic value of non-human living creatures, and the significance of species and ecosystems, in terms of their

---

[27] Sen, A.K., *The Ends and Means of Sustainability*, (Tokyo: Key note address at The International Conference on Transition to Sustainability, May 2000) <.http://www.iisd.org/pdf/sen_paper.pdf> [accessed: 16 March 2012]

[28] P.B. Anand defies this objection and states that "the universalism inherent in the 'capability approach' is far from anthropocentric". A debate may well be continued on this issue. But there is no room here to continue it. For more see Anand, P.B., 'Capability, Sustainability, and Collective Action: An Examination of a River Water Dispute', *Journal of Human Development* 81 (2007), 109-132 (p. 126).

distinctive roles, for the continued existence of all bearers of intrinsic value including humans) lie at the heart of environmental sustainability, one of the three pillars of sustainable development.

Martha Nussbaum, a leading scholar of Aristotelian ethics, has been evolving the same (capabilities) approach with special emphasis on its philosophical underpinnings as well as its suitability to supply a list of central human capabilities. Being enormously influenced in her thinking by Aristotle's idea of human functioning, Marx's idea of 'the truly human' and Kant's notion of the 'inviolability and the dignity of the person', Nussbaum has developed a neo-Aristotelian account of universal values as a foundation for basic political principles (with the capacity to override competing political theories and social norms). Articulating Aristotle's notion of human functioning (human flourishing) in terms of capabilities (the set of valuable beings and doings), she identifies a list of basic capabilities which have value in themselves. For her, the items of the list are just separate components, distinct in qualities, and thus need to be addressed separately. A detailed account on one item of the list, she argues, does not cover the necessity or value of another one; thus promoting one item at the expense of another is eventually in vain (i.e. goes against human well-being). She acknowledges that the list of central capabilities is not complete or rigid, but rather flexible, and open to be tested (her list of central human capabilities has been revised several times[29]) against the strength of our intuitions. She wraps up her position by noting that:

> ...the use of the list is facilitative rather than tyrannical: if individuals neglect an item on the list, this is just fine from the point of view of the political purposes of the list, so long as they don't impede others who wish to pursue it. And if they pursue an item not on the list, that is to be expected, and

[29] The most recent version of Nussbaum's central human functional capabilities list has employed the headings: (1) life, (2) bodily health, (3) bodily integrity, (4) senses, imagination, and thought, (5) emotion, (6) practical reason, (7) affiliation, (8) other species, (9) play, (10) control over one's environment.

> exactly what the list is meant to make possible. It is in this sense that the list is, emphatically, a partial and not a comprehensive conception of the good.[30]

It is apparent here that Sen and Nussbaum are concerned with developing a theory that is not only normative and empirical but also capable of directing policy. There is no doubt that this 'capabilities ethic', in some respects, is an outstanding contribution to the development discourse. As David A. Crocker puts it:

> One reason for the importance of this 'capabilities ethic' is that it fruitfully links, without confusion or fusion, those elements that have been unfortunately and even disastrously separated.[31]

But, as it seems to me, Nussbaum's version of the capabilities approach has been more successful than Sen's one. Firstly, by arriving at a list of central elements of 'truly human functioning', unlike Sen she intends direct political and constitutional application, and thereby seems to be successful in defending the capabilities approach from being criticised as non-operational. Secondly, Nussbaum's version is quite penetrating in the sense that, regardless of whether or not it is a thoroughly anthropocentric view, it gives a worthy clarification to the importance of the 'capability ethics' that is compatible with and supportive of economic and social sustainability (two pillars of sustainable development) in terms of being functional in realising the wellbeing of contemporaries and future generations.

---

[30] Nussbaum, M.C., *Women and the Human Development: The Capabilities Approach* (Cambridge: Cambridge University Press, 2000), p. 96.
[31] Crocker, D. A., 'Functioning and Capability: The Foundation of Sen's and Nussbaum's Development Ethic', *Political Theory*, 20.4(1992), 584-612, at page 588.

Furthermore, granted that Nussbaum apparently expresses concern for 'other species' by putting this phrase in the list of central human functional capabilities, her version becomes distinct from Sen's. But, since she does not recognise the view that non-human living creatures have functional capabilities, her approach is anthropocentric, and thus warrants criticism on account of being so. As in Sen's approach, the issue of environmental sustainability has been omitted in Nussbaum's approach, and such omission leaves her approach open to criticism.

But still, to return to the basic needs approach, one serious objection, raised by Sen, remains to be answered: is the basic needs approach free from the objections (i.e. that the criterion 'needs' is ambiguous and thus misleading; and that the criterion 'basic needs' does not address the 'valuation aspects' of development or issues of 'humanity' relevant to sustainable development) that have been held relevant concerning the use of the criterion of needs in the Brundtland definition? Here are two reasons to be optimistic about the basic needs approach being free from the objections: (1) as opposed to the ambiguous use of the criterion 'needs', the 'basic needs' criterion is relatively precise, and comprises specified human needs; (2) Sen is not right in claiming that the criterion 'basic needs' omits the valuation aspects of development or issues of humanity relevant to sustainable development because, as Paul Streeten rightly maintains, the basic needs approach includes a range of non-material values[32], which effectively correspond to such valuation issues of development. Examples include, according to Streeten, self-determination, political freedom and security, participation in making the decisions that affect workers and citizens, national and cultural identity, and a sense of purpose in life and work. The plausibility of this assertion becomes more apparent when Streeten goes further on to say that:

[32] Streeten, p. 50.

> BN [basic needs] is concerned not only with the undetermined but also with the unemployed: the aged, the sick, the disabled and orphaned children.' [33]

This attests to the view that the basic needs approach undeniably integrates economic sustainability and social sustainability, two pillars of sustainable development, through suitably focusing on material and non-material needs. Furthermore, this approach, as has been mentioned earlier, seems to uphold the issue of environmental sustainability, the third pillar of sustainable development, through advocating the reduced use of resources and availability of more resources.

1.3.3 The Caring for the Earth Definition of Sustainable Development

Although the Brundtland definition, as has been observed earlier, addresses issues of economic and partly social sustainability, another central issue, i.e. environmental sustainability, was less than explicitly addressed there.[34] Given this, the United Nations Environment Programme (UNEP) Caring for the Earth later redefined the concept of sustainable development (with a view to avoiding such limitations) as:

> improving the quality of life while living within the carrying capacity of supporting ecosystems. [35]

This is, indeed, another widely recognised classical and/or core definition[36] of the concept of sustainable development. This definition relates 'development' to the idea of

---

[33] Ibid, p. 50.
[34] Attfield, 2003, p.128.
[35] The United Nations Environmental Programme/World–Wide Fund for Nature/World Conservation Union, *Caring for the Earth*: *A Strategy for Sustainable Living* (London: Earthscan, 1991). Also available at <http://coombs.anu.edu.au/~vern/caring/care-earth1.tx>[accessed 20 January 2012] (Ch.1)

[36] Jacobs, M., 'Sustainable Development: A Contested Concept', in *Fairness and Futurity: Essays on the Environmental Sustainability and Social Justice,* ed. by Dobson, A. (Oxford: Oxford University Press, 1999), pp. 21-45 (p. 23)

'quality of life' explicitly, and recognises environmental limits, while in turn remapping the contours[37] of sustainable development. At the same time it involves progress towards discernment of the meaning of sustainable development from the point of view of justice; and here lies its main strength. The definition seems further to recognise distinctions between growth and development, which also involves progress towards a better understanding of the concept of sustainable development.

Nevertheless, to begin with, the Caring for the Earth definition remains silent about 'needs' (any type: basic or luxury), which is clearly a drawback. The Caring for the Earth definition concurrently, however, appears unintentionally to define sustainable development as an improvement in levels of human wellbeing in perpetuity (although not overtly so); and here lies arguably the central implication or, to be more specific, the central limitation of it. The commendation of the uninterrupted improvement of human wellbeing of this definition is rooted in the UN Declaration on the Right to Development of 1986, where the enthusiasm for uninterrupted improvement was candidly mentioned.[38] This commendation is both impractical and immoral: impractical in the sense that it conflicts with the Second Law of Thermodynamics[39]; and immoral in the sense that it imposes an unwarranted load on earlier generations to facilitate

---

[37] Economists who appraise the Caring for the Earth definition envisage human wellbeing as the only contestant being sustained. This is understandable because human wellbeing has intrinsic value from most viewpoints. But envisaging human well being as the one and only issue to be sustained is too narrow a view. For having goods and interests and also having the capacity to flourish (for details see chapter three of Part Two), non-human entities are bearers of intrinsic value like human beings. Hence the goods and interests of non-human entities merit being sustained. Besides, species and ecosystems, on which the continued existence of all living entities depends, also warrant being protected insofar as human capacity allows.

[38] United Nations, *Declaration on the Right to Development*, (New York: United Nations, 1986) http://www.un.org/documents/ga/res/41/a41r128.htm [accessed 15 March, 2012]

[39] According to the 2nd law, energy that has been lost due to interaction and transformation will not be recoverable by reversing the process. For details see, *Chemistry for the Gifted and Talented: the Second Law of Thermodynamics* (London: Royal Society of Chemistry: Advancing the Chemical Science, 2012) <http://www.rsc.org/learnchemistry/content/filerepository/CMP/00/000/673/32.%20the%20second%20law%20of%20thermodynamics.pdf>[accessed 15 June 2012]

relentless improvement of the quality of life for their descendants. Attfield remarks it as an 'unfair burden' for the earlier generations, in a passage which reads as follows:

> This [definition] seems inequitable, and might also involve unfair burdens for earlier generations if they were required to make sacrifices to facilitate continual improvements of quality of life for their successors.[40]

Wilfred Beckerman maintains that there is no logical reason for making all successors' lives better than those of their predecessors.[41] And he eventually rejects the entire concept of sustainable development on grounds of justice between generations (intergenerational justice).

Furthermore the Caring for the Earth definition warrants criticism for misrepresenting the concept of 'carrying capacity'. Carrying capacity is a biological concept, which is only applicable to non-human species, not to human beings. But this definition seems tendentiously to apply this concept to human populations. If we look back through the history of famine, what we find is that famine did not always occur in countries where the so called carrying capacity was exceeded. The flow of food and other environmental goods over borders, thanks to political will and transport expediency, has been found to defend many countries from the worst effects of famine, which is sometimes said to have occurred as a result of inadequate production of food within the territory of the country in question. Contrariwise, famine has been found to occur in a country where production of food was sufficient to feed its resident population, but

---

[40] Attfield, R., 'Development Ethics' (Cardiff University: ENCAP, Philosophy Section (unpublished)), pp.3-4

[41] Beckerman. W., 'Sustainable Development and Our Obligations to Future Generations', in *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*, ed. by Andrew Dobson (Oxford: Oxford University Press, 1999), pp. 71-92

when some of that population could not afford to buy the food they needed. Consider the following example.[42] USA, Europe and Japan all have exceeded the carrying capacity of land within their boundaries, yet all three regions have managed to avoid famine by importing the required amount of food support as well as exporting surplus production. Thus it seems that carrying capacity is not applicable to human populations of any ecological region, although it can sensibly be applied to the ecosystems of the earth as a whole and to non-human species which entirely count on their habitats for their subsistence food. As the Caring for the Earth definition applies this concept to human populations who are not confined to their supporting ecosystems for subsistence food, it involves an obvious misuse of the concept of carrying capacity. Thus correctly criticising this application as a misleading one Attfield states that:

> [Carrying capacity is] the capacity of a particular territory to support no more than a certain fixed number of a given non-human species. [But] this biological concept has sometimes been applied tendentiously to human populations, as if such populations were unaffected by trade and by social and international decisions. [43]

Now questions remain: (1) whether or not the commendation of perpetual improvement in human well-being level, which problematises the Caring for the Earth definition of 'sustainable development', can be repaired, and also (2) whether or not the difficulty arising due to the employment of the concept of carrying capacity in this definition can be overcome. The realisation of the unfulfilled basic needs of every individual is a pressing need. Thus the practice of the 'basic needs' realisation involves a continual improvement in the levels of human wellbeing (which is development) until

[42] Vanderheiden, S., 'Two Concept of Sustainability', *Political Studies*, 56(2008), pp. 435-455. (Note 5, p. 454).

[43] Attfield, 2003, p. 189.

and unless these improvements through development are sufficient to realise all unfulfilled basic needs at the individual level. Thus development involves total participation of each individual all over the world. Success in realising unfulfilled basic needs will positively help improve human wellbeing at some acceptable level, and such improvement (through the realisation of basic needs) will, in favourable circumstances, be sustainable in perpetuity. Furthermore, it is worth mentioning here that the concept of 'basic needs' is compatible with some other needs that are required to be met (such as needs for cooperation, self respect and so on) being met, without contradiction. This seems to be supportive of my basic-needs-based revised approach to sustainable development.

Alan Carter's perspective on the concept of sustainable development seems to be supportive of the interpretation I have given in the paragraph above, and thus worth mentioning here. For Carter, there is no need to confine the concept of sustainable development to refer to a process of change which continues forever, because within the mainstream 'development theory', as he says, some are found to argue that a precondition for 'political modernisation' is a society achieving a certain level of economic development. Thus, he says we could plausibly use the concept of sustainable development to refer

> …to the attainment of a certain level that is viewed as a precondition for sustainable life styles: 'development for sustainability' in other words. [44]

For him the idea of a certain level of economic development and commendation of attainment of that level in human wellbeing in perpetuity lie at the heart of a sustainable life style. Carter's observation seems to be compatible with my criticism and suggested revision of the Caring for the Erath definition of sustainable development. While

[44] Carter, A., 'Distributive Justice and Environmental Sustainability', *The Heythrop Journal*, XLI (2000), 449-460 (p. 451).

arguably the main strength of Carter's notion of a certain level of development is implicit in the commendation of perpetual endeavour for the attainment of a certain level of economic development, the main strength of the notion of basic needs, adopted by myself, is by the same token implicit in the commendation of perpetual endeavour for the fulfilment of basic needs. As opposed to the suggestion of the Caring for the Earth definition, both Carter's suggestion and the one I have tried to develop here seem plausible. For, as has been mentioned earlier, a non-stop improvement in the quality of human life is not practicable (for it conflicts with the second law of Thermodynamics) and not moral either (for this very practice gives emphasis to the betterment of future generations which, in turn, imposes unfair burdens on the present generation).

Interpreted appropriately (in particular as has been suggested in the paragraph above), the commendation of the Caring for the Earth definition (i.e. the constant improvement of the wellbeing of the entire population) can still be seen as consistent with the three main pillars of sustainable development: economic, social and environmental sustainability.

Given all this, however, it is now apparent that neither of the two attempts by the UN at a definitional formulation seems to be adequate as they stand. While the definition of the Brundtland Commission is flawed mainly for leaving the issue of sustainability under-defined (i.e. for omitting the issue of environmental sustainability) and using the vague criterion 'needs', the Caring for the Earth definition is flawed mainly for commending (albeit indirectly) a perpetual improvement at the level of human wellbeing and inappropriately applying the biological concept of carrying capacity to human populations, as well as for remaining silent about human 'needs' (or preferably basic needs). Thus a satisfactory or convincing definition of sustainable development must

make provision for addressing at least all the missing aspects, as mentioned above, of the Brundtland definition and the definition of Caring for the Earth; otherwise the claim of those who interpret the concept of sustainable development as a meaningless slogan or as a mere buzzword will begin to sound substantial.

Before I head towards a conclusion about how we should define or best interpret the concept of sustainable development, it is worth mentioning how economists address the concept in question. Economists' theories of sustainability are broadly distinguished as 'strong' and 'weak' versions of sustainability. This distinction is based on the debate about what categories of 'capital' (such as manufactured, or humanly generated, or natural capitals) are to be maintained.[45] The strong version of sustainability involves an emphasis on natural capital and rejects the substitution of manufactured or humanly generated capitals for the natural kind, while the weak version of sustainability entails that aggregate capital (manufactured + human + natural) has to be maintained over time and endorses unlimited substitution between categories as long as aggregate capital remains non-diminishing.

The central focus of a range of recent works has been on the debates surrounding this distinction. Wilfred Beckerman, Herman Daly and Michael Jacobs are found to have exchanged views on this issue in *Environmental Values* during 1994 and 1995, which, according to Andrew Dobson, is a unique guide to this debate.[46] There is no choice but to be very brief in discussing this exchange. Beckerman criticises both the strong and the weak versions of sustainability. Criticising the strong version, he states that it is morally

[45] Victor, P. A., J. E. Hanna and A. Kubursi. 'How Strong is Weak Sustainability?', *Sustainable Development: Concepts, Rationalities and Strategies* (Dordrecht: Kluwer, 1998), pp. 195-210(p. 196).

[46] Dobson, A. 'Environmental Sustainability: An Analysis and a Topology', *Environmental Politics*, 5.3 (1996), pp. 401-428.

repugnant as well as totally impractical as it suggests deploying resources to protect natural capitals (such as minerals, air, water, soil, flora, fauna, and ecosystems), which 'could otherwise have been devoted to more urgent environmental concerns, such as increasing access to clean water or sanitation in the third world'[47]. Criticising the weak version of sustainability, Beckerman argues that it 'offers nothing beyond traditional economic welfare maximisation'[48].

Contrariwise, Herman Daly maintains that while Beckerman's rejection of the weak version of sustainability is praiseworthy, his understanding of strong sustainability 'is based on his mistaken definition of sustainability'[49]. Beckerman's misrepresentation of strong sustainability is implicit in the assumption that man–made capital and natural capital are substitutes. For Daly, they are, rather, complementary[50], not substitutes. He adds that, if the truth were the other way around, we would have been able to build, for example, the same house with half the materials (timbers), substituting extra saws and carpenters for the missing materials (timbers) in question. Thus Beckerman's representation of strong sustainability seems unduly strong, and by the same token his criticism of strong sustainability as morally repugnant seems unsound.

Michael Jacobs, another participant in this debate, complements Daly's standpoint, maintaining the view that 'natural and human-made capitals are not infinitely substitutable'[51]; they can only be complementary. For, according to Jacobs, there are some valued functions and services of the natural environment which are not

[47] Beckerman, W. "'Sustainable Development': Is it a Useful Concept?" *Environmental Values* 3 (1994): pp.191-209, at p. 205.
[48] Ibid., p. 191.
[49] Daly, H., 'On Wilfred Beckerman's Critique of Sustainable Development', *Environmental Values*, 4.1(1995), p. 53.

[50] With a view to clarifying the notion of 'complementary', Daly refers to several concrete examples. He writes, 'what good is a saw-mill without a forest; a fishing boat without populations of fish; a refinery without petroleum deposits? Ibid. p. 51.
[51]Jacobs, M., 'Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman', *Environmental Value,* 4.1 (1995), 57-68 (p. 59).

exchangeable '*however much* human-made capital is offered in return'.[52] And this assumption involves the need and efficacy of sustainability as a 'constraint' on welfare maximisation, and plays the role of a radical response to Beckerman's complaint against the strong version of sustainability relating to the issues of constraints. Given this debate, the strong version of sustainability seems to be a satisfactory one as opposed to weak sustainability. The strong version of sustainability, through maintaining that the relation between man-made capital and natural capital is essentially one of complementarity, not substitutability (which is in turn supportive of provision for future generations), better fits the concept of sustainable development, and vice-versa. Furthermore, the strong version of sustainability (as opposed to Beckerman's too strong version of sustainability), appears to be committed to broader principles better meeting the three key requirements of sustainable development: economic, social and environmental sustainability.

The Brundtland report, by referring to social and environmental issues as well as non-anthropocentric value concerns, seems to have a strong and inevitable appeal in this context. What is needed when we distinguish loopholes in the UN definitions of sustainable development is to try supplying an adjusted version of it, so that the UN definitions become free from all anticipated criticisms (at least the ones that have been discussed above), and also merit appreciation from the perspective of the above mentioned strong version of sustainability as regards the use of various capitals.

The cure of the major difficulties with the Brundtland definition, as thus suggested above, involves two measures at the very least: (1) replacing the criterion 'needs' with the criterion 'basic needs'; and (2) overtly recognising the issues of environmental limits in the definition (a recognition which involves expression of concern for various non-anthropocentric value issues such as the goods and interests of

[52] Ibid. p. 63.

nonhuman life, and recognition of the values of different species and ecosystems and their role in protecting the life of all the bearers of intrinsic value on earth). The cure of the Caring for the Earth definition, on the other hand (as has been argued above), involves two measures as well, at the very least: (1) entirely rejecting the misleading use of the concept of carrying capacity, and (2) interpreting the commendation of perpetual improvement of the definition in a qualified sense, i.e. duly interpreting the scope of development (in order, as suggested above, to prioritise basic needs), a measure that makes it socially and environmentally sustainable.

1.3.4 Redefining Sustainable Development

Understood as has been argued above, sustainable development could then plausibly be (re)defined as the state of a society that implements a procedure leading to attaining a certain level of economic wellbeing which is capable of satisfying the basic needs of contemporary and future human beings without compromising the opportunity for other living creatures to meet their basic needs, and which is also capable of being continued indefinitely both socially and environmentally.

Now the question arises: are the UN definitions (i.e. the Brundtland definition and the Caring for the Earth definition) of sustainable development defensible in consideration of the understanding of the concept of 'development 'and 'sustainability', which I argued and defended in chapter one and chapter two? As has been argued in these chapters, an improvement of a very partial kind, which does not address the environmental issues relevant to it, can be called development (chapter one), but it cannot be called sustainable development, since the pursuit of such a development does

not address environmental limits and thus would fail to continue for an indefinite period of time and cannot be practiced world-wide (chapter two).

Form the findings of chapter one and chapter two as regards the traits of the concept of 'development' and 'sustainability', it can now be maintained that there are at least three key elements in sustainable development (which are widely recognised as the three main pillars of sustainable development): economic sustainability, social sustainability and environmental sustainability, suggesting that the pursuit of improvements can be called sustainable development if and only if it is capable of addressing all three elements mentioned above.

When the crucial problems have been identified and revised appropriately (in line with the revision suggested in the paragraphs above), the UN definitions of sustainable development in question seem to be consistent with the understanding of the concept of 'development' and 'sustainability', which I argued and defended in chapter one and chapter two. For the revised definition of sustainable development, which amounts to a joined-up approach derived from blending the two non-comprehensive and on occasion misleading UN definitions of sustainable development discussed above, seems satisfactorily to address all three pillars of sustainable development: economic, social and environmental sustainability.

Now two further but very significant questions may well be asked: Is the revised version of the UN definitions of sustainable development required to make sustainable development always morally satisfactory? Is the revised version of sustainable development required in actual fact morally attractive? The answer to the first question is 'no'. For, as we argued in chapter two, the desirability or morality of actions or policies has nothing to do with their sustainability because the connection between sustainability

and morality is not necessary, but merely a contingent one. In the light of this understanding of the concept of sustainability, in distinguishing a practice or a scheme of sustainable development, we only need to see whether or not the policy or practice in question is able to be sustained for an indefinite future as well as able to be practised world-wide, not whether or not the policy or practice is morally desirable. As I argued in the same chapter, the so called policies of Maximum Sustainable Yield are the typical examples of sustainable development; but they are, on occasion, open to moral criticism.

The answer to the second question, on the other hand, seems to be 'yes'. For, although as a definition of sustainable development, the revised definition need not make sustainable development morally desirable, as a matter of fact it appears more likely to make it ethically attractive. For, as has been argued earlier, (1) my revised definition of the UN definitions of sustainable development (suggested by the basic needs approach) is capable of addressing various issues of justice that the concept of sustainable development encompasses, which neither of the UN definitions can adequately address as they stand. The employment of the idea of basic needs in the supplemented definition, suggesting a practice of controlled use of resources, seems to help in attaining economic, social and environmental sustainability. (2) While through lessening the use of resources as well as increasing the availability of resources the supplemented version seems to be capable of addressing intra-generational justice, it seems to be capable of addressing environmental sustainability through furthering the scope of the basic needs approach to include the goods and interests of non-human living creatures (which qualify them to be bearers of intrinsic value like their human contemporaries). And this in turn attests the view that the basic needs approach is capable of addressing issues relating to our duties to protect species and ecosystems the preservation of which is indispensable for the

continued existence of all the bearers of intrinsic value (for details see chapter three in Part Two) without contradiction.

Furthermore, as has been argued earlier, emphasising a satisfactory quality of life through the attaining (by deprived societies) or the maintaining (by developed societies) of a certain stage of improvement in human wellbeing levels (i.e. basic needs) in perpetuity, the supplemented version importantly seems to envisage intra-generational justice as an advance towards intergenerational justice. And in so doing it attempts to reinterpret the UN definitions of sustainable development in a plausible manner. More importantly this means that environmental sustainability is not the first priority for the deprived societies; it can only be fully expected of them once a certain level of development is achieved by them, and this helps make the supplemented version of sustainable development ethically more attractive and practically more viable (for more see chapter two, Part Four).

At this instant we can recall some of the examples I supplied in chapter two: the practice of slavery, the creation of Farakka Barrage by the Indian government on the cross border River Ganges, and the fishing of tuna fish. As a practice, these are all sustainable, but undesirable for their morally objectionable implications. It thus now seems apparent that sustainable policies are not required to be just in themselves, but the significance of justice means that they should be fit to make them moral in addition to sustainable. Through being able to accommodate this overall concern, without making justice a constituent element of sustainability, the revised version seems to be a justifiable definition of sustainable development.

Going back to Beckerman's understandable objection against the UN definition of sustainable development, it can now be replied that, given a suitable interpretation of

the scope of improvement (development), issues of justice (relating to the difficulty with the apparent commendation of perpetual improvement in human wellbeing) can be addressed; and thus the alleged objection of Beckerman against the UN definition can also be overcome in a justified manner.

A last but not least question is: does the possibility of frequent reinterpretation and misuse of the proposed adjusted definition of sustainable development logically entail abandonment? Attfields' remark on the very debatable concept of peace could be mentioned here as a reply to the question. As he puts it:

> The concept of peace, to take a parallel case, has not been and should not be abandoned just because it is so frequently reinterpreted or misused.[53]

We notice that this process has also been in operation in the development of the concept of democracy. It took two and a half thousand years before Dahl and Schumpeter could develop their 'empirical theory' of democracy where they provided revised but recognisable conceptions of the widely-used concept of democracy [54]; hence the answer to the latest question seems clear and goes in favour of the possibility of meaningful use of the concept in question. Jacobs's reading of the concept of 'democracy' and his appraisal regarding the similarity between the concept of 'democracy' and 'sustainable development' reveals this issue with further clarity:

> How many definitions are there of 'democracy'? The most famous one ('government of the people, by the people, for the people') is comparable to the Brundtland definition of sustainable development: it is short and vague, and does not lend itself to precise interpretation and immediate application. But it captures the core idea. The possibility of different interpretations does not mean that democracy is either meaningless or non operational. Both democracy and sustainable development contain key essential principles, which are substantive, meaningful and not redundant.[55]

[53] Attfield, 2003, pp.126-127.
[54] Carter, p. 450.
[55] Jacobs, pp. 65-6.

Everything considered, the UN definitions (the Brundtland definition and the Caring for the Earth definition), if adjusted along the lines I have suggested here (i.e. the adjustment suggested by the basic needs approach), seem to turn out to articulate the concept of sustainable development as a meaningful and practicable concept. As well as all key traits of sustainability, the supplemented version of sustainable development appears to accommodate the issue of morality (but without making morality a constituent element of sustainability), which attests the view that the meaningful and practicable concept of sustainable development has been a justified concept all along.

PART TWO

HISTORICAL AND CURRENT TRENDS IN ENVIRONMENTALISM: TOWARDS A PREFERABLE NORMATIVE ETHICAL THEORY

Chapter One

2.1: Environmentalism: Origin and Development

It is now commonly believed that human beings have no choice but to protect the environment since without its support (that is to say its air, water, food, energy, light, heat and other basic elements that are indispensable for the survival of a living being), all life forms on earth would end, including humans. Ironically, human activities have been found to be the main source of the problems that are damaging the environment. David Pepper, a prolific writer on modern environmentalism, states that 18th century classical science profoundly influenced humans' world view of nature, and developed a materialistic attitude through conceptualising nature as a manoeuvrable machine, and also as the source of transforming the material lot of the whole of mankind.[1] This historical world view (a view which is widely known as modernism[2]) has been contributing to environmental degradation worldwide since its inception in the 18th century.

Instead of bringing about positive change in human life, as Pepper argues, modernism (through science and technology) has created enormous problems for humanity (through causing mass war, violence and repression, and nuclear and environmental threats). Furthermore, modernism (in the form of political theories, namely Liberalism and Socialism) has caused more harm to humanity than good. In light of this, a postmodern mistrust of modernism was developed, which, according to

[1] Pepper, D., *Modern Environmentalism: An Introduction* (London: Routhledge, 1996), pp. 1-5

[2] David Pepper reads modernism as: (1) the 18th century enlightenment promise to control and manipulate nature to improve everybody's fortune through advancing high science and technology, and (2) the advent and application of the most influential political ideologies, namely Liberalism and Socialism, which talked of changing underlying social, political and economic realities to promote humanity. For details see Ibid, p. 5

Pepper, constitutes the roots of modern environmentalism. In other words, modern environmentalism was born as a clear reaction to modernism.

The reaction to modernism, he asserts, has caused many of us not only to reject modernism but also to turn our attention back to pre-modern pro-environmental thoughts (such as holism, Gaianism, and nature worship) about nature, our relationship to it, and our place in the universe. These environmental thoughts, as many now claim[3] by echoing Pepper, have formed the basis of modern environmentalism.

Among various human activities, the economic ones are often held to be culpable for the current environmental problems. The currently dominant development paradigm (which involves economic growth as its central theme and gives approval of unrestricted use of limited natural resources to attain such an economic goal) has a straightforward causal connection with the current environment problems. The prolonged and widespread application of the economic growth view is now often said to have affected the entire community of lives on earth, irrespective of species. For some[4], modern environmentalism was born as a strong rejection of the current dominant economic practice, which has been contributing to environmental degradation worldwide.

Now if we compare the economic growth view with modernism it is not difficult to find a close link between them, because both give approval for unlimited use of natural resources for changing the material lot of the whole of mankind. Although the phrase 'economic growth' has not been exclusively mentioned in the modernism thesis, through advocating science, applying technology and implementing various political

[3] Cosgrove, D., 'Environmental Thought and Action: Pre-modern and Post-modern', *Transactions of the Institute of British Geographers*, 15.3(1990), pp. 344-58

[4] Martinez-Alier is one of the proponents of this view. For more see Martinez-Alier, J., *The Environmentalism of the Poor: A Study of Ecological Concepts and Valuation* (Northampton: Edward Elgar Publishing Ltd., 2002) Ch.1.

theories, modernism seems to supply the most useful tools for the economic growth view to attain its goal.

From the above discussion it has been observed that there are two human sources (in Pepper's phrase 'cultural filters') of environmental problems, to say the least: modernism and economic growth. They are the origin of modern environmentalism and the rebirth of humans' old environmental beliefs and values. To begin with, the force of environmentalists' reaction to modernism and policies of economic growth and the level of maturity of environmentalism as an academic movement were not the same as their present-day strength and efficacy. Environmentalism is now a mature public movement unsurprisingly opposed to the aforementioned two environmentally unfriendly views. To reach the present stage, environmentalism had to pass through several phases. An account of the main phases of environmentalism is now provided.

Reacting to mistreatment of the environment, some 150 years ago a few individuals began to protest. On some accounts, with the protests of those scattered voices, environmentalism was born.[5] To be more specific, the opening phase of environmentalism launched its journey back in 1850 in reaction to a long-standing process of environmental exploitation with advanced science and technology, involving an unprecedented wave of mining, forest clearance, land drainage and factory building during the period of the industrial revolution between 1780 and 1850.[6] The scattered proponents of the first phase of environmentalism realised that abuse of nature is neither good for nature nor for humans; but we can suppose that they presumably did not have

[5] Reynolds, A., *A Brief History of Environmentalism*, (London, Channel 4 Television, November 2010) <http://www.channel4.com/science/microsites/S/science/nature/environment.html> [accessed 2 December, 2010)

[6] Ibid. But Reynolds has mentioned 1730 as the beginning year of the industrial revolution.

any straightforward answer to the question: Do we protect the environment for our self interest or for its own sake?

Environmentalism reached more solid ground once the idea of respect for nature had been taken up and published by the American environmentalist Henry David Thoreau (1817- 1862) in his classic book *Walden* in 1848.[7] For him, humans experience the most harmonious life when living with nature. With this publication, environmentalism stepped into its second phase. Thoreau's reflection was strongly defended by the harmonious philosophy of the Scottish-born visionary and early conservationist John Muir (1838-1914), who also founded the Sierra Club, a US conservation organisation, in 1848. The main concern of this wilderness lover was to leave larger areas of wilderness untamed, because, for him, the disappearance of wilderness is a loss to humanity since, as he argued, wildernesses are spiritual places.

The reflections of the second phase of environmentalism were able to exercise a considerable influence on individuals, which is still continuing as a strong division of environmental commitment. The significant influence of this deeper stance of environmentalism in the societies of that period is implicit in the establishment of national parks in many developed countries, such as Australia, New Zealand and Canada. The establishment of the first conservation based organisations, like the Royal Society for the Protection of Birds (RSPB) in 1893, and the National Trust in 1894 in Britain, was a further outcome of the environmental campaigning of visionaries, such as Thoreau and Muir.

[7] Thoreau, H. D., *Walden* (1848), reprinted in *Writings of Henry David Thoreau*, vol. 2, p.12 (Boston: Houghton Mifflin, 1906)

A development towards the third phase of environmentalism occurred (in terms of humans' growing awareness about the plight and value of endangered wildlife) during the period between 1900 and 1950 after William Hornaday's (1854-1937) *Our Vanishing Wildlife: Its Extermination and Preservation*[8] had been published in 1913, where he attempted to draw readers' attention to the plight of endangered wildlife. He referred to the world's only living wild pigeon, Martha, which died in Cincinnati zoo. The wild pigeon was once the most populous bird on the planet, but had been hunted to extermination within just a half century.

The third phase of environmentalism attained rather more solid ground when Aldo Leopold (1887-1948), a former US Forestry Service official and University of Wisconsin and Iowa State University Professor, published his book *A Sand County Almanac* in 1949.[9] This is arguably one of the most influential books on conservation ever written. In this book Leopold expressively and ardently advocated humans' duty to protect the stability of nature. He advocated the same ethical sense of responsibility of humans towards nature as towards humanity, which raised an urgent issue of moving from the traditional ethical theory towards a comprehensive ethical theory that includes 'nature' besides 'humans' as moral patients.[10] Since then a debate has been running among environmentalists, and the matter of concern of the debate is whether humans can or should extend their ethical consideration to include non-human creatures and nature. At about that time (1951), Britain designated ten national parks to protect them from further development.

---

[8] Hornaday, W. T., *Our Vanishing Wild Life: Its Extermination and Preservation* (New York: C. Scribner's Sons, 1913)

[9] Leopold, A., (1887-1948), *A Sand County Almanac* (New York: Oxford University Press, 1949)

[10] This phrase was introduced in Warnock, G.J. *The Object of Morality* (New York and London: Methuen, 1971), p.148

A further development occurred in environmentalism (i.e., the fourth phase of environmentalism) after the groundbreaking 1962 book of an American marine biologist Rachel Carson, *Silent Spring*[11], was published. In her book Carson described how chemicals such as pesticides and insecticides were contaminating the environment, and particularly how farms, forests, gardens and wildlife were being poisoned. Insect life was dying out due to pesticide and insecticide use, which meant no food for birds, and eventually a silent spring. People were also in grave danger of cancer due to over-use of insecticides (such as DDT). Overall she illustrated the close relationship between the living and the non-living parts of nature, focusing on the ecological impacts of human development activities. The influence of Carson's work was enormous, and through this environmentalism was for the first time galvanised into an organised force, and a solid organisational platform. Conservation biology was introduced as a branch of biology at about the same time. Being largely influenced by her work, conservation biologists demonstrated that, due to human overuse of biomass, species dependent on biomass are harmed, which results in gradual loss in forest areas.[12] This is a case where environmentalism seems to be defended by scientists (conservation biologists).

The fifth phase of environmentalism emerged through the establishment of environmental pressure groups, namely Friends of the Earth in 1969 and Greenpeace in 1971. Friends of the Earth was born on account of the disagreement of the director of the Sierra Club with its policy on several issues (e.g., the Sierra Club's lack of opposition to nuclear energy); Greenpeace, on the other hand, was born as a result of some people being concerned about military nuclear testing and the preservation of various

---

[11] Carson, R. L., *Silent Spring* (Boston: A Mariner Book Houghton Mifflin Company, 1962)

[12] Haberl, H., 'Human Appropriation of Net Primary Production as an Environmental Indicator: Implications for Sustainable Development, *AMBIO*, 26.3 (1997), pp. 143-146

endangered species of whales. In addition, both Friends of the Earth and Greenpeace did flagship campaigns for pandas and tigers, and developed increased popular awareness about trade in seal fur, elephant ivory and rhino horn.

In the very next year, 1972, Barbara Ward and Rene Dubos published an outstanding report *Only One Earth*: *The Care and Maintenance of a Small Planet*[13], bringing about a remarkable change in the evaluation of development in the 20th century. This report was published to offer a framework for the proceedings of the UN Conference on the Human Environment (which is widely known as the primary defining event of the ten-yearly Earth Summits*)*. Though providing extended knowledge of the living environment to a greater degree, this report for the first time introduced a modified idea of development, focusing on environmental limits.

Held in Stockholm, and participated in by 113 nations, this first event of international environmentalism mainly addressed the environmental impacts of industrialisation. Two decisive achievements of the conference were the 26 principles of the Declaration of the United Nations Conference on the Human Environment, an Action Plan for the Human Environment and an Environmental Fund, and the establishment of the United Nations Environmental Programme (UNEP), which coordinated the following Earth Summits. Another significant outcome of the fifth phase of environmentalism was the explicit recognition of an economic and social gap between developed countries (First World) and developing countries (Third World). The conference clearly exposed that the rich not only degrade the environment but also receive a disproportionate share of global wealth. These economic and social divides are

[13] Ward, B., and Dubos, R., Only *One Earth*: *The Care and Maintenance of a Small Planet* (New York: W.W. Norton and Company, 1972)

still arguably on the rise. Martinez-Alier argues that environmental concern at that point (in the 1970s) surfaced due to the material concern about growing chemical poisoning and nuclear risks, not because the Western economy had reached 'a post material stage'. [14]

Another famous report, *The Limits to Growth,*[15] issued by the Club of Rome, was published in the same year of 1972, making the year momentous for the progress of environmentalism. Like the UN Conference on the Human Environment's report *Only One Earth*, the report of the Club of Rome stated that global environmental constraints would have a serious impact on global developments in the 21st century. It gave emphasis to developing an alternative paradigm to the conventional paradigm of economic practice.

Shortly before the 1970s, two publications in *Science* i.e., Lynn White's 1967 paper 'The Historical Roots of Our Ecological Crisis'[16]and Garrett Hardin's 1968 paper 'The Tragedy of the Commons',[17] began a deep intellectual debate concerning environmental issues. Much time during this decade was spent debating the themes of the two papers. Although the debates in question revolved around issues such as historical, theological, or religious, not ethical or philosophical issues, they greatly attracted philosophers' attention.

Before philosophers joined the debate in the 1970s, the environmental debate (about reasons for the protection of the environment) was revolving around non-philosophical issues, not philosophical or ethical issues. The standard understanding about the value of the environment was that what is bad for the environment is bad for

---

[14] Martinez-Alier, p.4

[15] Meadows, D. H., et al, *The Limits to Growth: Report For The Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972)

[16] White, L., 'The Historical Roots of Out Ecological Crisis', *Science*, 155(1967), pp. 1203-1207

[17] Hardin, G., 'The Tragedy of the Commons', *Science*, 162(1968), pp.1243-1248

humans. Environmentalism was exposed to a new dimension, the ethical dimension of environmental problems, through the participation of philosophers in environmental debate. Philosophers have importantly introduced the issue of value into environmental debates. Since then almost every environmental decision has faced an ethical challenge as such, and embodied the more fundamental enquiry: Do we care about nature for our sake or for its own sake?

Environmental concerns developed during the later Cold War period comprised the sixth phase of environmentalism. At this stage the world was preoccupied with issues relating to the Cold War, and thus the environment was less a focus of attention for the politicians and others involved with that issue. Nevertheless the participation of astronomers and marine biologists in the environmental debate has distinguished this phase with a precise importance. While astronomers have referred to light pollution (which obstructs the clear view of the night sky), marine biologists have drawn attention to noise pollution (which threatens the sonar navigation of dolphins and whales). This had, so to say, an effect on a minority only, and the majority overlooked such environmental problems because they were not immediate. But the international community took it seriously when it heard about the hole in the ozone layer that causes skin cancer; to save ourselves dying form skin cancer we rapidly stopped and adopted international agreements and ceased using chlorofluorocarbons (CFCs) in our sprays, flame retardants, refrigerators, propellants and solvents.

The most important event during this phase was the creation of the World Commission on Environment and Development (WCED) by the UN General Assembly in 1983. Gro Harlem Brundtland, the then Prime Minister of Norway, was appointed chairperson of this commission. The WCED become famous after its report (known as

the Brundtland report) was published in 1987.[18] This report has managed to attract attention from most environmentalists all over the world by officially introducing the concept of 'sustainable development'. The commission attempted to recognise both human needs and environmental limits in the definition of sustainable development, focusing on the triangular link between economic, social and environmental issues.

The seventh phase of environmentalism encompasses the decade when the Earth Summit occurred in Rio, Brazil, in 1992. This phase is significant, precisely because of introducing the concept of sustainable development together with institutional (United Nations) initiatives to implement it in its member countries. The important finding at this stage of environmentalism is that environmental problems have a direct link to the issues of economic inequality and social injustice. For example, the summit agreed to the point that global warming, loss of biodiversity and use of dangerous poisons have deleterious effects on human socio-economic conditions. Thus the leaders agreed to combat such environmental problems.

The process leading to the famous Kyoto Protocol (1997) was introduced at Rio, which required participant countries to cut carbon dioxide emissions by 5.2% within the period up to 2008 to 2012. The success of this protocol in attaining its professed goal is incomplete because some developed countries that rely on the oil trade, like the US and Saudi Arabia, were concerned at how much the agreement would cost them. They were putting their short-term interests first and refused to commit to anything on the carbon emissions front. Furthermore, developing countries like China and India were exempted from most of the Kyoto deadlines and yet they were growing at exceptional rates, using

[18] World Commission on Environment and Development (WCED), *Our Common Future* (Oxford: Oxford University Press, 1987)

dirty coal and cow dung as fuel, and are now the fastest growing consumers of fossil fuels as prosperity brings automobiles and increased energy generation on the scene.

The eighth and the last phase of environmentalism encompasses the decade of the 2000s. The Earth Summit during this phase occurred in August 2002, in Johannesburg, South Africa. This summit is notable for identifying five areas, water and sanitation, energy, health, agriculture and biodiversity, which are said to have been considered the most important sectors for human wellbeing. Another distinctive aspect of this summit is the fact that the developing countries became vocal, demanding their interests be given greater importance. Some might refer to a commitment to stop the loss of fish stocks and forests, as well as to halve the number of people in the world who lack basic sanitation by 2015, as examples of achievement at the Johannesburg summit. Environmentalists are found to comprehensively criticise this summit as one that was hijacked by corporate interests.[19] They criticise the US, Japan and oil companies for discouraging the promotion of renewable energy sources (wind and solar power) to facilitate their own economic benefit.

Environmentalism, as has been discussed above, had to pass through some eight phases to reach the present level. Martinez-Alier illustrates the progress of environmentalism (or the environmental movement) dividing it into three varieties (in his words, three intertwined currents): (1) the cult of wilderness, (2) the gospel of eco-efficiency, and (3) the environmentalism of the poor.[20] In the first current he covers those issues (particularly, the issues of reverence towards nature), which this writer has attempted to discuss in connection with the above-mentioned second and third phases of environmentalism. The second current involves concerns with the effect of economic

[19] See note 5
[20] Martinez-Alier, p.1

growth on pristine areas as well as on the agricultural, urban, and industrial economy, and also with the sustainable management of the resources of nature backed by several branches of ecology and economics. This current represents the above-mentioned fourth, sixth, seventh and eighth phases of environmentalism. Instead of merely focusing on economic growth, this current involves a stance, which suggests striking a balance between economic growth, social wellbeing and environmental limits, which is now widely known as sustainable development.

In the third and last current, Martinez-Alier attempts to cover areas such as issues of environmental justice. He labels this current the environmentalism of the poor (or popular environmentalism, or livelihood ecology, or liberation ecology), which stem from local, national, regional and global ecological distribution conflicts (which involve not only conflicts of interest but also conflicts of values) generated by economic growth and social inequalities. Through this categorisation, Martinez-Alier shows that not all environmentalists think and act the same. While some environmentalists have sought to support the economic growth view because of the technological promise it bears, and while some other environmentalists have sought to support only wilderness, there is a group of environmentalists who uphold a third view, the environmentalism of the poor, which addresses environmental problems based on the thoughts emerging from the global movement for environmental justice. The issue of justice, which this current upholds, appears to be raised (without being tackled) in the above mentioned eighth phase and in some sense in the fifth phase of environmentalism.

Despite many disagreements at various levels (such as at governmental or non-governmental levels, or in local or global institutions), environmentalism has now reached a more mature and organised stage compared to its earlier phases. In recent

times, people are increasingly seen to recognise environmental problems as caused by humans. Also, they are seen to recognise that they have no choice but to reassess their position of the environment and to make effective efforts to explore the way to address their development needs without undermining environmental limits. But unfortunately the achievement in the first Earth Summit (1992) to this end was not sufficiently satisfactory. Although it directed the participants in the right direction, distinguishing the area of most pressing concern, i.e., the issue of environmental justice, through recognising a big economic and social gap between the First World and the Third World, and also through exposing the fact that the rich enjoy a disproportionate share of global wealth, the first Earth Summit (1992) failed to supply appropriate policy-decisions recognising ecological distribution conflicts at various levels: local, national, regional and global. What is more, no progress towards that goal of rectifying ecological distribution conflicts has been achieved by the subsequent summits, suggesting that like the first one, corporate interests have also hijacked the Johannesburg Earth Summit 2002.

Now whatever advancement we have made so far seems clearly to be an outcome of the campaigning of environmentalists over the last 150 years. But just as the environmentalists of the first phase found 150 years ago, present-day environmentalists do not have any common view about the answers to the question: Do we protect the environment for our self interest or for its own sake? Preferably one can answer this question by saying that humans can and should find room for both human needs and environmental limits. Although environmental ethicists/philosophers seem to share a common view that humans are responsible for current environmental problems and that modernism and policies of growth have played a vital role in creating such problems, they hardly maintain any common view as regards the value of or reason(s) for protecting the environment. For instance, while some philosophers (such as Holmes Rolston

III[21]and Baird Callicott[22]) argue that, besides instrumental value, the environment (i.e., both the living and the non-living part of the environment) has its own value (intrinsic value), which needs to be recognised in order to plausibly address environmental problems, other philosophers (such as Mark Sagoff[23], Eugene Hargrove[24] and Bryan Norton[25]) argue that the value of the environment is either symbolic or aesthetic or instrumental, not intrinsic, and so studies on environmental problems can plausibly be continued without recognising the intrinsic value of nonhuman creatures and of the non-living part of the environment (they believe that human beings are the only bearers of intrinsic value). Despite many intra-group disagreements among the philosophers, the former stance can be regarded as ecocentric intrinsic value theory (one of the types of nonanthropocentrism), while the latter can be regarded as anthropocentric value theory (or anthropocentrism). Some other philosophers (such as Paul Taylor[26]and Robin Attfield[27]), who maintain another view, biocentrism, argue that it is not merely human beings that matter in ethics because non-human creatures have a good of their own, and thus have moral standing like humans. By saying this, they condemn anthropocentrism. Besides, they argue that the non-living part of the environment does not involve moral standing as it has no good of its own (although, according to them, it involves crucial instrumental value in much the same way lifeboats do). They limit moral standing to living creatures. Given this, for biocentrists, both anthropocentrism and ecocentrism are

---

[21] Rolston, H. III, *Environmental Ethics: Duties to and Values in The Natural World* (Philadelphia: Temple University Press, 1988)
[22] Callicott. J. B., *In Defence of the Land Ethic* (Albany: Suny Press, 1989)
[23] Sagoff, M. *The Economy of the Earth: Philosophy, Law,and the Environment* (Cambridge: Cambridge University Press, 1988)
[24] Hargrove E.C., *Foundations of Environmental Ethics* (Englewood Cliffs, N.J.: Prentice-Hall, 1989)
[25] Norton, B.G., *Why Preserve Natural Diversity?* (Princeton: Princeton University Press, 1988)
[26] Taylor, P.W., *Respect for Nature: A Theory of Environmental Ethics* (Princeton: Princeton University Press, 1986)
[27] Robin Attfield, *The Ethics of Environmental Concern* (New York: Columbia University Press, 1983)

extreme views and thus defective. Contrariwise, focusing on a life centred view, biocentrists claim their view to be plausible on a theoretical level and thus one that should be reflected in environmental policy and decision making.

From the foregoing discussion it seems that there, indeed, exists a considerable amount of disagreement among philosophers regarding the value of the environment (in particular, of the nonhuman living and nonliving parts of the environment). Although proponents of environmentalism over the last 150 years have managed to distinguish and also agree on the key sources of environmental problems (i.e. human activities), environmental ethicists/philosophers hitherto have not been able to reach a general agreement about the justification of or ethical reason(s) for preserving the environment. Three dominant theoretical trends, to say the least, underpinning the environment's value have been developed in environmentalism: anthropocentrism, biocentrism and ecocentrism (the latter two trends are often regarded as non-anthropocentrism). Since humans are recognised by anthropocentrists to be the sole reference point of value and nature is recognised to be instrumental to human ends, anthropocentrism is characterised as a human-centred view. Contrariwise, being the two major trends in non-anthropocentrism, biocentrism and ecocentrism have developed as more nonhuman-centred views. While sometimes the human-centred view is seen as a shallower form of environmentalism, the nonhuman-centred view is seen as a deeper stance. There again the two non-anthropocentric views (biocentrism and ecocentrism) have also been found to maintain distance between them concerning the value of two different parts of the environment: living and non-living. All the views here are defended by their proponents through various arguments, but which stance is more logical is still a matter of debate.

It is unquestionably true that the biosphere is crucial for the survival for all creatures that live on it. But it is also true that humans cannot survive without a certain

level of environmental modification. Environmentalism sometimes seems to miss out to reflect this reality in its approaches. For instance, while ecocentricism appears to merit appreciation for addressing the issue of environmental limits with due focus, it warrants criticism for sometimes omitting human development needs. Anthropocentrism has often been criticised for the opposite reason: for addressing development needs and sometimes omitting environmental limits. The crucial task now for the researchers into this field, therefore, is to tackle philosophical problems that emerge from these kinds of omissions, with a view to developing and or defending a theoretical trend that will be able to address on a par human survival issues (i.e. development needs) and the significance of protecting the integrity of the biosphere (i.e. environmental limits). Through recognising the moral standing of all living creatures as bearers of the intrinsic value and rejecting intrinsic value of nature, but treating its role as crucial for life, biocentrism seems to maintain a middle-of-the-road-view, striking a balance between development needs and environmental limits. The subsequent two related chapters encompass the recommended investigations: they cover philosophical problems for environmentalism and the possibility of biocentrism as a preferable normative paradigm for environmentalism.

Chapter Two

2.2 Philosophical Problems for Environmentalism

In recent times it has often been objected that traditional moral theories are anthropocentric and inimical to environmental concerns because they entirely omit the environmental underpinnings required by policy objectives. Contrariwise, environmentalism, as a radical re-evaluation of traditional ethical norms, is said to have filled this gap through upholding the environmental underpinnings in relevant ethical deliberations and policy objectives. A group of scholars[1], however, are of the opinion that environmentalism, whatever its 'practical political effectiveness', faces substantial philosophical difficulties in justification. In an influential paper[2], Elliott Sober attempts to outline philosophical problems for environmentalism with special reference to species preservation, and to argue that environmentalists cannot appeal to anything that could be used as the basis for species preservation, without disparaging the familiar principles of ethical arguments. A critical interpretation of Sober's allegation against environmentalism is provided below in greater detail.

The argument from the unforeseeable value (or future use) of endangered species is one of the environmentalists' major arguments for species preservation. Sober opens by problematizing this argument. As Sober paraphrases it:

[1] Sagoff, M., 'On Preserving the Natural Environment', *Yale Law Review,* 84(1974), pp. 205-38; Sober, E., 'Philosophical Problems for Environmentalism', in *The Preservation of Species*, ed. by Norton, B. (Princeton: Princeton University Press, 1986), pp. 173-194.

[2] Sober, p. 175.

> Although we might not now know what use a particular endangered species might be to us, allowing it to go extinct forever closes off the possibility of discovering and exploring a future use.[3]

What Sober objects to is the environmentalists' attempt to make ignorance of the value of endangered species into a reason for action. In so doing, as Sober argues, environmentalists create a philosophical problem, which amounts to an 'argument from ignorance'. For him, there is no problem with the argument's assumption that we have obligations as regards future generations. By the same token he argues that there is no philosophical problem with the environmentalists' argument when they claim that we should preserve an endangered species for its recognised instrumental values or aesthetic values, but a problem arises when they suggest that we ought to preserve them for their unforeseeable future uses. To defend his position, Sober refers to the phrase 'out of nothing, nothing comes'[4]. He argues that a rational decision requires premises about what is 'true' and 'valuable' (in decision-theoretical jargon, he says, the inputs are probabilities and utilities); but being based on total ignorance, it is hard for the environmentalist argument 'to assign probabilities and utilities precisely here'[5], thus showing itself to be irrational.

Furthermore, he argues that if we are entirely ignorant about what consequences the loss of an endangered species may generate then we should take seriously the possibility that the consequence of the loss of the endangered species in question could be beneficial as easily as it could be deleterious. This being so, ignorance of a species' value, for him, supplies no justification for any action or policy, or for any omission

[3] Ibid.

[4] Ibid., p. 175.

[5] Ibid.

either. To go over the main points of Sober's argument here, the argument from the unknown value of species amounts to the argument from ignorance, and ignorance is no more an argument for preservation than it is for extinction.

At some point, Sober illustrates the rationality of risk-taking. He uses the example of air-travel and tries to show that although flying means taking a risk, it is worth taking, for it is rational to do so. For him, while an air-journey involves a slim chance of disaster, it simultaneously involves a high probability of a typically rather modest benefit. Based on this understanding he proceeds to claim that it is rational to 'be willing to allow a species to go extinct in order to built a hydro-electric plant'[6], suggesting that there is no problem with our decision of undertaking air-travel, or, by parity, building a hydro-electric plant and allowing a species to become extinct, due to both arguments being based on probabilities (as opposed to the argument from ignorance).

If the aforementioned characterization of the environmentalist argument (as 'the argument form ignorance' and irrational) by Sober is fair, it seems to involve a serious philosophical challenge for environmentalism. Sober, however, does not seem to have got the underlying character of the environmentalist argument right. While the aforementioned environmentalist argument could still be interpreted as just based on an unknown possibility, it could instead be based on probabilities. And this makes Sober's characterization of the environmentalist argument, as a mere appeal to ignorance, vulnerable to criticism. This seems to receive expression in Robin Attfield's statement, which runs as follows:

> While the environmentalist argument could still be interpreted as simply based on an unknown possibility, it could instead be based on probabilities itself. Indeed, granted the large number of medicines that have been discovered from wild species, and the implicit appeal to benefits of this kind implicit in phrases

[6] Ibid., p. 176.

> about the species being potentially crucial to humanity, this is likely to be the underlying character of the environmentalist argument, rather than a mere appeal to ignorance.[7]

Attfield attempts to show in this passage that it is a misrepresentation of the environmentalist argument if it is interpreted merely as an appeal to unknown possibility. For it may well be interpreted as based on probabilities as well, i.e., a probabilistic interpretation is at least an equally possible alternative. Attfield argues that the prospect (that might be higher or lower) of wild species having a medicinal value (which would have later turned out to be crucial for humanity) rationalizes the environmentalist argument as an argument from probabilities. Attfield seems quite right here in supposing so; for wild species have been the main source of a large number of medicines and chemicals since time immemorial. Thus, to say the least, the underlying character of Sober's arguments (using the examples of air-travel and a hydro-electric plant) and the environmentalist argument in a sense appear to be similar, i.e., they are arguments from probabilities.

Seen in this light, the environmentalist argument might conclude that 'each and every species [sc. in the forest]'[8] should be preserved, since otherwise there is a small risk of a currently unknown loss that might be large or small. Sober rejects this conclusion and argues that it might be better to replace a given species with a hydro-electric plant to satisfy basic human needs for energy, particularly if the human community would have to forgo that benefit otherwise. Sober's rejection indeed seems plausible. For the conclusion that each and every species should be preserved since there is otherwise a

[7] Attfield, R., 'Sober, Environmentalists, Species and Ignorance', *Environmental Ethics*, 33.3 (2011), pp. 307-316(p. 310).
[8] Ibid.

small risk of a currently unknown loss that might be large or small is surely counterintuitive and unpersuasive.

The environmentalists' argument, understood as an argument for the conclusion that each and every species should be preserved in their habitats, thus appears to be a crucial problem for environmentalism. This challenge, following Attfield, can be addressed by reformulating the environmentalists' argument with an alternative conclusion. An environmentalist, for example, can construct an alternative probabilistic argument for preserving large clusters or systems of wild life habitats all the same, even if the only relevant kind of value is their possible medical value for humanity. And the alternative conclusion of the environmentalist argument from the very possibility of 'species being crucial to humanity into the future' is: 'the forest ought to be preserved, perhaps apart from small tracts that would be selectively used to satisfy basic human needs'[9]. Here, as we can observe, this alternative conclusion indicates a different appraisal of the environmentalist argument. While the conclusion that 'each and every species should be preserved' makes the argument unpersuasive (as we have already observed in the previous paragraph), the alternative conclusion makes the environmentalists' argument much more cogent. For 'the small probability that any given species will prove valuable translates into a significant probability that, given time for enough research, at least one of the species will turn out to be valuable, even though we do not know which this might be at present, but only if the habitat of them all, the forest, is preserved'.[10]

Furthermore, Attfield remarks that the very probability of benefit, which it is hoped will be generated through the preservation of the habitat of species, is a motivational force for the actual practice of bioprospecting (in other words biodiversity

[9] Ibid.

[10] Ibid., pp. 310-11.

prospecting, which is a type of scientific research that searches for wild species from which medicinal drugs and other commercially valuable components can be obtained) where stability is endangered, as well as making the argument for species preservation a rational argument. It can also be argued that the probability of this benefit is also very likely to influence the inclination of defenders of biodiversity and of conservation biology to represent the potential value of species as 'option value'. [11]

As we can observe, the above mentioned formulation of the environmentalist argument with the alternative conclusion seems to avoid the problem which arises in its formulation with the conclusion the each and every species should be preserved. This seems to be a close counterpart of the one Sober criticizes and names 'the argument from ignorance'. In this formulation we observe that our attempt to construct a probabilistic argument for preserving components of biodiversity - the value of which is not known to us at present but might turn out to be considerable in future - supplies a justification for the preservation of biodiversity through preserving its habitat, such as a forest. This formulation on the one hand involves Attfield's agreement with Sober on the point that the risk of a mass extinction of species would not require preserving every single one. Also, more importantly, it seems to supply a plausible response to Sober's criticism of the environmentalist argument from the unknown value of species through suggesting a modified interpretation of the environmentalist argument, which is arguably both probabilistic and persuasive, not counterintuitive.

Many biologists now seem to recognize option value as the core of the case for preserving biodiversity. For them, it captures both foreseeable future use and the value of

[11] Option value is a kind of value, which reflects the significance of more uses being unveiled in the future. In other words, it is a value reflecting the availability of a biological item for use at some future date. This value does not depend on actual utilization in future, but rather on the option of its availability for future use. For example, the biodiversity component (such as a species) may never actually be utilized, but there is advantage associated with retaining the option of its utilization.

the unknown. In other words, option value corresponds not just to the unknown future values of known species, but also to the unknown values of unknown species (or the 'unresearched' components of the forest). In biologist E. O. Wilson's words, biodiversity captures the idea of a 'frontier of the future', presenting an appealing prospect of mostly unknown range, with unforeseen uses. Wilson mentions that the realization that biological diversity is disappearing and, unlike many other threatened things, irreversibly, has caused the change from a 'bits and pieces approach' to a much more holistic approach to biodiversity.[12] Echoing this, many conceptualize 'biodiversity' as the representation of the idea of 'biodiversity crises'. But for many, although biodiversity is sometimes seen as a symbol for our lack of knowledge about life's components, it also opens up a calculus (a means 'for measurement and comparison') for reasoning about possible benefits which we have reason to anticipate, or, in other words, 'option value'.

In consideration of biologists' recognition of biodiversity as option value (i.e., foreseeable future use and values of the unknown), the argument for the preservation of biodiversity is not an argument from ignorance at all. Granted this, it can be said that the environmentalist argument from the unknown value of endangered species is not in actual fact an argument from ignorance either. This indicates that Attfield's reformulation of the environmentalist argument, a representation backed up by biologists who appeal to option value (and vice versa), is based on firm ground, compared to the formulation given by Sober. And this also suggests that the basis of Sober's representation of the environmentalist argument is much less compatible with the findings of the researchers in the relevant field of science. Primarily this is due to the fact that Sober has not incorporated, presumably unintentionally, relevant scientists' (in particular, conservation

[12] Wilson, E. O., ed. *Biodiversity* (Washington, DC: National Academy of Sciences/ Smithsonian Institution, 1988).

biologists') latest reaffirmation of the relation between diversity and stability and different values of biodiversity (in particular, option value) into his representation of the environmentalist argument. But this all means that Sober's argument is unsound. Thus through addressing the issues (the potential value of species as option value) that have been omitted by Sober in his representation of the environmentalist argument, and also through being backed up by biologists, Attfield seems right in asserting that the environmentalist argument is not merely an appeal to total ignorance. Hence Sober's representation of the environmentalist argument seems to be a misrepresentation.

The above mentioned is not, however, the only type of value appealed to by environmentalists, which Sober attempts to problematize. Another value that he tries to problematize is 'wholes', 'autonomous value' or 'holistic value'. To discuss and problematize environmentalists' appeal to holistic value, Sober draws our attention to the divergence of approaches of environmentalists and animal liberationists. He claims the philosophical problem for environmentalism becomes more complex when it assigns value to the holistic character of things and thereby prioritizes preserving the holistic characteristics of nature (such as whole species, communities and ecosystems), not the individuals of which they are composed. For many holistic environmentalists, the individual organism does not matter, so long as its species is preserved as a species. A number of holistic environmentalists (in this connection Sober cites the writings of Aldo Leopold, J. Baird Callicott, Edward Abbey and Garrett Hardin, treating them as holistic environmentalists) assert that environmental value cannot be based on values relating to individual welfare. In so doing, as Sober comments, they attempt to promote holistic value as the one and only value at risk in maintaining ecological balance and diversity.

Sober is impressed with the animal liberationists' view[13], as opposed to the holistic environmentalists' view, which involves the idea that it is individual members who suffer, not collectives (i.e., species); thus, for animal liberationists, the suffering of sentient animals should be taken into consideration in our ethical deliberations about them because 'suffering' carries meaning only when it is said of an individual organism. A species has experience of suffering only in virtue of this being true at the individual level. Sober affirms his support for animal liberationists' views by saying that:

> …the only sense in which species have experiences is that their member organisms do: the attribution at the population level, if true, is true simply in virtue of its being true at the individual level. [14]

Furthermore, Sober argues that the arguments from animal suffering succeed in being rational because such arguments are based on the utility or disutility of sentient animals (as previously mentioned, for him rational argument must be based on probabilities and utilities). By contrast, he argues, arguments from the autonomous value of collective or holistic systems are not rational because utility or disutility is not ascribable to collectives or holistic systems, due to the fact that these do not have the capacity to suffer or experience. Holistic value as appealed to by environmentalists, for him, thus turns into the source of a further philosophical problem for environmentalism.

Based on the principle of capacity to suffer and/or experience, Sober attempts to distinguish sentient animals from non-sentient beings like trees as well as mountains and salt marshes. Sober argues that trees have no capacity to suffer and/or experience, and thus have no independent or intrinsic value. Therefore, for Sober, non-sentient beings like trees do not merit moral consideration.

---

[13] There is an elaboration of this view in Singer, P., *Animal Liberation* (New York: Random House, 1975)

[14] Sober, p. 174.

Overall it seems that as a negative part of his project, Sober argues against holistic value theories. Alternatively, as a constructive part of his project, he attempts to support the animal liberationist view and suggests that individual sufferings should be taken into consideration in ethical judgments about organisms. He seems to appeal to utilitarian considerations where the moral community includes sentient beings as opposed to just humans, but omits non-sentient beings like trees. And this consideration seems to him to turn on the appeal to aesthetic value of nature and natural entities (as opposed to holistic value), which depends on human or animal appreciation. The key reason for Sober's appealing to aesthetic value seems to be its potential use in the premise(s) of a rational argument. He refers to 'principles related to aesthetic values as familiar principles'.[15] Then again, he rejects the value of holistic systems (which he refers to as one of the sources of unfamiliar ethical principles) because it lacks such potential, i.e., just for the reverse reasons.

Sober is so far right in saying that individual value is significant, but seems hardly right in blaming environmentalists as a whole for not involving regard for individual value in their theories. A number of environmentalists have expressed their concern for individual value as well as environmental value (although there is disagreement among environmentalists concerning the value of the environment), both playing a part in their theories. J. Baird Callicott's version of environmentalism can serve as an example in this context, in particular his understanding of the individualist bias of utilitarianism (Callicott here presents the US social policy which characterises reductive utilitarianism as an example of the individualist bias of utilitarianism) as being harmful in its impact on human perception of ecological values as well as in many other ways. As Callicott puts it:

[15] Ibid.

> ...the United States seems to pursue uncritically a social policy of reductive utilitarianism, aimed at promoting the happiness of all its members severally. Each special interest accordingly clamors more loudly to be satisfied while the community as a whole becomes noticeably more and more infirm economically, environmentally, and politically. [16]

The major claim of Callicott here is that 'the emergence of individualism' and 'alienation from nature' are causally connected, and the former causes the later. The proposed connection appears to be the main strength of Callicott's criticism of the policy of reductive utilitarianism. Sober, himself, seems to recognize this possibility by stating that 'Callicott is right that "strict academic detachment" is difficult here.' [17]The use of the words 'to pursue uncritically a social policy of reductive utilitarianism' in the passage quoted above from Callicott suggests that he is not against individual happiness. What he is opposing is the uncritical advocacy of a social policy of reductive utilitarianism, which ignores the link of people's interest at individual level to their interests at community level. Callicott's subsequent recognition of regard for individual value in his chapter 'Animal Liberation and Environmental Ethics: Back Together Again' supports Sober's objection to entirely holistic environmentalists but shows that it does not any more apply to Callicott, and in turn helps justify Attfield's assertion that 'philosophers who disregard individual value probably deserve Sober's reproaches, but are probably rarer than Sober seems to suppose, and not typical of environmentalists.'[18]

Sober puts sentient beings, on the one hand, and trees, mountains and salt marshes, on the other, into quite distinct categories: able to suffer versus not able to suffer; and (therefore) having intrinsic moral value versus having no intrinsic moral value (or having at most non-intrinsic moral value). The distinction between sentient beings

[16] Callicott, J. B., 'A Triangular Affair', *Environmental Ethics*, Vol. 2.4, 1980, p. 324.

[17] 17. Sober, p. 187.
[18] Attfield, p. 13.

and non-sentient beings, based as it is on the principle of capacity to suffer and/or experience, seems to have the counter-intuitive implication - that all non-sentient lives including trees can safely be ignored. This is surely not a desirable implication. The bizarreness of Sober's assessment (which can be called a 'category mistake'), in my view, is implicit in the use of the criterion 'able to suffer versus not able to suffer' for assessing the intrinsic value of living beings. Living beings such as trees are apparently distinct from non-living entities such as mountains and salt marshes. It is one thing to reject claims about the utility or intrinsic value of systems like mountains and salt marshes, and another to reject claims about the utility or the intrinsic value of the good of individual organisms like trees.[19] The bizarreness of the assertion of Sober here speaks for itself.

Sober seems beyond criticism so long as he states that non-sentient beings have no capacity to suffer and have no experiences. But he is mistaken when he assumes that the well-being of non-sentient organisms like trees has no independent or intrinsic value. A sentient being has a good in not suffering and being allowed to flourish. By the same token a tree has a good in receiving light and water (in other words, living entities have a goal or telos, and as such a 'capacity to flourish'), suggesting that irrespective of 'capacity to suffer' all living beings have a good-of-their-own, and therefore all of them are bearers of intrinsic value.

Now the question arises: what is the more relevant as a criterion for moral standing of all living beings? While 'capacity to suffer' is not a relevant (or necessary) criterion for moral status, capacity to flourish as explained here seems to be so. The implication of a combination of criteria for moral deliberation is immense. It receives an apparent expression in one of Marry Anne Warren's seven-point proposed combined criteria for moral status, which she names 'the interspecific principle'. Under the rubric of

[19] Ibid., p. 14.

'the interspecific principle', Warren argues that within the limits of her principles 1-4, non-human members of mixed social communities have a stronger moral status than could be based upon sentience alone.[20] But this is where Sober seems to have made a mistake by maintaining that creatures lacking experiences have no utilities, which in turn, forecloses arguments from the intrinsic value of all non-sentient living entities.

One might here argue that although Warren is saying that the value of sentient beings in some sort of community is not solely a matter of their intrinsic value as sentient, she has not clearly mentioned anything to indicate that her point is meant to extend to non-sentient beings. This indistinctness does not, however, weaken the aforementioned ground of arguments from the capacity to flourish of all non-sentient living creatures. For if sentient creatures have moral standing on grounds other than their sentience (let us say capacity to flourish), these grounds may well apply to non-sentient creatures too; consistency seems to imply this, whether or not Warren does. To be more precise, whether or not they are non-sentient beings, non-human living entities possess moral status, and thereby warrant being included in our moral deliberation, on account of their having the capacity to flourish.

If we take the view that health is intrinsically good and disease is intrinsically bad for living creatures whether they are sentient or not, then a range of arguments from intrinsic value becomes available to environmentalists which Sober passes over. It should be noted that these arguments from the intrinsic value or disvalue of health, disease and injury are clearly familiar, traditional and individualist.[21]

---

[20] Warren, M. A., 'Moral Status', in Frey, R. G. and Wellman, C. H. (eds.), *A Companion to Applied Ethics*, Oxford: Blackwell 2005, p. 67.

[21] Attfield, p. 14.

A further philosophical problem for environmentalism, mentioned by Sober, stems from environmentalists giving priority to the preservation of the last remaining members of an endangered species over the same number of members of more populous species. The animal liberationists see animal ethics in terms of the capacity to suffer of any individual, irrespective of their status – domesticated or wild. By contrast, as Sober argues, environmentalists see the main problem in terms of preventing the extinction of rare species, and give priority to the last remaining members of an endangered species over individual members of a species that is plentiful. According to Sober, this is a further source of a complex philosophical problem for environmentalism, since, as he says, 'the fact that one organism is part of an endangered species while the other is not does not make the rare individual more intrinsically important'.[22]

On a theoretical level, the above mentioned disagreements between animal liberationists and environmentalists, as Sober says, are an expression of a deep theoretical debate between reductionism and non-reductionism, and he characterises the animal liberationists' argument - taking nothing but the sufferings of individual sentient animals into our ethical deliberation - as a case 'where reductionism is correct.' [23]

Attfield's reply to Sober's criticism of environmentalists' significance–based categorization of the value of wild and domesticated species seems worth mentioning here. As Attfield puts it:

> more is at stake…for individuals when a species becomes rare, because the lives that might have been lived by future members of the species are at risk in these circumstances. Whereas the existence of future populations of plentiful species is not in doubt, that of future populations across the whole of future time of species currently declining towards zero is now in question, and is usually dependent on the last surviving members in the present.[24]

[22] Sober, p. 175.
[23] Ibid., p. 174.
[24] Attfield, p. 15.

At this point Attfield attempts to bring into the picture concern about the future population of species, which are presently declining towards complete extinction, and accordingly suggests that preserving individual members of an endangered species is more crucial (more valuable) than preserving individual members of a plentiful species.

Attfield's concern (for the last few members of rare species) as thus resolved (preserving the last few members of rare species on a priority basis as opposed to the members of species which are abundant so that the rare species could be protected from complete extinction) seems plausible. For his stance seems to be compatible with the view that 'there is the same obligation to future generations as to the present',[25] which has received widespread support from a range of philosophers,[26] and which also most importantly could be extended to include all bearers of life within the set of those that merit moral consideration. There is a problem with this argument, which I am going to discuss shortly. But if we take this view then we can proceed to state that just as in the case of humanity, future members of all other species count, to speak ethically (which seems to be an appeal to biocentrism), as much as current ones. It implies that it is our obligation to protect the remaining members of rare species from their becoming completely extinct (through abstaining from activities that harm them and would bring them to complete extinction if continued). Thus failure to do so would be allowing rare species to become extinct completely, which would make us guilty of a moral offence,

[25] Routley, R. R. V., 'Nuclear Energy and Obligations to the Future', *Inquiry*, 21 (1978), pp. 133-179 (p. 161).

[26] See Barry, B., 'Justice between Generations', in *Law, Morality, and Society: Essays in Honour of H. L. A. Hart*, ed. by Hacker, P. M. S. and Raz, J. (Oxford: Clarendon Press, 1977); Barry, B., 'Circumstances of Justice and Future Generations', in *Obligations to Future Generations*, ed. by Sikora, R. and Barry, B. (Philadelphia: Temple University Press, 1978); Heyd, D., *Genetics: Moral Issues in the Creation of People* (Berkeley: University of California Press, 1992); Kim, T., and Harrison, R., eds, *Self and Future Generations: An Intercultural Conversation* (Cambridge: White Horse Press, 1999); Mulgan, T. P., 'Teaching Future Generations', *Teaching Philosophy*, 22.3 (1999), 259-273.

and which also arguably justifies environmentalists' stance (in particular the aforesaid Attfield's stance): priority ought to be given to individual members of rare species over the same number of individual members of species which are plentiful.

The plausibility of the replies to Sober's arguments (that he formulated relating to philosophical problems for environmentalism) hitherto has gone satisfactorily. But one problem relating to our obligation to future members of species seems to stem from the thought that future members of species are not identifiable like their present-day members, and suggests that the ethical treatment of the unidentifiable future members of species may be different from the ethical treatment of their identifiable present-day members. This problem appears to be significant, and thus requires discussion.

Derek Parfit was one of the first to draw this problem, which he names 'the Non-Identity Problem' to the attention of researchers. [27] Parfit's view is that although we have no duty to unidentifiable future members of human generations, we have duties to sustain the quality of life of whoever there will be, to the extent that this can be affected by ourselves. By maintaining this view, Parfit recognizes here an impersonal aspect of morality without this turning on wholes or collectives (of the type offered by Leopold or Callicott, who attempt to justify principles such as that the integrity, stability and beauty of the biosphere is the decisive factor in morality). Parfit appears here to offer a modified but familiar and traditional ethical argument (not as opposed to but over and above Sober's argument from the aesthetic value of nature) for protecting future human generations, which has won wide support from advocates of familiar traditional approaches.

[27] The Non-Identity Problem (NIP) is also known as 'The Paradox of the Future Individuals', See D. Parfit, *Reasons and Persons* (Oxford: Oxford University Press, 1984) ch.16.

Attfield argues that although Parfit writes about future human generations, what he says seems relevant to future non-human generations as well; and his view seems not to involve too significant an exit from ethically familiar thoughts. Maintaining Parfit's line of reflection, Attfield then goes on to argue that to secure the continuity of species it is crucial to preserve the intactness of suitable habitats with living members of the species inhabiting them. For continuation of species into the future essentially involves at least two issues: (1) a suitable habitat, and (2) living bearers of genetic materials of the species. As Attfield puts it:

> Admittedly, the establishment of seed banks means that this dependence is not total; but the continuation of species depends on the intactness of suitable habitats, as well as on bearers of genetic materials, and that is best guaranteed if suitable habitats are preserved with living members of the species inhabiting them and helping secure their continuing suitability.' [28]

Thus to help protect biodiversity, alongside approving our duties towards protecting known or unknown future individual members of species, Attfield has sought to focus on preserving the intactness of suitable habitats with living members of the species inhabiting them. In so doing, Attfield seems to have tackled, with Parfit's help, the infamous 'Non-Identity Problem'. This being so, a response to the problems Sober identified with arguments for species preservation could be prepared on a modified individualist basis, which involves prioritizing individual members of rare species over the members of plentiful ones.

It now seems overall that at least the arguments that Sober has formulated with regards to philosophical problems for environmentalism are decisively flawed, and do not stand up against the counter-arguments that I have considered here. Also, as has been observed here, the argument from the unknown value of a species (e.g. an endangered species) is not 'the argument from ignorance', and the idea of 'option value'

[28] Attfield, p. 15.

of components of biodiversity makes Sober's remark about them (as tantamount to 'nothing') quite misleading or contentious to say the least. It has also been observed that environmentalists can plausibly argue on a modified individualist basis for the preservation of species without endorsing holistic theories or criticizing Sober's appeals to aesthetic value either.

Furthermore, it has been detected that Sober's rejection of the argument of environmentalists for the priority of an individual member of a rare species (with a few remaining members) over an individual member of a species which is plentiful, is implausible. Environmentalists can argue on a modified individualist basis for the preservation of species, and can also consistently give priority to the preservation of the last remaining members of an endangered species over the members of more populous species. This modified approach to environmentalism neither endorses holistic theories nor criticizes Sober's appeals to aesthetic value, but rather offers ethical guidance with regard to species preservation without destroying familiar principles of moral argument. More importantly, the modified environmentalists' argument can straightforwardly be adopted by animal liberationists without abandoning their individualist approach. Thus it seems apparent that Sober is right in appealing to the aesthetic value of nature as opposed to its holistic value, but misleading in maintaining that there is nothing to which environmentalists can appeal without disparaging principles of traditional moral reasoning.

What is more, Sober has mistaken one branch of environmentalism (i.e., 'environmental holism') for 'environmentalism' (which incorporates all possible branches of environmentalism). This confusion, or failure to distinguish one from another (i.e., 'environmentalism' from 'environmental holism') may well be one of the reasons for Sober's being over-confident about his own approach.

Attfield's criticism of Sober, and his approach to species preservation, as has been presented here, is based on his normative ethical theory - biocentric consequentialism.[29] As opposed to holistic environmentalism, Attfield, in his version of biocentric consequentialism, attempts to tackle the issue of the grounds of species preservation by appealing to a different understanding of the value of ecosystems and species (recognizing the inherent and instrumental value of ecosystems and species as opposed to their intrinsic value). Considering the support it gives here to defend the modified approach to environmentalism, Attfield's version of biocentric consequentialism appears to turn out to be a strong contender for a preferable normative ethical basis for an acceptable approach to environmentalism. This thought leads to the next chapter, which comprises a rather theoretical inquiry into Attfield's version of biocentric consequentialism.

[29] Biocentric consequentialism is the normative ethical theory that is based on two basic assumptions: (1) all living creatures have a good of their own, and have moral standing accordingly, and their flourishing or attaining their good is intrinsically valuable; (2) the morality of an action is dependent on its foreseeable outcomes. Combining one assumption with the other, this theory holds that the morality of an action or policy depends on its contribution to the fulfilment of the capacity to flourish of all affected creatures.

Chapter Three

2:3 Biocentric Consequentialism: A Contender for Preferable Normative Ethical Theory

As a version of biocentric consequentialism[1], Attfield's view (1) recognizes the moral standing of all living creatures as its core feature and (2) interprets moral rightness as a function of the foreseeable consequences either of individual actions or omissions or of general recognition of practices with which they conform. It maintains a distance from ecocentric positions that locate intrinsic value in ecosystems and in species over and above their component individual creatures - as well as the instrumental value of ecosystems. As opposed to intrinsic value, he recognizes the inherent value[2] of ecosystems through their appearing to human observers as attractive, and their immense instrumental value through allowing individual bearers of moral standing to flourish.[3] Besides, a species, even though it does not possess intrinsic value, possesses an immense instrumental value through playing an indispensable role in an ecosystem.

---

[1] Attfield's version is a corresponding type of biocentrism to Goodpaster (who provided a clearer rationale of moral considerability of living creatures; for more see Goodpaster, K. E., 'On Being Morally Considerable', *Journal of Philosophy,* 75(1978), pp. 308-325). Among the major works, where Attfield developed this version, are: 'The Good of Trees' (*Journal of Value Inquiry,* 15(1983) pp. 35-54), *The Ethics of Environmental Concern* first edn. (London and Basingstoke: The Macmillan Press, (1983)), 2nd edn. (Athens and London: University of Georgia Press, (1991)), and *Value Obligation and Meta-Ethics* (Amsterdam and Atlanta, GA: Editions Rodopi B.V., (1995)).

[2] Objects of appreciation such as objects of nature and works of art have this kind of value (extrinsic), and appreciators are benefited through appreciating them. For more see, Attfield, R., *The Ethics of Environmental Concern,* 2nd edn, pp. 151-153.

[3]Ibid. p. 149.

Furthermore Attfield argues that a species is valuable because the existence of each possible future member of the species in question depends on its continuance. He envisages this point as one of the grounds of his support for the preservation of the greatest possible range of existing species or biodiversity.[4]

Alan Carter's review in *Mind* of Attfield's *The Ethics of the Global Environment*[5] involves a profound critical exposition of Attfield's version of biocentric consequentialism. Analysing the core premises of Attfield's biocentric consequentialism, Alan Carter has been found to praise[6] Attfield's normative theory for its 'innovatory' (but 'relatively introductory') contribution to applied ethics (in particular to environmental ethics) and to the 'real relevance of philosophy today' as well as to criticize it for its several alleged flaws or unwelcome ecological implications. As has been stated by Carter, Attfield's biocentric consequentialism is in the first place an inegalitarian normative theory, and one of the major (to him) unwelcome implications of this theory - what Carter labels the 'Minimax Implication'[7] - stems from its supposedly disproportionate ascription of different moral significance (or in other words intrinsic value) to the good of different living creatures.

In this context Carter quotes the following passage from Attfield's *The Ethics of the*

---

[4] Ibid. p. 193.

[5] Carter, A., 'Review of Robin Attfield: The Ethics of the Global Environment', in *Mind,* 110. (2001), pp. 149-153.

[6] In his review of Attfield's *The Ethics of the Global Environment,* Carter has first recognized biocentric consequentialism as an 'extremely impressive theory'; and in his reply to Attfield's first reply to his review of Attfield's *The Ethics of the Global Environment*, Carter has further recognized Attfield's biocentric consequentialism by saying that 'perhaps the most impressive environmental ethics developed to date in any detail is Robin Attfield's biocentric consequentialism.' Carter, A., 'Inegalitarian Biocentric Consequentialism, the Minimax Implication and Multidimensional Value Theory', *Utilitas*, 17.1 (2005), pp. 62-84.

[7] Ibid., p. 64.

Global Environment:

> For biocentric consequentialism, intrinsic value lies in the good or the well-being of bearers of moral standing. Following Aristotle, I take this good to consist in the development of the capacities essential to their kind…I also maintain that more complex and sophisticated capacities (such as that of autonomy) take preference over less complex and sophisticated ones, but only where both are at stake; no automatic priority belongs simply to membership of a sophisticated species, or simply to being human. [8]

Carter here attempts to show that by maintaining the reflection implicit in this passage Attfield in fact gives priority to the well-being of human beings over other living entities, and also encourages the extermination of 'inessential species' in favour of human population. In developing one of his worries about Attfield's theory, Carter argues that this theory at some point enjoins us to maximize the good or well-being of all bearers of moral standing, but abruptly it goes on to support a different view that developing more complex and sophisticated capacities (such as autonomy) takes preference over simpler and less sophisticated ones (which means the supremacy of the bearers of sophisticated capacities i.e., human beings over non-bearers of such capacities). This is an allegation against Attfield of committing speciesism.

Carter adds that by deploying the Aristotelian element (which involves that a minimally worthwhile life requires development in some degree of most essential capacities) within his ethical theory Attfield has managed to remove the repugnance from the well-known Repugnant Conclusion. But through being 'committed to the view that more good flows from developing everyone's capacities to some degree than from maximally developing the same capacities of a minority at the expense of those of the

[8] Attfield, R., *The Ethics of the Global Environment* (Edinburgh: Edinburgh University Press, 1999), p. 39.

majority'[9], as has been alleged by Carter, Attfield's theory suggests that 'we ought, *ceteris paribus*, to bring about the lowest acceptable level for the greatest number of human beings'.[10] And this is the issue that Carter refers to as 'the Minimax Implication', which in turn, as he maintains, leads to a bizarre conclusion for a supposedly environmental ethics. To provide further clarity on the meaning of his Minimax Implication, Carter writes:

> Strictly speaking, it would be preferable to construe 'minimax' as "the lowest level for the best off". However, with regard to any capacity whose development is constrained by a limited resource, bringing about the lowest acceptable level for the greatest number of humans would itself imply minimising the level of the best off. [11]

This seems to be a further allegation against Attfield of committing reverse discrimination. Furthermore Carter accuses Attfield of incorporating and highlighting the issue of 'the moral considerability of possible persons along with actual ones'[12] in his theory, paving the way for the Minimax Implication.[13]

Another decisive flaw of Attfield's biocentric consequentialism, according to Carter, is its being a monistic theory. For Carter monistic theories attempt to maximize one value, and, therefore, are not capable of providing determinate answers to moral questions; it is only value pluralism (or 'moral-pluralist environmental ethics') that can answer such moral questions by taking into account various normative theoretical considerations (such as, anthropocentric, zoocentric, biocentric and ecocentric considerations) as well as by trading off those various values against one another. Carter

---

[9] Carter, 'Inegalitarian Biocentric Consequentialism, the Minimax Implication and Multidimensional Value Theory: A Brief Proposal for a New Direction in Environmental Ethics', p. 65.

[10] Ibid.

[11] Ibid. Also see Carter, 'Review of Robin Attfield, The Ethics of the Global Environment', p. 151.

[12] Attfield, *The Ethics of the Global Environment*, p. 152.

[13] Attfield, R., 'Biocentric Consequentialism and Value Pluralism: A Response to Alan Carter', *Utilitas*, 17.1 (2005) 85-92 (pp. 85-86).

concludes his review by arguing that as a monistic theory Attfield's brand of biocentric consequentialism is inadequate to cover the full range of ethical issues, and that the complexity of environmental considerations warrants rather a far more pluralist value system. Furthermore, Carter says that

> Attfield's particular brand of consequentialism appears, quite inadvertently, to have an implication that would reveal it to be less environmentalist then its proponent presumes, and yet which, simultaneously, is likely to repel those lacking sufficient environmental concern.[14]

The implication of Attfield's theory, as Carter reads it, is inadequate protection for 'inessential species', namely one of inadequate protection for 'inessential species'.

Attfield has been found to mount a response to Carter's objection to his theory. Before we undertake discussion about Attfield's reply to Carter's criticism of his theory, it is worth mentioning that Carter's criticism about/of Attfield's biocentric consequentialism does not justify Sober's stance (or criticism) of environmentalism, or rescue it from various replies to him discussed in the previous chapter; but Carter's criticism attempts to problematize Attfield's particular brand of biocentric consequentialism. Carter's seemingly strong criticism of Attfield's ethical theory warrants a closer scrutiny of Attfield's reply to him, or else the theoretical grounds of Attfield's approach to environmentalism (as discussed in the previous chapter), and in particular to preserving species, would remain exposed to an open and unchecked challenge.

Attfield's classification of living creatures in terms of their moral significance is rooted in their capacities and interests, not in their species memberships. It reveals that moral significance can differ not merely between members of different species, but also among the members of the same species (e.g., among the members of the human species) based on their capacity and interests, suggesting that Attfied's theory as thus

[14] Ibid., p. 86.

presented by Carter (Carter assumes that Attfield emphasizes autonomy at the expense of other values,[15] and supposes that in so doing Attfield commits himself to speciesism) is a misrepresentation or misunderstanding, to say the least.

Attfield now replies to Carter's inference adduced against his theory that biocentric consequentialism may well enjoin us to bring into existence billions and billions of humans with their capacities developed ever so slightly in preference to preserving many non-human species. In his reply Attfield explicitly states that biocentric consequentialism involves obvious rationales against any large increase of the existing human population. Attfield argues that Carter's analysis of his theory, as being supportive of developing people's capacities 'ever so slightly', is a misinterpretation because, for him, such a practice (i.e. developing people's capacities 'ever so slightly') fails to satisfy basic human needs. As Attfield puts it:

> Nor does biocentric consequentialism advocate developing people's capacities 'ever so slightly', or even 'to a slight degree', since such a practice would standardly fail to satisfy basic human needs for the development of essential capacities. (Consider, for example, people whose capacity to communicate was restricted to pronouns and present-tense verbs only.)[16]

Attfield here clarifies that biocentric consequentialism gives emphasis to satisfaction of basic needs, and thus, logically speaking, it cannot advocate developing people's capacities 'ever so slightly' because the proposal of satisfying basic human needs and developing human capacities 'ever so slightly' do not go together. As has been stated in the passage above, restricting some people's capacity to communicate to pronouns and present-tense verbs only certainly does not satisfy the basic needs of those people.

[15] Attfield, *The Ethics of the Global Environment*, pp. 116-24.
[16] For more see World Commission on Environment and Development, *Our Common Future*, (Oxford University Press, Oxford, 1987, Chapter on 'Population and Human Resources' in Part II, pp. 95-117

Because it is based on such a misapprehension, Carter's diagnosis of the supposed 'Minimax Implication' of Attfield's theory seems to be erroneous.

As opposed to directing us to bring billions and billions of people into existence, Attfield has been found to suggest stabilizing population at a much lower level than this. To be more precise, Attfield suggests a sustainable human planetary population of around 8 billion.[17] This figure appears to be compatible with the lower end of the range of UN population scenarios (which is about 7.5 billion).[18] Attfield's suggestion for stabilizing human population at a lower level of 8 billion (which is rather less then the possible ceiling of 10 billion) appears to contrast strongly with Carter's supposed inference or accusation about Attfield's theory that it may enjoin us to bring billions of humans into being at the cost of non-human species. This being so Carter's accusation against Attfield's theory in this regard seems again to be a misrepresentation. In addition, elsewhere Attfield adds that non-human interests, as recognized in biocentric consequentialism, can easily justify a crucial difference to human practice and policies as regards population size and distribution. To put it more clearly, Attfield writes that

> Biocentric consequentialism could advocate adding billions and billions of people only if the others could be supported on other planets, without damaging the creatures or the ecological systems of those planets, or if they were to live not simultaneously but spread out diachronically over the centuries, with a sustainable but limited human population on Earth continually replacing itself. [19]

This passage clearly implies that Attfield does not mandate overpopulation not only on Earth but also in any other possible habitat (other planets). Suggesting a sustainable but

[17] Attfield, 'Biocentric Consequentialism and Value Pluralism: A Response to Alan Carter', p. 87.
[18] . Attfield, R., 'Biocentric Consequentialism, Pluralism, and 'The Minimax Implication': A Reply to Alan Carter', *Utilitas*, 15.1 (2003), 76-91, p. 78.

[19] Attfield, 'Biocentric Consequentialism and Value Pluralism: A Response to Alan Carter', p. 87.

limited population on Earth he seems to further suggest that population can be increased by billions and billions if and only if the additional population could be placed on other planets without damaging the creatures or the ecological systems of those planets. Thus Carter's accusations against Attfield's theory of advocating 'a world full to the brim of people' at the cost of other living entities seem to be misleading.

In responding to Carter's criticism of his stance for juxtaposing the moral considerability of possible persons along with actual ones, Attfield attempts to show that the moral considerability of possible human beings and non-human creatures implicit in the basic characteristic features of biocentric consequentialism comprises a contribution to pro-environmentalist thought, which arguably warrants appreciation from environmentalists, but, unfortunately, Carter has missed that. Carter has not been found to give details of how this core premise generates the alleged Minimax Implication. As Carter recognizes that Attfield has been successful in removing the Repugnant Conclusion, presumably Carter's reasoning is that through suggesting the lowest acceptable level for the satisfaction of the needs of the greatest number of future human beings this same (core) premise generates the Minimax Implication. But just as Carter's suggested implication of Attfield's theory for population is revealed to have been imaginary (as has been observed in previous paragraphs), Carter's accusation against Attfield's theory of generating unwelcome implications through upholding moral considerability possible persons (along with actual ones) turns out to be unfounded.

From the above discussion, it seems apparent that Carter's alleged criticisms of Attfield's biocentric consequentialism are misleading, and fail thus far. Now the task is to tackle the question 'do the proponents of biocentric consequentialism have satisfactory replies to the criticism of this theory as a monist theory suggested by Carter?' If the answer is 'yes' then a further question arises and needs to be addressed: 'Can biocentric

consequentialism be a strong contender among theories of normative ethics in tackling the full range of ethical issues including environmental ones?'

Let us first then see what plausible replies are available to serve against the criticisms of Attfield's biocentric consequentialism by Carter. As we have observed earlier, Carter rejects Attfield's biocentric consequentialism for its generic limitations as a monist theory. The major limitation of monism is its attempt to maximize one value. In reply to Carter's criticism of his theory as a promoter of a single value (i.e. monism), Attfield explicitly states that:

> In fact, biocentric consequentialism incorporates a rather elaborate account of priorities among values, and later relates 'values' such as justice to the balance of value over disvalue that this theory of priorities seeks to optimize. Thus it embodies several features of value-pluralism (recognizing the value of health, the development of capacities, worthwhile life, justice, etc. as well as autonomy) while seeking to provide a value-based rationale for choices between recognized 'values'. It is pluralist in recognizing and relating a plurality of values, but monistic in relating them, consequentialist-wise, to the overall balance of value over disvalue, rather like the Total View version of utilitarianism, of which it is a variant with a richer axiology and a broader understanding of the range of bearers of moral standing. [20]

Attfield's reply to Carter's accusation here seems to hang on the claim that besides being a monistic theory, biocentric consequentialism embodies several features of value pluralism. In recognizing and relating a plurality of values (such as health, the development of capacities, worthwhile life, justice, etc. as well as autonomy), Attfield seems to have incorporated a certain feature of value pluralism into his theory. However, Attfield's theory is not a radical variety of pluralism, as he assumes that these values are commensurable ones. This variety of theory, following Elinor Mason's classification, can

[20] Attfield, 'Biocentric Consequentialism, Pluralism, and 'The Minimax Implication': A Reply to Alan Carter', p. 91.

be called 'normative pluralism'.[21] Thus Attfield, at this level, seems to be a normative pluralist. On the other hand, he appears also to be a foundational monist.[22] For although he believes that there are multiple values, he has been found to endorse a value-based rationale for choices between recognized 'values'. This being so, Carter's characterisation of Attfield's biocentric consequentialism just as a monistic theory, which gives undue prominence to a single value, appears to be misleading, and thus to fail. Summarizing his reply to Carter, Attfield remarks that:

> …the objections which he [Carter] poses to this particular monistic normative theory [Attfield's biocentric consequentialism] are inconclusive…This leaves biocentric consequentialism as a serious contender among theories of normative ethics, with regard to… ethical issues in general.[23]

Now it is worth asking: 'does Carter's failure to refute Attfield's biocentric consequentialism qualify this theory to be the basis of an adequate environmental ethics; in other words, 'does the failure lead us to accept biocentric consequentialism?'. Indeed, it does not. But the high plausibility of biocentric consequentialism has been a typical feature of this theory. For example, firstly, as has been observed, it can cope well with some infamous problems, namely the Non–identity Problem and the Repugnant Conclusion. Secondly, through recognizing multiplicity of values, this theory seems to

---

[21] . Normative pluralism is the view that there is plurality of bearers of value but is monist fundamentally. It is different from radical pluralism, which maintains that there is a plurality of values, but the values are mutually irreducible. For more see, Mason, E., 'Value Pluralism', *The Stanford Encyclopedia of Philosophy,* Fall edn (2008) <http://plato.stanford.edu/archives/fall2008/entries/value-pluralism/>[accessed November 2010].

[22] Foundational monism is the view that there is only one value at the most basic level – that is to say, the basic level subsumes all other non-basic levels of values. The conceptualization of foundational monism has been done with the help of Elinor Mason's classification of different levels of pluralism (for more see, Ibid.).

[23] Attfield, 'Biocentric Consequentialism, Pluralism, and 'The Minimax Implication': A Reply to Alan Carter', p. 91.

have plausibly managed to overcome the excessive simplicity of a strictly monistic view. And thirdly, through endorsing a value-based rationale for choices between recognized 'values', this theory seems to enjoy the advantage of relative simplicity. [24] The third point is very significant as pluralistic moral systems usually do not embody any meta-principle and thus cannot adjudicate clashes between values, which, according to radical pluralism, are irreducible. Consequently radically pluralistic theories are hardly able to provide any clear-cut guidance for actions or policy decisions. Pluralists, however, can in principle avoid these problems through endorsing some meta-principles to resolve clashes between various values. But, as Attfield argues, 'then this meta-principle would turn out to occupy a pivotal position within the theory, doing all the work and taking all the strain; and what started as a pluralistic theory would have turned into a monistic theory after all'.[25]

From the above discussion it has now become clearer that the supposed implications of biocentric consequentialism suggested by Carter are not implications of it as he supposed them to be, but rather biocentric consequentialism, as opposed to any straightforward monistic theory such as hedonism and any radical pluralistic value theory, seems to uphold the view that there are a range of values, and meta-principles are necessary to adjudicate conflicts between those values. Thus among the various available normative theories, biocentric consequentialism seems to be a serious contender not only for a preferable normative ethical basis for an acceptable approach to environmentalism but also for the discipline of ethics as a whole.

---

[24] Attfield, R., *Value, Obligation and Meta-Ethics*, (Atlanta, Georgia and Amsterdam: Editions Rodopi, 1995) Ch. 6.

[25] Attfield, Attfield, R., 'Biocentric Consequentialism, Pluralism, and 'The Minimax Implication': A Reply to Alan Carter', p. 91.

PART THREE

ENVIROMENTAL IMPACTS OF DEVELOPMENT ACTIVITIES AND THE DIMENSION OF HUMAN SECURITY: THE CASE OF BANGALDESH

Chapter One

3.1 Human Security: Genesis and Contours

The concept of 'security' did not appear in the literatures of relevant policy fields until the 1940s. At the beginning of its use, the meaning of the concept of security was restricted to the military defence of a state's territory, which continued for a period of nearly three decades - from the 1940s until the 1960s. This stance is familiar as the conventional (or traditional, or classical, or orthodox) realists'[1]approach to security.

A change occurred in the scope and meaning of the concept of security for the first time in the 1960s. The understanding that economic power, diplomatic capability or ownership of a key economic resource (e.g. oil) is pertinent in conceptualising the concept of security has brought about this change. This stance is familiar in the discipline of International Relations as 'Neo-realism' which:

> maintained the focus on states and the pursuit of power but accepted that not everything that happens in the world is determined by military might.[2]

A further transformation of the meaning of this concept occurred in the post-Cold War world. This has been initiated and advanced by scholars who were not convinced that 'Neo-realism' had evolved far enough from Realism to take account of the changes that had occurred in the world since the 1940s.'[3] This is recognised as the 'human security view' of security.

---

[1] Realists are the traditionalists in International Relations and Security Studies who focus their enquiries on military security in inter–state relations, envisaging states as the main 'actors' in security discourse. In philosophy, however, there are two schools of realism, namely metaphysical and epistemological; and philosophers who belong to relevant groups are recognised as realists in this sense. The word 'realist' has been used here to mean entirely different people, i.e. scholars of International Relations, not philosophers.
[2] Hough, P., *Understanding Global Security* (London and New York: Rutledge, 2004), p.4.
[3] Ibid.

Criticising the Neo-realists' stance, the proponents of the human security view state that, although Neo-realists recognise issues, such as 'economic power', 'diplomatic capability' and 'ownership of a key resource or resources' as important issues in conceptualising the concept of security, they have entirely omitted (or failed to address) a very crucial issue, i.e. humans' security. Another objection that could be put forward against Neo-realists is that they consider the concept of security as merely materialistic (as opposed to personal security, freedom from crime, oppression, violence etc., which concerns the access to materials to address purely military and economic capability). The same objection can be put against the conventional realist approach to security. These limitations with both conventional and Neo-realist definitions of security, as has been argued by Erdogan, justify a fresh conceptualisation of the concept of security.[4] It is in this context that the 'human security view' arose.

It is worth mentioning that the concept of human security, however, is not the one and only neologism that drives us to expand the focus of the concept of security beyond the level of the state. The list of neologisms, according to Paris, involves diverse security concepts, namely common security, global security, co-operative security, and comprehensive security; and 'human security', according to him, is the latest accumulation in this list.[5]

The 1994 *Human Development Report* of the UNDP focused on the 'human security' issue for the first time as a major statement. To begin with this report, the author rejects the realists' approaches to security (both conventional and Neo-realist stances) on the ground that realists' approaches to security have omitted entirely 'non-military aspects of security', especially 'the legitimate concerns of the ordinary people

[4] Erdogan, I., 'Migration: As a Threat to Security?' *Journal of Turkish Weekly*. 27 February 2009, p. 1.
[5] Paris, R., 'Human Security: Paradigm Shift or Hot Air', *International Security*, 26.2 (Fall 2001), pp. 87-102 (p. 97). Paris borrows these terms from R. W. Jones (Jones, R. W., *Security, Strategy, and Critical Theory* (Boulder, CO: Lynne Rienner, 1999).

who sought security in their daily lives',[6] or in other words 'the right to individual security'. The author then goes on to suggest that human beings are the central analytic referent of security, directing the concept of security to a new, broader horizon. Scholars in the relevant filed of security now herald this as a paradigm shift, a journey from 'state' towards 'human' security.

A fundamental question may well arise here, that of whether the human security view is a complete rejection of the state-centred view. Here the answer is 'no', because the objection against the state-centred view (the realist's view) is not because of its advocacy for the territorial defence of states, but rather for its entire omission of non-military security issues, particularly human security concerns. Thus, rather than declaring them redundant, the proponents of the human security view see state-centred views as an inadequate or narrow conception of the concept of security, and envisage their own view - the human security view - as the more adequate approach, which is also known as the broader conception of security.

As laid out in the 1994 UNDP report, there are seven interrelated significant components of human security, as such, namely: economic security (assured basic income), food security (physical and economic access to food), health security (relative freedom from disease and infection), environmental security (access to sanitary water supply, clean air and a non-degraded land system), personal security (security from physical violence and threats), community security (security of cultural identity) and political security (protection of basic human rights and freedoms).[7] According to this report, these seven categories of security generate two types of safeguard concerns from security threats. Firstly, safeguards from persistent threats such as hunger, disease and

[6] United Nations Development Programme, *Human Development Report*, 1994 (New York: Oxford University Press, 1994), p. 2

[7] Ibid., p. 22.

repression. And secondly, safeguards from sudden and hurtful disruptions in daily life – whether in homes, communities or jobs. The report maintains that all categories of security are crucial for human existence and wellbeing both at individual and collective levels.

Some works in the literature, however, amount to modification of the UNDP's lists of security concerns. Nef, for example, modifies the UNDP's list by arguing that human security should be addressed under five different categories of security concerns, namely '(1) environmental, personal, and physical security, (2) economic security, (3) social security, including freedom from discrimination based on age, gender, ethnicity, or social status, (4) political security, and (5) cultural security, or 'the set of psychological orientations of society geared to preserving and enhancing the ability to control uncertainty and fear'.[8] The view of Reed and Tehranian adds two more aspects to the above list. They are psychological security (a situation which establishes interpersonal relationships that will be based on mutual love and respect) and communication security (a state where freedom and flow of information are unrestricted).[9]

Some proponents of the human security view, however, avoid providing a laundry list of kinds of security. Thomas is an instance in this connection and avoids providing a laundry list by maintaining that major concerns of the human security issue are the fulfilment of basic human needs, realisation of human dignity, and freedom from oppressive power structures.[10]

Wyn Jones introduces two terms, namely 'broadening' and 'deepening', with a view to analysing 'human security'. By 'broadening' he means the incorporation of non-

[8] Nef, J. *Human Security and Mutual Vulnerability*: (Ottawa: The International Development Research Centre, 1999), p. 25.
[9] Reed, L. and Tehranian, M., 'Evolving Security Regimes', in *Worlds Apart: Human Security and Global Governance*, ed. by Tehranian, M., (London: Taurus, 1999), pp. 54-78 (p. 39 and p. 47).
[10] Thomas, C. 'Introduction', in *Globalization, Human Security, and The African Experience,* ed. by Thomas, C., and Wilkin, P. (Boulder: Lynne Rienner Publications, 1999), pp. 1-19 (p. 3).

military issues within the scope of security (such as environmental security and freedom from degradation, the spread of disease, overpopulation, mass refugee movements, nationalism, terrorism, and nuclear catastrophe), while by 'deepening' he means the consideration of the security of the individuals and groups as referents of security (rather than focusing narrowly on territorial securities).[11]

Based on Jones' concepts of 'broadening and deepening', Paris constructs a matrix of the field of security studies, categorising four alternative sources of security threats. They are: (1) National Security (Conventional Realist approach to security studies), (2) Redefined Security (e.g. environmental and economic security), (3) Intrastate Security (e.g., security from civil war, ethnic conflict, and democide), (4) Human Security (e.g., security from environmental and economic threats to the survival of societies, groups and individuals).[12]

Of the four alternatives, Paris recommends 'human security' as the more plausible option. He lists five specific advantages of the use of the concept 'human security':

> First, the contents of cell 4 [human security] echo many of the concerns of the human security coalition, so it makes intuitive sense to use this terminology. Second, employing human security as a label for a broad category of research eliminates the problem of deriving clear hypotheses from the human security concept itself… Third, and relatedly, although many scholars in this branch of security studies may be interested in normative questions as well as empirical ones, the advantage of using human security as a descriptive label for a class of research is that the level would not presuppose any particular normative agenda. Fourth, mapping the field in this manner - with human security as one branch - helps to differentiate the principal non-traditional approaches to security studies from one another…Finally, the very fashionability of the label "human security" could benefit scholars by drawing attention to existing works within cell 4 [human security] and opening up new areas of research in this branch of the field.[13]

[11] Paris, p. 97.
[12] Ibid, pp. 97-100.
[13] Ibid, p. 101.

Paris, however, most notably, claims that there is no use to be made of the classification of the issues of security based on the dualistic terms 'broadening and deepening', because, for him, this classification could be made redundant by a more refined and purposive classification.

Given this, one may well argue that 'human security' is an ambiguous, blurry, and non-operational concept. Some proponents of the human security view, however, strongly disagree with this judgment. Presumably the author of the 1994 UNDP report suggested a list of seven concrete elements of the human security, anticipating this sort of criticism against it. Opposing their critics, some proponents of the human security view hold that the absence of the definitional boundaries, or in other words the 'wideness' of the concept of human security implies its 'all encompassing' and 'integrative' qualities, which they see as among the concept's major strengths. As Paris puts it:

> Human security may serve as a label for a broad category of research in the field of security studies that is primarily concerned with non-military threats to the safety of societies, groups, and individuals, in contrast to more traditional approaches to security studies that focus on protecting states from external threats.[14]

Paris envisages 'diverseness of categories of the concept of security' as an opportunity for re-conceptualising the concept of security, not as a difficulty.

Furthermore, Paris suggests that, being holistic and inclusive in nature, human security offers little analytical leverage. Nevertheless, for him, it plays a useful taxonomical role through categorising a range of contributions to scholarship, undertaken on the concept of security by various disciplines and discourses. This could also provide a handy label for broad categories of research, which 'explore the particular conditions that affect the survival of individuals, groups, and societies…'[15]

[14] Ibid, p. 96.
[15] Ibid, p. 102.

It thus appears that there are at least two stages of disagreement about the concept of security. In stage one, disagreements prevail between proponents of the conventional approach to security and the proponents of the human security approach, while in stage two they prevail between the proponents of the human security approach themselves. Thus disagreements about security take place as much within approaches to security as between them.

Disagreements, at stage one, polarise related scholars into two opposing groups, involving two competing definitions of the concept of security, namely the narrow conception and the wider conception of security. As mentioned earlier, conceptions given by 'traditional' or 'orthodox' or 'classical' realists, or Neo-realists, belong to the first kind, while conceptions given by the proponents of the human security view belong to the second kind, e.g. the UNDP's 1994 definition of human security.

Disagreements of the stage two kind are subtler than disagreements of the stage one kind, and thus more difficult to dissolve or reconcile. The proponents of the human security view are divided into two groups, and their disagreements mainly concern the source of security threats. Some focus on 'want' as the source of security threats while others focus on 'fear'. Thus, although the 1994 UNDP's human security definition is more fashionable and often cited, and although some scholars (such as Paris) believe that 'human security' is a flawless and adequate option for conceptualising the concept of security, there are still other conceptions about it. There are also a number of unresolved issues as to its conceptualisation and operationalisation. These disagreements about the human security view are said to be rooted, to a large extent, (1) in its vagueness and incapability of offering practical guidance to academics (particularly those who are interested in applying it to their policy decisions), and (2) in the persistent disagreement

(between the Western or developed world and the developing or the underdeveloped world) on 'how to secure security'.

As mentioned earlier, disagreements between the proponents of the conventional approach to security and proponents of the human security view are not entirely contrasting. Acharya, the co-author of the UNDP's 2003 Commission on Human Security report, observes that our response to human security does not always require intrusion against a sovereign state. Collective action becomes satisfactory when it is envisaged as a case of pooling sovereignty rather than weakening it. People, as he says, find a solution to overcome the traditional concept of sovereignty by a more collaborative and consensual means.[16]

Axworthy, writing on the relation between human security and the state, asserts that:

> …the concept of peace and security -- national, regional, and global – makes sense only if it is derived from people's security.[17]

Although the measure of security, according to Axworthy, is the 'individual's position' rather than that of the 'state with its hold on power', it does not hamper interdependency between the two. Acharya's and Axworthy's stances on the relationship between human security and state seem mutually supportive, and also both plausible in a sense. It is because there are security issues that are theoretically balancing and require a joined up approach. For instance, protection of individuals in times of conflict and the improvement of opportunities for advancement are theoretically balancing themes and form a joined up solution for the resolution of those security issues.

---

[16] Acharya, A., 'Human Security: East verses West', *International Journal*, 56 (2001), pp. 442-460 (pp. 442 and 444). Also available at <http://hdr.undp.org/reports/global/1994/en/> [accessed 2 December, 2010].
[17] Axworthy, L., 'Introduction', in *Human Security and the New Diplomacy: Protecting People, Promoting Peace,* ed. by McRae, R. and Hubert, D. (Montreal: McGill-Queen's University Press, 2001), pp. 3-13 (p. 13).

As has been mentioned earlier, there are two major security concerns of the human security view: security from 'want' and security from 'fear'. Based on this, proponents are divided into two different groups. While Canada and a range of European countries focus much on security from 'fear', the broader Japanese and Thai views focus greatly on security from 'want'. For some this gap is irremovable, but there are other people who disagree with them. Levine cites Lizée, who states that, despite various other disagreements, proponents of human security views share one point in common. This common point of agreement is individual security. As Lizée puts it:

> Definitions of human security vary greatly, though they all coalesce on one central element: the emphasis on the need to protect the individual because it is only when individuals are secure that broader national and international institutions can themselves be legitimate and secure.[18]

According to Acharya, these competing approaches are not essentially mutually exclusive but rather they form a:

> complementary and evolving understanding of a complex and larger paradigm of human security in response to emerging challenges.[19]

Furthermore, Acharya claims that human security is not so called 'Western'. To defend his position he notes that:

> In the early 1990s, in response to a perceived Western onslaught on human rights and democratization, some Asian governments argued that the definition and promotion of human rights should be subjected to the different cultural contexts and historical experiences of Asia.[20]

In light of this guidance, Acharya asserts that human security does not undermine 'communitarian ethics'. As he puts it:

> Neither is human security "Western" in the sense that it ignores the issue of economic rights, or the "right to development".[21]

---

[18] Lizée, P. P., 'Human Security in Vietnam, Laos, and Cambodia', *Contemporary Southeast Asia*, quoted in Levine, S., 'Human Security and 'Asian Values'', Kobe, Japan, 27 December, 2005, in *Annual Report 2005-2006: Human Security* (Kobe: Asia Pacific Research Centre, 2006), pp. 347-374 (p. 368).
[19] Acharya, pp. 450-451.
[20] Ibid, p. 449.
[21] Ibid, pp. 449-450.

Levine condemns Acharya's views as a subjective expression and argues that as an Asian he tries to find a conflict-avoidance mechanism in addressing human security (that is perhaps more characteristic of Asians than non-Asians, he adds) and consequently Acharya sees little reason for there to be a conflict between the two competing stands on human security approaches (i.e. security from 'want' and security from 'fear').[22]

It thus appears overall that as a relatively new and developing view, the human security view, is conceptualised in ways that involve contested conceptions, although the divides among the conceptions are not as clear as they might seem. For, despite its flexibility, the concept of human security has a common core, i.e. the issue of individual security, and various conceptions of human security share this core in common. This core has been accorded greater importance in international governance as well as in codes of conduct. In addition, it has turned into an academic trend and a fledgling policy movement in recent times.

Furthermore, most importantly, disagreements among the contesting conceptions or views do not merely concern the conceptualisation of human security; they are to a large part about its operationalisation as well. Among disagreements as to its operationalisation, some are more complex and stronger, and involve the issue of its analytical utility, political viability and ethical justification.[23] Thus, further studies are needed to grapple more with the question of how to operationalise the concept of human security, and which conception or view of human security would be ethically more convincing and compatible, if not conclusive. The next chapter is an attempt to move towards that end.

---

[22] Levine, p. 367.
[23] Svensson, K., 'Human Security as Inclusive Security--Gender, Epistemology and Equality', *African Security Review,* 6.2 (2007), pp. 2-13 (pp. 3-10).

Chapter Two

3.2 Revisiting the Concept of Human Security

A thorough study of the concept of human security, involving its conceptual and operational aspects, would involve at least three questions and require clear replies to those questions in order to address security challenges that are discussed under various security conceptions in the vibrant field of security studies. The questions are:

i) Security for whom?
ii) Security from whom [or what]?
iii) Security by whom?[1]

Those who believe in realist approaches to security (both the conventional and the Neo-realist approach) have an immediate answer to the first question: Security for whom? For them, security is concerned with states, i.e. securing states from external attacks. External attacks may come through military intervention by another country or through economic sanctions on essential survival goods or foods, or blocking of sea routes etc. Here the realist's conceptions of security are restricted to mean protection for sovereign states and individuals within the national boundaries of the nation states. This sense of security hardly recognises any responsibility of the state to the people who live within its territory for whatever reason, but are not citizens.

Nigel Dower, a prolific writer on this issue, considers this realist characterization and understanding of security as too narrow, and summarized their views on security as follows:

> (i) It [security] is about being free from arbitrary attack on one's person or property (from individuals in one's society, one's state, foreign states or international terrorists)…Its emphasis is upon the negative goal of reducing or eliminating the risk that bad things will happen to people.

[1] Jain, P., 'Asian Values and Human Security: Some Definitional and Conceptual Concerns', Kobe, Japan, 27 December, 2005, in *Annual Report 2005-2006: Human Security* (Kobe: Asia Pacific Research Centre, 2006), pp. 338-346 (p. 341).

> (ii) In political terms its pursuit is on limited groups of people, namely the citizens of a state whose government pursues security. The focus of policies pursued by governments tends to be nationalist…
> (iii) The chief guarantor is an effective state which protects its citizens through law and order, through effective external defence, and increasingly in the modern world by a range of measures to reduce the risk of terrorist attack.
> (iv) Its focus is on the present and medium-term future.
> (v) Its success depends on the general tendency of human agents not to violate the rights of other people – whether through moral persuasion, the threat of sanctions or prevention.[2]

This very sense of 'security' is centred on the 'territorial sovereignty' of a state. Here the focus is on military aspects of security, and the idea is that the state is the chief guarantor of protection; and armaments, threat of sanctions or prevention are the best strategic measures for security. Humans are treated here as citizens of the state, not as members of the human species, suggesting that the state has no responsibility to the people who are not citizens (e.g. overseas non-residents, foreign visitors and so forth) but live within the boundary of the state in question.

Among the ethical issues arising here, some arise from the security concept, as thus defined or conceptualized by the conventional realists and the neo-realists. The problems here are (1) whether states, not human beings, are the only eligible candidates for being selected as referents of security; if protection from security threats is a fundamental human right then the subsequent concern arises (2) whether 'it is more important morally that we stop other people doing wrong to other people than that we prevent or stop suffering which is caused by many other causes, such as natural causes, social injustice and other human causes'[3].

Here the important concern relating to the above mentioned ethical queries is 'human well-being', and both the realist approaches to security appear to be counterintuitive from the view point of well-being. In one sense, in terms of their being

[2] Dower, N., 'Security and Sustainability', unpublished paper delivered at Reykjavic University, 21 October 2005, 1-7(p. 1).

[3] Dower, N. 'Security in the Modern World', (Aberdeen University: SDHP, Philosophy Section, (unpublished)).

suitable as a subject matter for moral discussion, both the realist approaches are entirely unsuitable or amoral. In another sense, even if realist approaches are counted as a subject matter of moral judgment, they often fail to merit a positive verdict. The reason for this failure is the fact that the fulfillment of the realist project is often in conflict with human well-being, and being antithetical or neutral to human well-being, realist approaches to security warrant being envisaged as morally defective by any normative ethical theory, in the full range from egoism to altruism, and from consequentialism and virtue ethics to deontology.

Realist approaches themselves justify Nigel Dower's criticism through maintaining that the only referent of security is the state, and the source of the threat to security is merely external. Of observations against realist approaches, at least two are obvious: firstly, a much greater security threat comes from disease, poverty, hunger, environmental disasters and so forth, and secondly a greater threat may come from a state's own territory rather than from external countries.

Purnendra Jain elaborates on this understanding. Security threats, as he observes, can come from another state in the form of a war in which civilians are affected and relentlessly suffer. They may also come internally through political repression, a failing government, and bad governance, or through natural disasters, such as a tsunami or an earthquake. Security, therefore, involves individuals as its major concern, and the central purpose of security is protecting individuals from all attacks, both internal and external.[4]

Jain's interpretation is penetrating, but not adequate. Anything that creates security threats justifies being tackled in the conceptualization of human security. Every species, as ecologists inform us, has a certain role in the ecosystem if it is to run properly. Human life being part of nature depends on the proper functioning of the biosphere

[4] Jain, p. 342.

(which can, in other words, be assumed to be our life support system). Therefore a secured human life and its continued or sustainable existence is not possible with policy initiatives which do not appropriately focus on ecosystems and biodiversity (i.e. species) in their policy decisions. Given this, Jain's conceptualization of human security seems to be inadequate. Another assumption that makes Jain's interpretation of human security vulnerable is the view that 'nonhuman life plausibly has intrinsic value as well as human life'[5]. For Jain's interpretation does not involve concern for non-human creatures, the bearers of intrinsic value.

In light of this understanding, the answer to the first question: 'security for whom?' is thus to be the bearers of intrinsic value i.e., members of the human community and the community of non-human creatures (for more see Chapter Three of Part Two and Chapter Two of Part Four). Furthermore, ecosystems and biodiversity warrant consideration for their role in supporting the survival of living creatures. For some[6], 'nonliving parts of nature', for example, the systemic value of nature also have intrinsic value and thus can be candidates for the same (in some views such as that of Holmes Rolston[7]). And this implies that referring security just to human beings, let alone to the state, is a narrow use of the concept of human security.

The second question is 'security from whom [or what]?' According to the realist view, the answer is: security from attack by other countries or other groups such as terrorists, or attacks by lawless individuals. As has been briefly noted earlier, proponents of the human security view provide their answer by dividing the sources of security threats into two categories, namely 'security from want' and 'security from fear'.[8] The

---

[5] Attfield, R. 'The Concept of Sustainable Development Revisited', *Yeditepe 'de Felsefe*, 1.3 (2004), 300-309 (p. 303).
[6] Aldo Leopold is the pioneer of this concept.
[7] Rolston, H. III, *Environmental Ethics: Duties to and Values for Natural World* (Philadelphia: Temple University Press, 1998), pp. 160-91.
[8] Jain, p. 341.

first concern involves issues such as hunger, poverty, disease and natural disasters and the like. The latter concern involves issues such as security against violence, human rights abuse, civil war and ethnic conflicts and so forth.

While most of the leaders of the West and East, and international institutions such as the United Nations, all agree on the first kind, there is a difference of emphasis among proponents of the latter concern. The Andrew Mack report (supported by the Government of Canada and a range of other European countries) and the Ogata-Sen report (funded by the Japanese Government) could be mentioned here as testimony of the disagreement on the range of human security issues. The Mack report focuses much on the 'freedom from fear' aspect of the security issue, while the Ogata-Sen report puts less emphasis on it and much more on the 'security from want' aspect.

Here one thing is very clear, that, while the realist view of security entirely omits issues of security from 'want' and 'fear', proponents of the human security view (the wider conception of security) set them at the centre of security discourse. Now an ethical question arises whether human beings have a right to life and whether human beings have a right to improve the quality of their lives or, in other words, the right to development. Although the latter question needs interpretation, philosophers agree on the issue that human beings have a right to life. The cogency of humans' right to life speaks for itself. On the human right to development, there is apparent guidance from the United Nations. The UN 'Declaration on the Right to Development' of 1986 is an official recognition of development as a human right.[9] Thus, in terms of the human right to life and development, and also from the point of view of ethical justification, the human security view merits recognition.

[9] United Nations, *Declaration on the Right to Development*, (New York: United Nations, 1986), Preamble, Paragraph 2.

We can now turn to Mill's essay on *Utilitarianism* for further clarification on the concept of security, which is supportive of the human security view, but adverse to the realist approach to security. Mill regards security and liberty as the permanent or vital interests of a person. And about security he says it is a pre-condition of a valuable life. Human security and liberty ground people's moral rights. Thus, for Mill, actions that damage human security interests are not only harmful, but also promote injustice. As a general rule, Mill therefore suggests that moral requirements should be restricted to a prohibition of aggression and of injury to individual security and liberty.[10] Thus in light of Mill's analysis, the human security view seems to be the more plausible and morally sound view, and by contrast the realist approaches to security appear to be morally threadbare.

'Security by whom?' is the third and most debatable question concerning security. The realist answer to this question is 'the state'. Hobbes might have an influence on the realists in this context. Hobbes, writing on the necessity of a *Leviathan* (a strong state), maintains that strong support from states is obviously needed in order to protect individual interests from the danger of anarchy that results from the general tendency of the individual's selfish interest. [11]

Hobbes' argument, however, does not seem to be strong enough because, when owing to economic adversity, some states are overrun through globalization and bad governance, the capability to provide protection has come into question. War-torn societies are the hot spots of state failure. One major concern here is the view that states themselves can be agents of human security violations. As Lloyd Axworthy puts it:

---

[10] Gray, J. N., 'John Stuart Mill: Traditional and Revisionist Interpretations' *Literature of Liberty*, 2.2(1979< http://www.econlib.org/library/Essays/LtrLbrty/gryMTR1.html>) [accessed 20 January 2010]
[11] Hough, pp. 2-3.

> The state has, at times, come to be a major threat to its population's rights and welfare -- or has been incapable of restraining the warlords or paramilitaries -- rather than serving as the protector of its people. [12]

Another major concern here is the fact that irrespective of political ideals and practices (whether democratic or non-democratic) states could function as agents of security threats. For example, as has been stated by Jain, there are abuses of human rights in China and Myanmar, both authoritarian states. The same situation prevails in democratic and advanced states as well. Examples include a law of Australia under which police may indiscriminately search premises and facilities run by Muslim communities. Police are also authorized to interrogate and deport organizations/individuals suspected of preaching violence.[13] These issues are said to have pervasively influenced the broadening of the focus of security discourse beyond the level of the state and towards individuals. Also these issues have accelerated the advent of global organizations (in the context of global security) for rescuing that part of humanity who are at risk of severe security threats.

Despite their disagreement on many other aspects, the Mack report and the Ogata-Sen report notably agree on the aptness of the United Nations as an appropriate (and incomparable) international institution for the protection of the security in question. Now the question is: Who and which agencies have the capacity and legitimacy to provide security from 'want' and 'fear'? Is the UN a legitimate body and capable of providing security in this regard? If so, which, among the United Nations Organizations and its agencies or other international organizations (such as the World Bank and the IMF), or international NGOs, or other organizations (such as NATO, OSCE etc.), is the

[12] Axworthy, L. 'Human Security and Global Governance : Putting People First', *Global Insight* , 7 (2001), 19-23 (p. 19).
[13] Jain, p. 343.

best alternative to protect security (in its broad sense) in terms of legitimacy, capability and effect?

The international organizations which have a clearer mandate than most to prevent conflicts, in order to guarantee security and peace, are 'the UN and, within Europe, OSCE and NATO'[14]. NATO (a military organization) and OSCE (the Organization for Security and Co-operation in Europe), however, act more like regional bodies, which do not represent one hundred per cent of the nation states across the world, as does the UN. As regional organizations (or international in the more limited sense) NATO and OSCE:

> …may support global goals [of security]…but equally they may assert their collective interests against the interests of other countries of the world. [15]

Therefore, organizations such as NATO and OSCE cannot be treated as the legitimate actors to deal with global conflicts and security, though regional organizations, especially NATO, play a vital role in the present international security crisis, and have a considerable bearing on the present volatile global state of security, through employing strategic (military) solutions to all security challenges (in the traditional sense) irrespective of their nature, and, in turn, act more like a higher version of a mighty nation-state actor. International multilateral financial institutions, such as the World Bank and the IMF, also have a major influence on economic development and security across the world. Their roles, in any case, are not beyond criticism. For example, the financial prescriptions of the IMF at the time of the Asian economic crisis in the 1990s have been highly controversial.

International NGOs are also concerned with global security issues and:

---

[14] Smith, K. E., *European Union Foreign Policy in a Changing World* (Cambridge: Polity Press, 2003), p. 17.

[15] Dower, N., *World Ethics: the New Agenda* (Edinburgh: Edinburgh University Press, 1998), p. 181.

> Increasingly act as lobby groups and as providers of expert information and advice, not merely to individual governments but also at international conferences and in international institutions. [16]

The effectiveness and legitimacy of international NGOs as global security actors, however, have come under attack. Cecilia Albin, one of the critics, argues that:

> Despite the increased presence and activism of NGOs on the international stage, however, their participation in negotiating fora remains largely unofficial, ad hoc, or subjected to the preferences of national governments. A principled and cautious expansion of the opportunities for NGOs to participate in international negotiations could enhance the effectiveness and legitimacy of their outcomes. [17]

Criticizing the legitimacy and effectiveness of NGOs as global security actors,

Mohamed Jawhar Hassan argues that:

> International NGO work driven by Western interests, values and world views sometimes do[sic] not jive with the more pressing and relevant needs of developing societies, e.g. emphasis on democracy and civil and political rights over stability, poverty eradication and good governance. [18]

As can be observed here, Albin and Hassan plausibly claim that international NGOs, through being more unofficial in negotiating global security issues, and sometimes being more focused on world issues (such as democracy and civil and political rights), and also sometimes being less focused on the relevant needs of developing societies (e.g. poverty eradication and good governance), thus fail to emerge as effective and legitimate actors so as to tackle global security issues.

---

[16] Ibid., p. 184.

[17] Albin, C., 'Can NGOs Enhance Effectiveness of International Negotiation?', *International Negotiation,* 4.3(1999), 371–387 (p. 371).

[18] Hassan, M. J., *Role of Non-state Actors in International Security and on Humanitarian Issues in Conflict Areas* (Kuala Lumpur: Institute of Diplomacy and Foreign Relations (IDFR) and the International Committee of the Red Cross (ICRC), 2008) <http://www.isis.org.my/attachments/397_MJH_RoleOfNon-StateActors.pdf.> [accessed 6 March 2010].

The UN, compared to other organizations mentioned above, can arguably be ranked as a global organization, in the true sense:

> … whose stated aims are to facilitate cooperation in international law, international security, economic development, social progress and human rights issues.[19]

As the representative of the nation states (nearly all independent states throughout the world), the UN assumes the legitimacy of action to deal with international security issues. As Nigel Dower traces it:

> The United Nations was set up at the end of the Second World War [in 1945]. Its primary purpose was to provide a realistic framework for maintaining international security.[20]

The rationale of the UN for managing human security and/or global security concerns is in any case at least implicit in the analysis of the two following issues: (1) the meaning of the concept of human security, and (2) the membership policy of the UN (open to all nation states subject to the fulfillment of its requirements).

As has been mentioned earlier, threats to security are not only 'military' in nature (where solutions depend on the use of force). The human security view implies that threats to security can come from other areas as well, such as hunger, poverty, disease and natural disaster, human rights abuse, civil war and ethnic conflicts etc. Furthermore, the security threats that come from these sources cannot be faced by using military force, for there is no military solution to such insecurities. On several occasions, I have also mentioned and defended the view that in addition to human beings, nonhuman life and human life support systems (ecosystems) are also vital issues in current security debates.

---

[19] XTimeline, *United Nations: Its History and Milestones* (XTimeline.com, 2008). < http://www.xtimeline.com/timeline/United-Nations--Its-History-and-Milestones >[accessed 11 February 2010].

[20] Dower, p. 116.

For a loss of any species or any disorder in natural systems causes damage to all life forms including humans.

These wide ranging security elements are also included in the subject matter of state sovereignty. Being global in nature they are a subject matter of inter-state policy initiatives, and therefore require global initiatives (legitimate and effective) in order to protect the biosphere, the only habitat of all lives on earth. Hence, security can be assumed, in its broad sense, to be addressed and achieved by a global international organization through balancing all the instruments of foreign policies of nation states and fostering the well-being of lives on earth, based on common policies, inter-state cooperation and agreements. The United Nations Organization, in this connection, is intended to be the exclusive legitimate actor, which can arguably address all aspects of diversified human security challenges, with a view to protecting human and other lives from all security threats all over the world.

The Brundtland Report of 1987, entitled *Our Common Future,* ascribes great importance to this matter, and a relevant passage reads as follows:

> National boundaries have become so porous that traditional distinctions between local, national, and international issues have become blurred. Policies formerly considered to be exclusively matters of 'national concern' now have an impact on the ecological basis of other nations' development and survival. Conversely the growing reach of some nations' policies--economic trade, monetary, and most sectoral policies –into the 'sovereign' territory of other nations limits the affected nations' options in devising national solutions to their own problems. This fast-changing context for national action has introduced new imperatives and new opportunities for international cooperation. [21]

The Brundtland Report in this passage expressively divulges the necessity of increasing cooperation among the nation states in order to support secure and peaceful continued

[21] World Commission on Environment and Development, *Our Common Future,* (Oxford: Oxford University Press, 1987), p. 312.

human existence throughout the world, for separate policies and institutions can no longer cope with the changing inter-state security issues in question.

The report of the World Commission on Environment and Development, particularly its definition of sustainable development, also provides persuasive support for the UN's justifiability as a security actor. As I discussed and revised in Chapter Three in Part One, the Brundtland definition of sustainable development is grounded on socio-economic and environmental (notably non-anthropocentric) value concerns. Given this, the UN seems to hold a wider view concerning the value of the environment, which in turn seems to be supportive of issues of human security.

Two other conventions, which were agreed in Rio in 1992, and which arguably further justify the role of the UN as equally legitimate and crucial, are the United Nations 'Convention on Biodiversity' and the 'Framework Convention on Climate Change'. The agreement embodying the Convention on Biodiversity (CBD) was adopted for the preservation of biodiversity all over the world, whilst another key agreement, the UN Framework Convention on Climate Change (UNFCCC), was adopted for the stabilization of greenhouse gas emissions into the atmosphere.

Current environmental challenges and humans' diversified security concerns justify the urgency and aptness of the agreements of the UNFCCC and the CBD. The need for those agreements has been reaffirmed in the United Nations' Copenhagen Climate Change Conference 2009 by participant countries signing the 'Copenhagen Accord' (although some people believe that by signing the Accord, poor and affected countries 'risk displacing the legitimate negotiation process taking place under the auspices of the UN'[22]), and in the United Nations' 2002 Strategic Plan for the

---

[22] Friends of the Earth International, *UN Climate Conference Closes without Adopting 'Copenhagen Accord'* (Amsterdam: Friends of the Earth International, 2009) <http://www.foe.org/un-climate-conference-

Convention on Biological Diversity (a strategic plan was adopted in an attempt to stop the loss of biodiversity and to secure the continuity of benefits that it provides through conservation and sustainable use of its elements, particularly genetic resources and a fair and equitable share of the benefits resulting therefrom). [23] Some scholars, however, argue that the result of implementation of the UNFCCC under the rules adopted in the Kyoto Protocol is incompatible with the objectives of CBD, because they involve threats to the lives of many other species. [24]

The other factor that vindicates the UN as the most distinctive international organization in protecting world humanity from security threats is its membership policy. As the UN charter outlines it:

> Membership in the United Nations is open to all other peace-loving states [sc. other than the five permanent members of the Security Council] which accept the obligations contained in the present Charter and, in the judgment of the Organization, are able and willing to carry out these obligations. [25]

---

closes-without-adopting-copenhagen-accord >[accessed 3 February 2010]. Full text of the 'Copenhagen Accord' can be accessed at http://www.guardian.co.uk/environment/2009/dec/21/copenhagen-accord-climate-change.

[23] Convention on Biological Diversity, *The Strategic Plan for the Convention on Biological Diversity 2011-2020, Including Aichi Biodiversity Targets* (Brasilia: UNEP, 2012)< http://www.cbd.int/sp/ > [accessed 5 May 2012].

[24] For instance, Fréderic Jacquemont and Alejandro Caparros argue that cooperative impact of UNFCCC and the CBD appears to be complementary although in effect they are not. This conflicting situation arises particularly whilst agreements to the UN Framework Convention on Climate Change (UNFCCC) are implemented in accordance with the policy guidelines set by the Kyoto Protocol. It is because, as regards forestry, the Kyoto Protocol promotes the use of forests as sinks in order to reduce greenhouse gas (GHG) emissions to 5% below 1990 levels. According to Fréderic Jacquemont and Alejandro Caparros, co-operative efforts (which have recently begun) between the UNFCCC and the CBD are in place in order to attain the specified target of GHG reduction, but co-operative efforts tend to convert an old forest into a single species forest, which have potential negative impacts on biological diversity. For Fréderic Jacquemont and Alejandro Caparros, an integrated harmonized ecosystem approach is needed that makes a balance between harmonized and coordinated biodiversity concerns and GHG mitigation. For details see Jacquemont F., and Caparrós, A., 'The Convention on Biological Diversity and the Climate Change Convention 10 Years After Rio: Towards a Synergy of the Two Regimes?', *Review of European Community & International Environmental Law* (*RECIEL*), 11.2 (2002), 169-180. This article is also available at http://dx.doi.org/10.1111/1467-9388.00315

[25] United Nations, *Charter of the United Nations*, Chapter 2, Article 4. <http://www.mfa.gov.tr/data/Kutuphane/MultilateralConventions/CharteroftheUnitedNations.pdf> [accessed 5 May 2012].

In terms of the number of member states, the UN is the largest international organization:

> With the addition of Montenegro on 28 June 2006, there are 192 United Nations member states, including virtually all internationally-recognized independent states. [26]

The large membership of the UN, undoubtedly, proves its role to be truly global.

But a question arises here: has the UN been successful in achieving its professed goal? Indeed, the achievement of the UN is mixed. Not all its aims have been fully realized. It has had both success and failure in world security issues. Remarkable successes following the end of the Cold War include:

> - a 40% drop in violent conflict[since the early 1990s];
> - an 80% drop in the most deadly conflicts [since roughly the middle of the 1990s] and
>
> an 80% drop in genocide and politicide [between 1998 and 2001]. [27]

On the other hand, some notable failures of the UN in security issues include:

> - Failure to prevent the 1994 Rwandan genocide, which resulted in the killings of nearly a million people, due to the refusal of Security Council members to approve any military action.
>
> - Failure by MONUC (UNSC Resolution 1291) to effectively intervene during the Second Congo War, which claimed nearly five million people in the Democratic Congo (DRC), 1998-2002, and in carrying out and distributing humanitarian aid there.
>
> - Failure to intervene in the 1995 Srebrenica massacre: despite the fact that the UN designated Srebrenica a 'safe haven' for refugees and assigned 600 Dutch peacekeepers to protect it, the peacekeeping force was not authorised to use force.

---

[26] Ibid.

[27] Human Security Centre, *Human Security Report 2005: War and Peace in the 21st Century*, (Oxford: Oxford University Press, 2006), p. 3. This report is available at <http://books.google.co.uk/books?id=rSIrNeFWIfcC&lpg=PR1&pg=PR1#v=onepage&q=&f=>[accessed 3 February 2010].

- Failure to successfully deliver food to starving people in Somalia; the food was instead usually seized by local warlords. A US/UN attempt to apprehend the warlords seizing these shipments resulted in the 1993 Battle of Mogadishu.
- Failure to implement the provisions of UN Security Council Resolutions 1559 and 1701 calling for disarmament of Lebanese paramilitary groups such as Fatah and Hezbollah.
- Allegations of sexual abuse by UN peacekeepers during UN peacekeeping missions in Congo, Haiti, Liberia and Sudan.[28]

These failures of the UN have been mainly in human rights and security issues and are generally ascribed to these failures coming from the UN's intergovernmental nature. As an association of 192 member states, it is, in fact, under an obligation to reach consensual decisions. It is a global international organization, but not an independent organization. Even when it reaches a decision, mandated by the 15-member Security Council, the Secretariat does not provide necessary resources to implement the decision. Inability of the Security Council to act in a clear and decisive way in a crisis and the veto power of permanent members (USA, UK, Russia, France and China) of the Security Council could also be listed as a reason for this failure.

Despite failures in some cases, the UN has some commendable success in various issues and still remains the last resort for humanity in protecting themselves from global security threats in a peaceful manner. The UN Charter envisages such a policy, which represents peaceful measures (developing UN Peacekeeping forces) to be the best device for maintaining international peace and security in a cost effective manner. According to the US Government Accountability Office:

> The UN Peacekeeping is eight times less expensive than funding a US force.[29]

[28] Ibid. [accessed 4 February 2010].
[29] Shapiro, A. J., *The Global Peace Operations Initiative* (Washington, DC, The U.S. Institute of Peace, 2012) <http://www.state.gov/t/pm/rls/rm/184845.htm>[accessed 10 July 2012].

The main motto of the UN is 'win-win interventions' in which the intervention is based on co-operation and consent. The underlying aim of peace-keeping suggests that war is always a failure. Hence the UN being committed to peace and an enemy to war is at least a road to hope if not fully a success. Being the last resort, our present and future security depends on the UN's necessary initiatives and its continuation, for there is no legitimate alternative available to human beings other than the UN in initiating necessary global policies for ensuring humanity's present security and its continuation into the future.

As can be observed, the crucial message of the human security view is a call for a major shift in governments' and individuals' traditional attitudes towards the issues of development and environment, for these are the issues that address essential aspects of the security issues mentioned earlier under the two heads: security from 'want' and 'fear'. The 1994 UNDP report explicitly recognizes the interdependence of security and development as the two major components of human life and dignity. This is even more apparent in the UN Secretary-General, Kofi Annan's speech in 2005:

> We will not enjoy development without security, we will not enjoy security without development, and we will not enjoy either without respect for human rights. Unless all these causes are advanced, none will succeed.[30]

The relationship between security and development has a certain implication for their satisfactory conceptualization. This relation provides the grounds for seeing 'security' as 'human security' and 'development' as 'sustainable development'. Human security offers much to the field of sustainable development. Most importantly human security underlines the 'three pillars' of sustainable development: economic sustainability, social sustainability and environmental sustainability. The urgency of the elimination of

[30] Annan, K., *Introduction: A Historic Opportunity in 2005* (United Nations, 2005). <http://www.un.org/largerfreedom/chap1.htm#> (accessed 1 February 2010].

intra-generational poverty and deprivation over the short term (in addition to long term measures for eliminating inter-generational poverty) is a major reminder from human security to the proponents of sustainable development. Thus human security, for some, can be re-expressed as a comprehensive concept of 'sustainable security', which parallels the vibrant field of sustainable development. In this context Khagram, Clark and Raad write:

> This more expanded field facilitates critical integrations of state, human and environment security, and parallels the three linked pillars of society, economy and nature central to the field of sustainable development.[31]

In practice there is hardly any genuine reflection of this new understanding about human security and sustainable development. Although interrelated and interdependent, they are often considered as distinct concepts – development as a 'soft' issue and security as a 'hard' issue.[32] And this shows how deeply the traditional conception of security is favoured by state governments, and also by the majority of academia. As can be observed, my analysis suggests that a satisfactory response to security threats, particularly ones that stem from 'want' and 'fear', must involve both individuals and the state as the referents for security, and the human security view is arguably said to have developed as an enterprise directed to that end.

Recognizing the human security view as a building block of human survival, the Commission on Human Security Report 2003 maintains that:

> Human security means protecting fundamental freedoms—freedoms that are the essences of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and appreciations. It means creating political,

[31]Khagram, S., Clark W. C., and Raad, D. F., 'From the Environment and Human Security to Sustainable Development', *Journal of Human Development*, 4.2 (2003), 289-313 (p. 290).

[32] Svensson, K., 'Human Security as Inclusive Security--Gender, Epistemology and Equality', *African Security Review,* 6. 2(2007), 2-13 (p. 5).

> social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity.[33]

The UN, by virtue of its position, is in the role of the key actor, undertaking security through reducing root causes by implementing effective measures. As it is a global international organization, not a world government, it therefore is not in a position to enforce necessary measures on nation states all over the world like those that a state government implements on its citizens. Nevertheless, making use of its position, it endeavours to guarantee the security (in the wider sense of the concept) of world humanity to a considerable extent, through planning, declaring and implementing initiatives to the best of its capacity. The Millennium Development Goals (MDGs) are one of the major attempts of the UN to that end. All 192 United Nations member states have agreed to try to achieve these Goals by the year 2015. The declaration (signed in September 2000) commits the states to:

1. halve extreme poverty and hunger;
2. achieve universal primary education;
3. promote gender equality and empower women;
4. reduce child mortality;
5. improve maternal health;
6. combat HIV/AIDS, malaria, and other diseases;
7. ensure environmental sustainability; and
8. develop a global partnership for development. [34]

Upon closer analysis the MDGs appear to be a practical initiative in addressing a range of diseases, promoting education, health and gender equality, and facilitating development and environmental sustainability.

---

[33] Commission on Human Security, *Human Security Now* (New York: Commission on Human Security 2003), p. 4.

[34] United Nations Development Programme, *Millennium Development Goals (MDGs),* Available at: http://www.un.org/millenniumgoals/ [accessed 2 February, 2010).

As the Borgen Project estimates, $40 to 60 billion each year is needed to achieve all eight goals.[35] It seems that the success of the elimination of the root causes of human security threats all over the world, particularly those that come from 'want' and 'fear', is largely related to the success of the UN's initiatives, namely the current MDGs, since the UN is the only actor working for this. Now the question is whether it will be able to reach its goals by the stipulated time. This attempt has been considerably successful. The progress towards the MDGs has been jeopardized largely by the 2008 economic downturn, particularly owing to diminishing resources, fewer trade opportunities and sluggish aid assistance to the developing world. Despite this barrier the story of achievements of the MDGs is not all bleak. According to the MDGs Report 2009:

> •Those living in extreme poverty in the developing regions accounted for slightly more than a quarter of the developing world's population in 2005, compared to almost half in 1990.
>
> •Major accomplishments were also made in education. In the developing world as a whole, enrolment in primary education reached 88 per cent in 2007, up from 83 per cent in 2000. And most of the progress was in regions lagging the furthest behind. In sub-Saharan Africa and Southern Asia, enrolment increased by 15 percentage points and 11 percentage points, respectively, from 2000 to 2007.
>
> •Deaths of children under five declined steadily worldwide - to around 9 million in 2007, down from 12.6 million in 1990, despite population growth. Although child mortality rates remain highest in sub-Saharan Africa, recent survey data show remarkable improvements in key interventions that could yield major breakthroughs for children in that region in the years ahead. Among these interventions is the distribution of insecticide-treated bed nets to reduce the toll of malaria - a major killer of children. As a result of 'second chance' immunizations, dramatic progress is also being made in the fight against measles.
>
> •At the global level, the world came together to achieve a 97 per cent reduction in the consumption of substances that deplete the Earth's

[35] The Borgen Project, *UN Millennium Development Goals* (Dutch Harbor , Alaska: The Borgen Project, 2003)<http://borgenproject.org/un-millennium-development-goals/>[accessed 3 February 2010]

> protective ozone layer, setting a new precedent for international cooperation.[36]

This gives an account of successes that are realized towards some selected targets. Achievements towards some other targets of the MDGs are not mentioned here, suggesting that accomplishments on those targets are significantly low, and thus accelerated progress is needed in those areas. These successes, however, show that the goals are within reach at the global level, and even in much marginalized places. Thus the MDGs focus on our efforts and its vision of a world 'without overwhelming human security threats' is not a nonoperational ideal standard, but an essential and viable project, which as such merits recognition. Humans' rights to freedom from security threats (especially from 'want' and 'fear') ground their moral rights, which in turn provide persuasive support for the human security view (the wider conception of security) and the justification for the UN as the legitimate and effective security actor at the global level.

Various local and regional initiatives and activities, however, can be of significant support to the UN in reaching its MDGs and other urgent pro-poor policy initiatives. Initiatives at national and regional level are needed where the nature and scope of security threats and their remedies are local and/or regional in nature. Thus, these security threats cannot be addressed without state government and regional bodies' active initiatives and participation. For example, a local and/or regional security issue may well involve a range of local security actors and systems, namely nation states' defence, police, justice, parliamentary and public security oversight, transparency in defence budgets, and

[36] United Nations, *The Millennium Development Goals Report 2009* (New York: United Nations, 2009) <http://www.un.org/millenniumgoals/pdf/MDG_Report_2009_ENG.pdf > [accessed 2 February 2010].

respect for human rights in the exercise of their functions.[37] A range of academics, think tanks, and representatives of international organizations, governments, advocacy groups and NGOs are found to have agreed upon this issue. They have converged to reflect on the role of security forces and suggested that a people-centred human security perspective is needed which:

> links between the security system and society-at-large, focusing on threats to individuals' socio-economic and political conditions, and on communal and personal safety.[38]

This new move suggests a comprehensive and coordinated approach to various sectors of security systems and also envisages both human security and security of states as a matter of important concern. In view of that goal, Security Sector Reform (SSR) has emerged for protecting security in a comprehensive and coordinated manner. The purpose of SSR includes:

- enforcing both state and human security
- improving armed and security forces' efficiency by reforming their professionalism and ethics
- promoting democratic governance of the security sector, by supporting the institutions responsible for supervising security institutions (including parliaments, independent institutions such as ombudsmen, the media, auditors and civil society)
- developing holistic, comprehensive approaches to SSR by coordinating reforms at national and international levels
- encouraging partner country ownership[39]

SSR appears here to involve a reconciliation between the traditional states-centred approach and the human security approach. The UK has played a crucial role in formalizing the concept of SSR, and this was also endorsed by the UK Department for International Development (DFID) in 1997.

---

[37] Bagayoko-Penone, N., 'Promoting Peace and Democracy through Security Sector Reform', *Insight*, 79(2009), 1-3 (p. 1).

[38] Ibid.

[39] Kraft, H. J. S., 'Democratisation and Reform in South-East Asia', *Insight*, 79(2009), p. 8.

SSR has however been criticized as a non-operational concept, an ideal standard. The financial cost of reform, lack of donor coordination and coherence (with the view to reducing conflict, SSR involves donor agencies in governance), difficulties in evaluating SSR, and lack of capacities and expertise are considered as the potential challenges for the relevant states, and these are some of the main limitations of this proposed governance. Nevertheless, some proponents of SSR believe that SSR governance can bring about a significant change where commitment to democracy and human rights has become a regional aspiration. [40]

The prospects of this proposal, as I believe, depend on how nation states will line up their domestic political conditions with the democratization anticipated at national and regional level. Seemingly it is not an easy task because a state government (presumably a corrupt or a weak one) can sever their link with the regional body setting 'state sovereignty' as an excuse. Contrariwise a powerful state government can spoil the underpinning purpose of the proposed regional governance through prioritizing its own interest, ignoring the mutual interest of humankind as a whole. Thus the prospect of SSR depends on the viability of introducing governance at regional level. This, however, needs separate study on the problems and prospects of governance, particularly regional and global governance, but there is no scope here to discuss this further.

[40] Ibid.

Chapter Three

3.3 Environmental Impacts of Development Activities: A Human Security Dimension

Human beings depend on nature and its systems for food, clothing, shelter, water supply, the air they breathe and so forth. Many of the effects of humans' environmental interventions undertaken for their survival are unintended although they have multiple impacts. The level of impact started mounting soon after humans began seeking comfort, rather than being satisfied with the sheer realisation of their survival needs.

Analysing evidence from a range of discourses on human history, evolutionary biologist Jared Diamond in his award-winning science book, *Gun, Germs, and Steel*: *The Fates of Human Societies,* argues that the gaps between the scope of human environmental interventions and the economic outcomes of such interventions were not identical in all societies. For him, history's widest disparities (particularly inequalities in power and technology between human societies) originated in environmental and geographical differences (such as the most productive crops and domesticable animals), and such inequalities do not reflect cultural, racial or genetic differences. To exemplify this, he refers to Eurasian societies, which, being placed in a geographical situation with a good climate and landmass as well as plenty of domesticable animals, achieved an early head start in developing various skills and strategies, such as writing, technology, government, weapons of war, and immunity to deadly germs, and established dominance over other continents.[1]

[1] Diamond, J., *Guns, Germs, and Steel: the Fates of Human Societies* (New York: W.W. Norton and Company, 1999), pp. 1-13

In light of Diamond's view, Eurasian societies (or civilisations), as opposed to the societies on other continents like America and Australia, have therefore a greater responsibility for environmental changes and/or damage for a certain period of time (during the period between the Ice Age and the pre-colonial period). Diamond's view appears to have dismantled ethnically-based theories of human history, but some scholars condemn his view as dogmatic as well as inadequate, and argue that, like environmental and geographical differences, genetic diversity helps explain economic outcomes.[2]

Irrespective of environmental or genetic differences, the process of human environmental interventions has reached a tragic stage, when reliance on a thrust towards science and technology has become the common belief of humans, and everyone appears to be convinced and contented with new technological inventions, of which many are now often envisaged as the main causes of the current environmental degradation, ecological problems and human insecurity.

The level of human environmental interventions and their impacts, however, has not been the same at all times in every society. One of the main reasons is that progress in science and technology has been far from uniform. Under-developed or developing countries are far behind the developed countries in this regard, and hence their contribution to environmental pollution compared to the developed countries is lesser. Developed countries, having been well equipped with scientific equipment and devices, have greatly polluted the environment. For instance, the rate of the emission of carbon

[2] For more see Ashraf, Q., and Galor, O., 'Human Genetic Diversity and Comparative Economic Development', *Series Working Papers 2008* <http://www.brown.edu/Departments/Economics/Papers/2008/2008-3_paper.pdf> [accessed 3 August 2010]

equivalent gases by developed countries is many times more than that of the underdeveloped countries. According to statistics,

> the per capita green house gas emission by developed countries is six times the world average emissions…USA alone emits 20% of the entire global emission.[3]

Just to refer to the gap in emissions at an individual level,

> per capita carbon emission of a Bangladeshi is just 0.3MT compared to 20MT emission by a USA citizen. [4]

The above documentation implies that the rich are largely culpable for the climate change that is due to global warming, and also culpable for human security threats resulting therefrom. Ironically, the poor suffer more due to climate change, but are hardly culpable for that. Indeed, being exposed to the adverse effects of climate change, the poor (particularly in the underdeveloped countries) suffer more. The most distressing phenomenon humans experience due to climate change is extreme weather events, such as floods, droughts, heat waves, tropical storms and the gradual rise in average temperatures and sea levels. As *New Internationalist* reports on the effects of global warming in Bangladesh:

> By 2050, a 30-centimetre sea-level rise may displace 10 per cent of the country (currently the equivalent of the population of the Netherlands). A one-metre rise will submerge up to a fifth of the country – permanently. [5]

---

[3] Khan. M. R., 'Environment', *Banglapedia*: *National Encyclopaedia of Bangladesh,* 2006 <http://www.banglapedia.org/> [accessed 3 August 2010]

[4] Chowdhury, J. A., *Essays on Environment* (Dhaka: Botomul, 2007), p.73

[5] Healy, H., 'Adaptable by Nature', *New Internationalist,* 451(2012), 23-30 (p.18).

Climate change thus has a vital security implication for the bulk of the population, particularly for the people who live in and around the coastal areas of underdeveloped or developing countries, and particularly for the Small Islands Developing States (SIDS).

This does not, however, mean that the poor do not make any contribution to the degradation of the environment, and also it does not imply that environmental problems begin only after a country has become rich; but rather the truth is that scientifically uninformed, technologically unequipped and poverty-stricken poor people of the underdeveloped countries also pollute the environment through unskilled utilisation of biomass as a source of energy. For example, due to the unavailability of energy (particularly gas) in the underdeveloped countries (in the countryside, suburbs and some parts of the cities, especially where poor people live), the poor have to depend on biomass sources as sources of energy (such as, in South Asian countries, rice straws, husks, dung, twigs, leaves, bags, jute sticks, fuel wood and so on). The open air burning of such biomass releases various carbon equivalent gases in the atmosphere, such as Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O) and Nitrogen Oxide (NO_x), and pollutes the environment. The unreflective use of biomass is not reducing at all, due to there being no progress in the rural energy supply situation, plus due to there being an unchanging state of stark poverty in the poor communities. Furthermore, the rate of the combustion of biomass is rather increasing steadily in line with the growth of population in such communities.

The poor and the rural people can and should not, however, be blamed in the first place for using biomass, as they have no other choice, and secondly they can and should also not be blamed for the unmitigated use of biomass unless they are supplied with an environmentally more friendly and economically affordable source of energy. This suggests that the poor act willy-nilly to confront the environmental (ecological)

limits (carrying capacity) and thresholds of nature, and both the rich and the poor make contributions to the current imperilled condition of the environment, even though in many cases for contrasting reasons: for instance while the poverty-stricken, scientifically uninformed poor people pollute the environment through unmodified use of biomass (owing to the unavailability of an alternative energy supply) for the sake of survival, the rich pollute the environment through misuse and/or overuse of energy with a view to increasing their lavish standard of living.

This chapter will now concentrate on major sectors and forms of human development activities. Human development activities are diverse, and hence impose multiple impacts on the environment. There is no universally accepted list of sectors and forms of human development activities that affect the environment. Nevertheless, a widely agreed list of sectors and forms of development activities is not impossible to produce. The following is a list of some such major sectors and forms of human development activities that affect the environment greatly [6]:

- Energy—development, distribution, processing, management, and/or consumption/use (oil, gas, nuclear, other)
- Natural resources—development, management, and/or harvesting, use (e.g., fisheries, aquaculture, forestry, hunting/trapping, mining)
- Agriculture/food production—land cultivation, animal husbandry, food processing (waste handling, treatment, and disposal)
- Physical infrastructure—creation or use of infrastructure, such as roads, housing, bridges, ports, storage facilities, railways, sewage, or waterworks
- Transportation—road, marine, rail or air transportation, and all related activities and infrastructure
- Toxic/hazardous substances and materials—generation/manufacture, use, management, regulation, transportation, or disposal (e.g., toxics and pesticides)
- New substances and organisms—development, deployment, and regulation (e.g., new chemicals, genetically modified organisms)
- New products and technologies—development and deployment
- Industrial activity—e.g., resource processing and manufacturing

[6] Office of the Auditor General of Canada, *Appendix 1—Human Activities and their Potential Impact on the Environment*, (Ontario: Office of the Auditor General of Canada, 2007) <http://www.oagbvg.gc.ca/internet/English/meth_gde_e_19283.html >[accessed 14 July 2010]

- Urban development (e.g., conversion of wetland into human habitat, destruction of bio-diversity through physical infrastructure and related activities)
- Military activities—training, equipment, materials, natural disasters and other emergencies (e.g., preparation and response)
- Waste generation or management (including hazardous waste)
- Movement of goods and services (local, regional, national, international)
- International trade (export and import)
- Occupational/workplace hazards
- Cleanup/rehabilitation of contaminated sites
- Procurement and consumption of goods.

Although this is not a complete list, it supplies a number of instances that attest human intervention with the environment is wide-ranging. Also, it is apparent from the list that involvement or intervention with the environment on the part of scientifically informed and technologically advanced people is far greater than that of people who are scientifically uninformed and technologically backward, which in actual fact means that the interactions of the rich (or developed countries) with the environment are far wider than that of the poor (or again underdeveloped or developing countries). According to documentation:

> Developed countries, which have 20 per cent of the world population, use up 80 per cent of the world resources…The gap between rich and poor countries was widening annually [that is, during the 1980s and 1990s]. [7]

A separate list for the environmental impact of development activities is now required. Human development activities have a range of impact on the environment, but much variance is found in scholars' assumptions about what makes impact of development activities problematic. While many consider the impact on local people for the near future as important (anthropocentrists), others take into consideration impact on

[7] Khor, M., ' Some Principles for an Alternative Lifestyle and Development', in *Environmental Crisis in Asia-Pacific : Declaration and Resolutions of the SAM Seminar on Problems of Development, Environment, and the Natural Resource Crisis in Asia-Pacific 1983*, ed. by Alam, S., (Penang, Malaysia: SAM, 1984), p.56.

the whole of humanity and on other species for the distant future (biocentrists). In addition, there is an alternative stance (ecocentrism) that allows for not only present and future humans and other species but also the planetary natural systems themselves. The size and extent of the list now depend on which stance we are going to adopt. If we were to agree to the latter stance, making a comprehensive list of the environmental impacts of human development activities would be quite a cumbersome task, if not impossible. Present purposes do not require such a list. We can therefore go on to supply a list that may well not be comprehensive but may be considered a widely agreed list of some major environmental impacts on the major components of Earth (such as water, air, coastal or marine areas and land)[8]:

[Some impacts on water:]

- reduction in quality of habitat for fish and other aquatic organisms; increased runoff and erosion;
- depletion of fish populations;
- impairment of water quality (pollutants, pathogens, bacteria, nutrients);
- need for increased water treatment;
- increased algal growth/blooms;
- decreased biodiversity; and
- encroachment of exotic, invasive species (e.g., zebra mussels).

[Some impacts on groundwater:]

- reduced groundwater quality (e.g., pollutants/toxins, hydrocarbons pathogens, bacteria;
- impairment of drinking water quality;
- need for increased water treatment;
- reduced groundwater quantity;
- surface water effects (quality and quantity); and
- explosions (from petroleum products, fuels).

[Some potential impacts on air:]

- release of carbon dioxide and other greenhouse gases (contributing to global warming);
- depletion of the ozone layer;
- impairment of air quality;
- smog (including particulates, ground-level ozone);

[8] Ibid, pp.56-57

- effects on human and wild life health (e.g., upper respiratory problems and higher rates of hospitalization);
- acidification of lakes and rivers (acid rain); and
- deposition of air pollutants on land and surface water body;

[Some impacts on coastal/marine areas]

- alteration/degradation of quality of fish and other marine habitat;
- depletion of fish populations;
- increased disease and pathogens affecting fish;
- impairment of water quality—e.g., pollutants (including petroleum products), pathogens, bacteria, nutrients;
- exotic, invasive species;
- socio-economic effects; and
- reduction of tourism activity.

[Some impacts on land:]

- depletion of renewable and non-renewable resources;
- soil and groundwater contamination;
- erosion/desertification;
- reduction/removal of wildlife habitat;
- removal/reduction of wetlands;
- reduction in biodiversity (soil organisms, plants, wildlife);
- increased surface water runoff/storm water runoff;
- mining waste (tailings); and
- opening of remote areas.

The impacts in the list above can be classified into local and global environmental problems. Examples of local environmental problems (from the list above) involve all types of pollution from a local industry including smog and litter, impairment of drinking water quality, reduced ground water quality and loss of a rare species from a locality. On the other hand, global environmental problems comprise two types of problems: systemic or repetitive.[9]Global problems of the systemic kind involve global warming (which is at least partly due to releases of CO2 and greenhouse gases, and which causes floods, drought, wildfires and so on), depletion of the ozone layer, and desertification including all sorts of impairment of the quality of air and water. These are global

[9] For details, see Attfield, *Environmental Ethics*: *An Overview for the Twenty-First Century* (Cambridge: Polity Press, 2003), pp. 5-6.

problems since they are determined by the ecological systems of the planet. On the other hand, deforestation, reduction in bio-diversity, and reduction or removal of wetland can be labelled global environmental problems of the repetitive kind, productive in different localities by parallel sets of local causes. These problems are global in the sense that they occur worldwide and have impacts on global economic and financial systems.[10] Although this appears to be a long list, it is actually incomplete, since there are many other environmental impacts of human development activities (such as wildfires, oil slicks and radioactive strontium) that have not been included. This is also incomplete in the sense that some impacts may well have gone unnoticed through our ignorance.[11]

Nevertheless, the above list is adequate enough to clarify and justify the assertion that environmental impacts of development activities are widespread and alarming. It reinforces the idea that the more humans advance in science and technology with a view to improving their quality of life and comfort, the more they have made themselves insecure. Most significantly, the above mentioned impact list justifies the assertion that the current and the potential environmental degradation, ecological problems and human security threats are all anthropogenic, and deeply motivated by human self-interest, suggesting such challenges are to be seen as social and moral issues, not merely scientific ones. Thus addressing an environmental problem without recognising its moral and social aspects is inadequate, if not entirely futile, and presumably here lies the secret of the failure and or ineptness of many existing discussions and discourses on the environment.

---

[10] See Brown, L. R., 'Challenges of the New Century' in *State of the World 2000*, ed. by Starke, L., (New York and London: W W Norton & Company , 2000), pp. 3-26

[11] For example, toxic effects of asbestos on healthy air and of lead pipes on drinking water went unremarked for many years and centuries (from Roman times) respectively.

John Passmore's understanding of the concept of 'ecological problems' seems supportive of the above-mentioned interpretation. By 'ecological' he means a problem that arises as a practical consequence of human dealings with nature; and 'problem' means an issue that involves cost which we are unable to live with and can cure or alleviate.[12] Passmore's view entails that 'ecological problems' are always amenable to human action, and hence frequently anthropogenic. This attests the view that 'ecological problems' are not merely issues suited to a scientific or technical fix.

Although scholars share a common belief that the current environmental problems and human security threats are anthropogenic, they are found to maintain diverse views about the specific origin of such problems. There are as many as eight seemingly opposing views about the origin of such problems. They are: (1) the population theory, (2) the affluence theory, (3) the economic activity and growth theory, (4) the technology theory, (5) the capitalism theory, (6) the absence of markets theory, (7) the patriarchy theory, and (8) the religion theory.[13] It is worth noting here that although every alternative view undeniably addresses some important aspects of the origin of ecological problems, none can address the case in point comprehensively. It means that such problems are not explained by any single factor (neither population, nor affluence, nor technology, nor capitalism, nor lack of markets, nor patriarchy, nor growth, nor religion).

The above-mentioned list, as we can comprehend, attests the view that human development activities are mainly concerned with the satisfaction of humans' own needs. Also, these instances supply us with the idea that unfortunately and ironically impacts of

---

[12] Passmore, J., *Man's Responsibility for Nature* (London, Duckworth**,** 1974), p. 43.
[13] Attfield, R., *The Ethics of Environmental Concern,* 2nd edn (Athens and London: University of Georgia Press 1991), pp. 9-17

development activities are the major stumbling block that hinder humans from reaching their key objective of development, or at any rate from attaining sustainable development. The list also entails that the amount of risk is so high and widespread, that not only humans but also all non-human life on earth would be at stake, if humans continued to follow the traditional theory/model of development (involving economic growth[14]).

Given this, the widely agreed list of opportunities to avoid or minimise negative environmental effects is explored below[15]:

- consideration of environmental factors/concerns in the early stages of decision making (e.g., for projects, product development);
- reducing energy consumption and increasing use of renewable energy sources through;
- increased efficiency (e.g., enhanced fuel efficiency for vehicles, reduced electricity consumption by household appliances); and
- building design (new buildings) or retrofitting;
- advancing, developing, and employing green technologies;
- reducing consumption of resources;
- increased reuse and recycling, thus decreasing resource consumption, and waste production and disposal;
- eco-efficiency;
- green procurement—purchasing more environmentally friendly goods and services;
- pollution prevention by
  - avoiding the use of hazardous/toxic materials;
  - using cleaner fuels;
  - using clean emissions technologies for engines; and
  - using cleaner energy sources (e.g., solar, wind power); and
- improved emergency response and preparation.

The above list suggests that success in avoiding or minimising a range of environmental problems partly depends on the success of science, particularly on its

[14] The traditional theory of development is that a nation's progress is measured in terms of economic growth, which is therefore its primary goal.

[15] Office of the Auditor General of Canada, *Appendix 1—Human Activities and their Potential Impact on the Environment* <http://www.oagbvg.gc.ca/internet/English/meth_gde_e_19283.html >[accessed 2 August 2010]

capacity of developing and advancing necessary devices that can foster employing green technologies, increasing reuse and recycling, and using clean emissions technologies for engines. There is, in any case, no problem with the view that solutions to environmental problems are partly scientific, but the problem arises when the relation of these problems to science is understood otherwise e.g., when scientists see environmental problems as merely scientific and endeavour to resolve environmental challenges scientifically, through new inventions, as if moral dimension of environmental problems was ignorable and social changes were unnecessary.

A number of researchers, including environmental ethicists, have been found to oppose this, and argue that problems arise when we take environmental problems merely as technical problems, and anticipate solutions from particular specialist disciplines. Rachel Carson, in *Silent Spring* in 1962, argued that we take risks when we envisage environmental problems merely as technical problems, and hope to find a quick scientific or technological fix. Use of pesticides, according to her, is an example of taking such a risk, which offers an effective, albeit short-term, solution to some questions (agricultural and health questions, for example) leaving many other questions untouched.[16] Among the unaddressed or unasked important questions are ecological, socio-political and ethical ones. These unaddressed or omitted questions are equally significant and quite relevant

[16] As Rachel Carson points out, pesticides (e.g., insecticides, herbicides, fungicides, and so forth) were quite effective for a certain period of time (evidence shows, as she mentions, that the benefit from pesticides was short-term because the original pesticides had become ineffective against pests since a genetic resistance was developed in them over a short period of time) in limiting crop loss from all kinds of undesirable forms of life such as insects, some targeted plants and fungi, and in fulfilling the requirement or satisfying the pressure of increased agricultural productivity to meet the need of increasing population, without raising prices. She also mentions that insecticides such as DDT and other chlorinated hydrocarbons were also very effectual in killing mosquitoes and other insects which spread diseases such as malaria, typhus, and plague. Given this, according to Carson, pesticides can be distinguished as a feasible temporary solution to some health and agricultural questions, but simultaneously warrant criticism for being an unsustainable solution to the problem in question, and also being silent in addressing some important questions, such as ecological, socio-political, and ethical.

to the issue of pesticides. Among the important omitted questions are: What effects are pesticides having on other things throughout the food chain? Who should decide levels of safety and risk? Are the benefits worth the risk?[17]

Granted that such questions are significant, the issue of pesticides use requires an interdisciplinary approach that combines a diverse group of disciplines such as agriculture, chemistry and various branches of biology, medicine, economics, politics, and law, including questions of value, but in fact scientists are often found to assess and offer solutions to environmental problems merely in a scientific manner. Joseph R. Des Jardins characterises this sort of bounded scientific approach as being concerned with the interest of government and private industry. Being funded typically by government and industry, Des Jardins argues, such scientific approaches deal with the questions being asked by government and industry, and no others, which is why he maintains that science has created as many problems as it has solved. [18]

A similar criticism can be brought about against the traditional economic theory of development in which Gross Domestic Product (GDP) is envisaged as the unique determining factor of development. Human wellbeing, arguably, does not depend on higher rates of economic growth; rather it depends on how, among humanity, the benefits of economic growth resulting from development activities are distributed. The evidence shows that despite good economic growth in several countries, the poor remain poor, or in many cases become poorer day by day:

> The benefits of economic growth do not always reach the majority of the people … Although several developing countries managed to achieve good

[17] Des Jardins, R. J., *Environmental Ethics: an Introduction to Environmental Ethics* (, Belmont, CA: Wadsworth, 2001) p. 4

[18] Ibid, pp. 2-13

> rates of economic growth, they could not solve problems of poverty, unemployment and inequalities … There are more starving, homeless and sick people in the world today than five or ten years ago … In developing countries, too, there are serious inequalities in income.[19]

This illustration calls attention to the fact that 'higher economic growth' has nothing to do with remedying inequalities, particularly economic inequalities in a society; but rather as economic growth accelerates so does the gap between the rich and the poor. Thus higher economic growth alone is not the kind of policy to bring about socio-economic equality or progress in society, let alone environmental protection. This gap, as has been mentioned earlier, results in turn in increased environmental damage through increasing the poor's contribution to environmental damage, forcing them to burn available local sources of energy like biomass at an increasing rate.

So the key points on which the conceptualisation of environmental problems rests are that (1) although the environmental footprint of affluence is enormous, poverty is also linked to environmental problems of development (for some, both affluence and poverty are terminal diseases[20]), and (2) environmental problems are not addressed by any single discipline, neither science nor economics, but rather constitute an issue that combines a variety of disciplines including moral discourse. The reason behind the link of current environmental problems to moral discourse is the fact that 'tackling ecological footprints in the North is an issue of global justice, and essential to a transition to sustainability'[21]. Granted, the impossibility of addressing environmental problems by any

---

[19] Khor, M., 'Some Principles for an Alternative Lifestyle and Development' (see note 7), p.56

[20] De Graaf, J., Wann, D. and Naylor, T.H., *Affluenza: The All-Consuming Epidemic*, 2nd edn (San Francisco: Berrett-Koehler, 2001), p. xiii.

[21] Adams, W. and Jeanrenaud, S. J., *Transition to Sustainability* (Gland: IUCN, 2008), p.48

single discipline, and also granted the inequalities between the rich and the poor and in conjunction with the contribution of the rich the increasing contribution of poverty-stricken people to the degradation of the environment, development policy guidelines have long been needed that were ecologically sound, and provided enough basic goods for the common man. Unfortunately there is hitherto little or no apparent reflection about such guidelines in the development policies and activities of any society – developed or underdeveloped.

Thus implementing a policy of development that will guarantee rational and skilful use of resources and also that is more in harmony with a satisfactory quality of life for humans and the stability of the environment is now a pressing need. From the foregoing discussion it is clear that among the major sources of human security threats are humans' overuse and unskilful use of resources. These types of uses of resources for development purposes are in effect a major enemy to sustainable development, which suggests that success in formulating an attractive variety of sustainable development significantly relies on its capability for addressing the significance of human security for sustainable development. The next chapter presents some human security impacts of environmental problems caused through development activities in Bangladesh.

Chapter Four

3.4 Bangladesh: A Case Study

Located in the low-lying flood plains of the largest South Asian Rivers – the Ganges, Brahmaputra, Padma, Jumana and Meghna – Bangladesh occupies one of the world's largest deltas. Surrounded by India to the west, north and east, by Myanmar to the south east and by the Bay of Bengal to the south this country comprises four distinct physical regions: the central alluvial plains, the Sundarbans mangrove forests, the slightly higher plains in the north east and north west, and the Chittagong Hill Tracts (the only upland area, in the south east along the Myanmar border). As the biggest segment of the country comprises flood plains, it is quite fertile and vegetated, and thus called *The Green Delta* (which is also a nick name for *Bangladesh*).[1] This fertile and vegetated green delta, however, has now become one of the most ecologically vulnerable places in the world.

Being an active delta, Bangladesh is naturally a disaster-prone country. Floods and cyclones were in existence right from the beginning of the formation of this alluvial plane, but afterwards, particularly over the last half century, the frequency of such occurrences and their devastating impacts (on human and non-human lives) has mounted significantly. As various forms of evidence show, these occurrences are partly due to human intervention (excessive or unskilful) with the environment both at local and global levels. The population explosion[2] has imposed further pressure, resulting in

[1] The Golden Fibre Trade Centre Limited (GFTCL), *Ganges Delta: Most Fertile Land for Growing Jute, Kenaf, & Roselle Hemp Fibers,* (Dhaka: GFTCL, 2009) <http://www.jutexporterbangladesh.ne1.net/ > [accessed 6 August 2010]

[2] The greatest problem that Bangladesh faces is an unusually large population in a small land area. It has a population density that is the highest in the world, except for a few city-states like Singapore. The population grew from 42 million in 1951 to about 147 million in 2005. It is projected to reach 166 million

overwhelming environmental disasters and a terrifying human security threat due to such disasters. For example, deforestation is one of the major human-caused environmental problems that contribute to reduction of the water-carrying capacity of the rivers, resulting in more floods and suffering. A thorough enquiry would reveal that a number of anthropogenic environmental changes have become the main impediment to achieving sustainable socio-economic development in Bangladesh, and human security has also become gravely vulnerable to such natural disasters and environmental hazards.

Like many other severely affected areas in the world, environmental problems in Bangladesh have a two-fold dimension: local and global. The main local environmental problems in Bangladesh involve various types of pollution by pollutants from: internal factories; open and untreated excreta disposal; uncontrolled motor vehicles; open waste-burning and various development works including building construction and road digging, and cooking with biomass fuels; rapid change in morphological features through erosion and siltation; and destruction of coastal ecosystems, particularly of the vulnerable ecosystems of the Sundharbans mangrove forest, and of their salinity. These are classified here as local environmental problems, as they are related to locality. Some problems like erosion and siltation are, however, paralleled elsewhere, and thus may have a global dimension. By contrast the major global environmental problems involve global warming, reduction of bio-diversity and wetland.

Bangladesh does not hold the status of an industrialised country. Nevertheless whatever industrialisation has occurred in Bangladesh has occurred mainly in its urban areas (particularly in and around the divisional and district towns including the capital

---

in 2015. The unabated population growth has already overburdened the human service and physical structures in urban areas, and has largely polluted air, water and land in urban areas together with such areas as wetlands and forests all over the country.

Dhaka), but without following any zoning code. Very few industries have regulation and facilities to control or deal with the disposal of toxic waste (solid or liquid), which has resulted in the severe imperilment of the ground water and air quality of major cities, particularly the capital Dhaka. The river and lakes in Dhaka (particularly the Burigonga and the Turag) have become large open sewers; the organic waste from industries, drains, sewers and the capital's runoff run into these bodies of water, hardly receiving any treatment, which has depleted the dissolved oxygen in the water, and has contaminated it with different kinds of noxious pollution. A lack of sewers, drains or services to collect solid and liquid waste and safely dispose of them has added to the water situation, which has resulted in a crisis in the availability of safe and sufficient water supplies to city dwellers. Besides emissions from the old technology, brick kilns and low-technology diesel transformation are the crucial sources of air pollution in major cities, particularly Dhaka. The water and air situation is fairly similar in all other major cities in Bangladesh.

A huge inflow of population from the countryside to the urban areas, particularly to the capital Dhaka and the second largest city, Chittagong, has caused rapid growth of not only unplanned industries but also residential and commercial establishments. The unplanned city expansion has serious social and environmental impacts, which include rapid loss of wetland and agricultural land, segregation of the poor in the most dangerous and worst located areas, and a greatly increased cost of providing basic infrastructure, public transport and social services. This has added to the already poor environmental health of the major cities, and consequently over 50 percent of the urban citizens in Dhaka live in what the World Health Organization has termed 'life and health threatening' conditions. The leading causes of death and illness in major cities, particularly in Dhaka and Chittagong, now are mostly environment-related diseases. Among the most serious are:

> Diarrhoea, cholera, typhoid and food poisoning (caused by contaminated food and/or water);
> Airborne respiratory infections (e.g. pneumonia and tuberculosis – linked to over-crowding);
> Vector-born diseases (e.g. malaria, dengue fever and filariasis); and
> Scabies, trachoma, typhus and other diseases linked to a lack of water for washing.[3]

The health cost of environmental pollution is quite significant. A country Environmental Analysis workshop (held in Dhaka in 2005, and jointly organised by the Ministry of Environment and Forest and the World Bank) estimated that:

> Reduction of PM10 concentration in Dhaka by 20% would result in avoiding 1200 deaths, 80 million cases of sickness and a health cost saving of US$ 169 million. If PM10 concentration could be further reduced by 80%, it would result in avoiding 3500 deaths, millions of cases of sickness and a health cost saving of US$ 492 million.[4]

PM10 (Particulate Matter) is used here to mean particles of 10 micrometers (usually particles range from less than 10 nanometers to more than 10 micrometers, and being non-spherical they are widely defined by their aerodynamic diameter) in air. Two-stroke three-wheeler diesel vehicles are known for discharging PM into the air of Dhaka at an alarming rate. It can easily be presumed from the documentation above that savings would be quite massive if reduction in the rate of pollution from the local sources of pollution were made possible. Considering this, the Bangladesh government banned two-stroke three-wheeler diesel vehicles in 2003, and has managed to minimise air pollution to some extent in major cities including the capital Dhaka. Another major form of environmental pollution related to motor vehicles in urban areas is noise pollution, which, due to the absence of traffic rules, is increasing gradually in proportion to the increased number of vehicles on the road.

---

[3] Hardoy, J.E., *Environmental Problems in the Third World Cities: an Agenda for the Poor and the Planet* (London: IIED, 1992), p. iii

[4] Chowdhury, A.J., *Essays on Environment* (Dhaka: Botomul, 2007), p.36

The municipal governments are responsible for guaranteeing environmental health, pollution control and land use management for city dwellers, but, as is often observed, such governments are too weak, inefficient and unrepresentative, and thus incompetent to carry out their assigned duties. One person might say that one of the main constraints in fulfilling their assigned duties is the big gap between the power and resources available to them and the amount they require.[5] Guaranteed that power and resources available to the city or municipal governments are far behind the required levels of power and resources; another might argue that the level of service from the city governments would be improved significantly if initiatives were taken that are both hygienic and cost effective. The latter claim seems plausible because, for instance, pipe water can often be installed to provide a safer supply for the same price that sufferers pay to doctors and for medicine to cure them of water-borne or water-based diseases. Also, city authorities could have installed a treatment plant for excreta disposal, of a kind far more effective and cheaper than conventional sewers and sewage treatment plants.

Another major environmental problem is river bank erosion and siltation. Bangladesh is a riverine country. According to a record of the Bangladesh Water Development Board, about 254 places along 16 major rivers come under erosion during the flood season (July-September), severely endangering thousands of river bank dwellers' lives, and threatening the existence of a number of old towns and cities. Located at the crossing point of the rivers Padma and Meghna, the gradually disappearing old and famous town of Chandpur can be supplied here as an example. Although riverbank erosion is destroying lives and resources in all areas in Bangladesh, the effect is most obvious in the rivers Padma and Jamuna. An estimate suggests that at least one million people have already been affected by this phenomenon either directly or

[5]Ibid, p. xi

indirectly, leading to an economic loss of more than US $40 million annually.[6] On the other hand, in an average year at least two major rivers change course due to siltation, leaving many rivers unnavigable and dislocating navigation routes. The poor are usually the victims of this process, as the people who live by the banks of rivers are mostly the hardcore poor.

The coastal zone of Bangladesh is also under terrific attrition due to erosion, which is mainly caused by severe tidal activity at the head of the Bay of Bengal, high upland discharge with a heavy sediment load, piling up of water at the coast during the monsoon, strong summer winds and powerful waves.[7] Landslides in inland countries are identified as another major source of siltation problems in Bangladesh. A relatively rapid change in morphological features occurs as a result of such erosion, resulting in transformations in biodiversity and biochemical cycles leading to change in the weather patterns of Bangladesh. The Sunderbans mangrove forest, which extends a little over 1.5 million acres all along the coastline, touching up to at least five districts – namely Cox's Bazaar, Chittagong, Patuakhali, Satkhira and Khulna – and which is declared the home of the world's largest natural heritage by UNESCO, has been severely affected due to morphological change. Other sources of pollution in the coastal area are the use of chemical fertilizers and insecticides, leakage of oil from sea and river transport, and oil from ship-breaking activities in river ports and coastal areas.

Although the process of erosion, siltation and change in morphological features has long been recognised as a natural phenomenon in the rivers of Bangladesh, in recent years it has been identified that the building of many dams in India and (recently) China,

---

[6] Khan. M. R., 'Environment', *Banglapedia*: *National Encyclopaedia of Bangladesh,* 2006 <http://www.banglapedia.org/> [accessed 4 September 2010]

[7] . Ibid

and deforestation in the Himalayan Mountain slopes in Nepal have added to the siltation and flood situation in Bangladesh. Soil loses water-withholding capacity owing to deforestation, which results in increased surface run-off and severe soil erosion.[8]

The salinity problem in its south-western part is another crucial environmental concern for Bangladesh. Lying as it does at the mouth of the Bay of Bengal, this area has always naturally been under threat of prospective intrusion of saline water from the Bay. The ordinary state of salinity and potential inland saline intrusion were naturally governed by the natural sweet water flow of the River Ganges through the river Padma, the Gorai and its distributary, the Madhumati. But the flow and level of sweet water in the Gorai-Madhumati estuaries has been drastically reduced since India commissioned the Farakka Barrage on the River Ganges to withdraw water at that point (for more see chapter one in Part One). The severe shortage of water flow in the Gorai-Madhumati estuaries has facilitated inland saline intrusion from the Bay of Bengal, making the entire south-western region saline-affected. A number of rivers and distributaries have dried up over the last three decades as a result of water withdrawal at the Farraka Barrage point. According to statistics, more than 500 micromhos/cm (micromho is a measuring unit of salt concentration in water) are found to have intruded nearly 160km inland, which has distorted the entire Gorai-Madhumati estuarine ecosystem. A vast area – namely Satkharia, Khulna, Jessore, Naril, Bagerhat and Gopalgonj districts – has been gravely affected through saline intrusion. Among the severely affected areas are rivers, agriculture, fishery, forestry, power generation and industry, as well as human and non-human animal health and life.

[8] Ibid

Given this, shrimp cultivation has emerged as a unique alternative to subsistence agriculture in the affected area, particularly in Satkhira and Khulna districts. This cultivation requires saline water to be held stagnant for 8-9 months every year, and this in turn has been adding to the already unbalanced salinity situation of the land. The engagement with this new dimension of land use has been on the rise for at least two reasons: (1) it is the only alternative to subsistence agriculture, and (2) it is a major source of overseas export earnings for Bangladesh. Consequently agricultural land has rapidly been lost to shrimp ponds; but the irony is that although from an economic point of view this practice seems temporarily supportive of the local people, its long-term environmental and economic impacts are catastrophic. The big concern is that the practice of this new dimension of land use has already crossed the crucial threshold inland of 80km, and is still on the rise. Thus shrimp cultivation has added to the saline condition of the south-western region of Bangladesh.

Half of Bangladesh can be delineated as seasonal wetland. Wetland provides the habitat of a large number of fauna and flora, and it has always been a matter of great economic importance, particularly for retaining fish, wildlife and various other vegetative covers. The polder projects are one of the major sources of pollution in wetland areas. Poldering is the construction of waterlogged structures within project areas, which obstructs the natural drainage system through accumulation of silt in drainage channels, and turns the wetland area into a progressive and permanently flooded area. Among the major problems of such activities are: lack of drinking water, reduction of fish resources and irreversible changes in wetland areas. Many people have left the wetland areas (for example the areas of *Chalan Beel* and *Beel Dakatia*) due to these unfavourable changes.

Deforestation is a global environmental problem of the repetitive kind. According to statistics, forest cover has been reduced by 50% since the 1970s, and

according to another estimate in 1990, per person forestland was less than 0.02 ha, which is one of the lowest forest ratios per person in the world. In the last decade of the 19th century, the south-eastern part of the Sunderbans coastal zone, including the vicinity of the river Naf in the Chittagong area, was cleared for human habitation and other activities, and has by now been entirely cleared and occupied for shrimp cultivation, salt production and agriculture. Coupled with these activities, the conversion of rich tropical forest with unique bio-diversity into plantations, improper land use and the prevalent mode of farming (*Jhum* cultivation that leads to massive loss of top soil) in the Sunderbans in the Chittagong area have made this area vulnerable to cyclonic winds, exacerbating soil erosion and diminution of bio-diversity.

The south-western part of the Sunderbans has also been ill-treated by undue human intervention. Among the major human activities that are discerned as severely detrimental to the Sunderbans in the south-western part of Bangladesh and to the environmental condition of its entire south-western region including the coastal area are: shrimp cultivation, salt production, subsistence agriculture and developing habitation within the forest area, harvesting of timber, fishing in and around the Sunderbans, and collection of honey, beeswax, oysters and shells from the same forest.[9] Besides, Bangladesh has a rich bio-diversity, but some species are found to be threatened. These include 54 inland fish species, eight amphibians, 54 inland reptiles, 41 resident birds and 40 inland mammals, plus 100 vascular plants.[10]

Bangladesh is, as has been mentioned, a riverine country. Out of 57 international rivers the country of origin (or transit) of 54 rivers is India, and three other rivers originate in Myanmar. Thus an important source of looming environmental problems in

[9] Ibid
[10] Ibid

Bangladesh is the taking of water for irrigation and other uses upstream on the other side of the border. India's Giant River-Link Project[11] is a case in point since the construction of the Farraka Barrage. In this project the Indian government has come up with a plan to supply water to those states (e.g. Haryana, Gujarat and Rajasthan) that are drought-affected. In view of this goal, the government has identified 30 connecting points in different rivers which have been connected by digging canals. Bangladesh has directly been affected due to India's water withdrawal at the connecting points of the river Brahmaputra and the Teesta.

Environmental experts and activists from both Bangladesh and India have repeatedly expressed their deep concern about this devastating project, and urged India to restrain from implementing this anti-environmental agenda. Some scholars have expressed their deep concern because of the Indian government's breaching of international treaties on the use of international rivers[12] by not consulting Bangladesh before coming up with such a project, which has devastating environmental impacts on Bangladesh. Focusing on the adverse effects of this project on Bangladesh, the Washington Times published a report on 20 September 2003, stating that the impacts of the Indian River-Link Project would be severe flooding during the monsoon rains and worse drought during the dry season in Bangladesh. The report cites Jayanta Bandyopadhyay (an executive of the Centre for Development and Environment Policy at the Indian Institute of Management in Kolkata, India) who asserts that once the Indian plan is implemented, the world could lose the richest fisheries in South Asia; salinity

[11] The River-Link Project seeks to connect the Ganges in the north and the Brahmaputra in the east, and then join it to the Kaberi and Mahanadi in the south and then the Mahanadi to the Beas in the west. Again, the Brahmaputra and the Teesta would be connected to take waters from the former to the latter.

[12] International treaties prohibit an upper riparian country from unilaterally diverting and altering the natural course of international rivers.

would also make inroads into the region, affecting thousands of hectares of arable land and the lives of millions of people subsisting on agriculture in Bangladesh. Mangrove forests, he says, will be disastrously affected, as they depend on the steady rise and fall of tides for their roots to breathe. Arresting the natural flow of rivers could be a death knell for the Sunderbans, the world's largest remaining coastal forest and a world heritage site shared by the delta regions of India and Bangladesh. Jayanta Bandyopadhyay's prediction of 2003 is now a reality for Bangladesh. This is evident in the current condition of the entire drought- and salinity-affected south-western region, and in changes to the weather and to the vulnerable ecosystem of the Sunderbans forest.

The Bangladesh media and environmental activists have waged a campaign against this Giant River-Link Project, raising public awareness of the adverse effects of this plan and forcing the Government of Bangladesh to take up the issue. On 13 August 2003 the Foreign Ministry summoned the Ambassador of India, Dilip Sinha, and handed him a diplomatic protest note, which expressed the concern that the Giant River-Link Project would threaten Bangladesh's ecology and economy.[13]

The Tipaimukh Dam construction (it is now just a matter of time before construction can start because final agreement has already been signed by the relevant parties pertaining to it) on the River Barak in the Indian state of Manipur – about 200km upstream of the Bangladesh border – is another major environmental concern for Bangladesh, which the Indian government has decided to commission as part of its multi-purpose hydroelectric project, and a treaty was signed for it by relevant parties in Delhi in April 2010. Despite criticism from experts and strong protests from

[13] Choudhury, S., *Alternative Views of Environmental Security in a Less Developed Country: the Case of Bangladesh* (Fullerton: The Free Library, 2008) <http://www.thefreelibrary.com/_/search/Search.aspx?SearchBy=0&Word=year+of+publication&Search=Search&By=0>[accessed 10 May 2012]

environmental activists and various organisations and political parties[14] from both Bangladesh and Manipur State, the Indian government has launched this project, and Bangladesh and part of Manipur will be hugely affected by it, both ecologically and economically.

While a large number of natural and human resources of the south-western part of Bangladesh are severely affected by the Farakka Barrage, the Tipaimukh Dam Project will damage the entire north-eastern region of Bangladesh, causing widespread flooding due to changes in the natural flow of the rivers Surma and Kushiara during the rainy season, and causing river transportation problems due to desertification (a process which renders the land increasingly dry until almost no vegetation grows on it, making it a desert) during the dry season. The list of other problems includes a gradual snatching away of the means of local people's livelihoods and of nonhuman life, insufficiency of drinking water and a decrease in industrial activities towards a complete discontinuation, involving decline in agricultural products and increased risk of earthquakes in the Sylhet area. According to statistics, a large number of tribal people (approximately 40,000) in Manipur will be forced to relocate from their homeland and innumerable fauna and flora will disappear.[15]

In face of protests by different environmental activists, NGOs and political parties from the Bangladesh side and the Indian state of Manipur, the Indian government has defended its position in relation to this project by saying that nothing will be done

---

14 . Such as the then opposition party of Bangladesh, Citizens' Concern on Dam and Development (CCDD) and Hmar Students' Union (Manipur).

15 Rezwan, M., *Bangladesh, India: No to Tipaimukh Dam* (Aymara, Indonesia: Global Voice, 2009) <http://globalvoicesonline.org/2009/05/27/bangladesh-india-no-to-tipaimukh-dam/>[accessed 23 February 2012]

that can harm Bangladesh. It is indeed hard to rely on the rhetoric of the Indian government, as the said government similarly expressed its commitment to give Bangladesh its fair share of water from the River Ganges, but this commitment has not yet been realised.[16] One can envisage the severely affected south-western region of Bangladesh around the Farraka Barrage as an example to suggest how detrimental the Tipaimukh Dam on a river in an upstream country would be for the downstream country, Bangladesh. Even if the water sharing issue of the River Ganges is left unsettled, commissioning a new dam like the Tipaimukh Dam can do nothing but damage the bilateral ties and mutual trust between India and Bangladesh. A source in the recent past confirmed that while 40,000,000 people of Bangladesh, and its crippled agriculture, fisheries, navigation, manufacturing industry, forestry, poultry and other relevant sectors have been badly affected by the Farakka Barrage alone, India has not left the water of many other major rivers unregulated.[17] Among other major rivers where India has commissioned barrages and thus generated disputes on water sharing are: the Teesta, Feni, Mahananda, Monu, Khowai, Muhuri, Gumti and Kodla. What is more, negligence in resolving barriers to signing the much-hyped agreement on fairly sharing the water of

[16] The Indo-Bangladesh Joint Rivers Commission (JRC) has met many times on the sharing of Ganges water, but without any success. In April 1975, India assured that it would not operate feeder canals until a final agreement was reached between Delhi and Dhaka on the sharing of Ganges water. Bangladesh was assured of getting 40,000 cusecs of water. But India violated the agreement (MOU) by diverting the full capacity of 40,000 cusecs of water. The matter was brought to the attention of the UN General Assembly, which, on 26 November 1976, adopted a consensus, directing the parties to arrive at a fair and expeditious settlement. On 5 November 1977 the Ganges Waters Agreement was signed, assuring 34,500 cusecs for Bangladesh. But the JRC statistics show very clearly that Bangladesh did not get her due share during the subsequent years. The then Prime Minister of Bangladesh visited India and signed a treaty with the then Prime Minister of India on 12 December 1996. The treaty stipulated that below a certain flow rate, India and Bangladesh will each share half of the water. But New Delhi has continued violating the treaty by using more water of the river at the cost of Bangladesh. The JRC report of 9 March 2009 revealed that from 1999 to 2009, India intermittently reduced the water flow to Bangladesh.

[17] SOS-arsenic.net, *India-Bangladesh: 21st Century Battle for Water Sharing* (Dhaka: SOS-arsenic.net, 2004) <http://sos-arsenic.net/english/groundwater/waterbattle.html#5> [accessed 27 February 2012]

the river Teesta is another major source of mistrust and water-related human insecurity and environmental crisis.

In the recent past China has begun a similar type of project known as the 'Greater Western Water Diversion Project' to actively pursue the possibility of interlinking and damming major rivers in order to divert water from the Brahmaputra to the Yangtze and from the Yangtze River Basin to other parts of the country, particularly the Shaanxi, Hebei, Beijing and Tianjin areas. Three big dams have been commissioned under this project.[18] By doing this, China will have strangled one of the major sources of water of India, and for Bangladesh it has been a double-barrelled problem, i.e. the natural water flow of the River Brahmaputra has now gone under the control of two powerful neighbouring countries instead of one. The implications of sharing the water of the River Brahmaputra are huge. For some this may well turn into a major source of conflict in Asia in future. Indian officials have started detailed discussions with their Chinese counterparts, just as Bangladesh has been trying to negotiate the river water sharing problem with India for the last three and a half decades, although without any notable success.

A more recent threat is 'Arsenic Contamination in Groundwater'. A growing trend of using underground water for drinking purposes is causing a global epidemic of arsenic poisoning. A worrying matter is that about 30 million people (more than one fifth of the total population of the country) have to drink water with a high arsenic contamination level. In terms of the number of people exposed to arsenic contamination, Bangladesh is the worst among the 17 affected countries. A recent study has identified

[18] The structures are: 607 ft (185 m) high and 7,575 ft (2,309 m) long on the Chang (Yangtze) River, central Hubei prov., China, 30 miles (48 km) W of Yichang. This is the largest concrete structure in the world; the dam was constructed from 1994 to 2006.

the Farakka Barrage as the root cause of arsenic poisoning in Bangladesh.[19] This suggestion seems plausible as the arsenic victims live mostly in the south-western region of Bangladesh, and they have had to depend on deeper levels of groundwater, which holds a high concentration of arsenic, because of the Gorai-Madhumati estuaries being dried up as a result of water withdrawal at the Farraka point.

Humans' development activities (such as use of fossil fuel, energy and the like) cause emission of greenhouse gases (GHGs) into the atmosphere, and make the planet warmer, which has resulted in climate change. As a heavily populated (about 150 million) developing country, Bangladesh makes a contribution to the GHG load in the atmosphere, but compared to that of developed countries it is much less. According to an estimate:

> USA accounts for around a quarter of greenhouse gas emission. Bangladesh accounts for less than one-half of one percent. This is because Bangladesh consumes only a little energy compared to other countries, only 0.15 tons of oil equivalents (TOE). Of the world's total emission of carbon dioxide she accounts for one-seventh of one percent.[20]

This clearly reveals how insignificant Bangladesh's contribution to global warming and thereby climate change is; but the fact of the matter is that the implication of climate change (for which Bangladesh is hardly culpable) for Bangladesh is nothing short of enormous. One of the alarming impacts of global warming on Bangladesh is the threat of permanently submerging 10 to 20 percent of the country's landscape, including the Sundarbans, due to the rising of water in the Bay of Bengal.

---

[19] Siddique, H., *Farakka to Tipaimukh*, (Dhaka: Bangla Praxis, 2009) <http://banglapraxis.wordpress.com/category/trends-and-analysis/page/2/> [accessed 30 April 2010]

[20] Chowdhury, p.41. The report concerns here per person per year.

In terms of the emission of chemicals such as CFCs into the atmosphere, Bangladesh has made a contribution but to a lesser extent, as in the case of GHGs. The reasons remain the same as in the GHGs case. Excessive uses of fertilizer and pesticides to secure a higher yield of crops to meet the need of a constantly growing population have been another two causes of global environmental problems.

From the above discussion it seems that in regard to the causes of environmental problems in Bangladesh, there are two dimensions: local and global. The local type represents environmental problems related to and caused by the activities of local people, while global types represent environmental problems related to people worldwide and caused by individuals or governments across all countries. The origin of most of the environmental problems both local and global, as has been observed, is anthropogenic (i.e. these problems are caused by actions and/or inactions of individuals or governments), which affects the whole range of fauna and flora as well as water, air and land (and both farming and forest-related activities).

The more visible local environmental problems in Bangladesh are mostly associated with renewable resources, which are in danger of exhaustion from excessive and inefficient uses, by the rapidly growing population. Some local environmental problems, as has been observed, increase due to the lack of appropriate policies as well as inefficiency and negligence of the designated governmental bodies in executing existing policies and regulations. The municipal governments, for instance, are quite capable of tackling problems like excreta-disposal by installing cheaper treatment plants (which are both result-oriented and cost-effective), but no initiatives have yet been taken by them. The conditions and concerns remain the same as in the case of local industrial pollutions.

A huge inflow of population from countryside to the capital Dhaka, Chittagong and other major cities could be reduced to a considerable extent by implementing decongestion policies (one of the main objectives of these policies is to shift government offices and industries from the central areas of the capital Dhaka and other major cities towards their edges following environmental rules and regulations, e.g. a zoning code), but no policy initiatives have yet been taken by the concerned governmental bodies in regard to this either. Thus the current environmental situation in the major cities is in part due to the negligence of the municipal governments, suggesting that appropriate initiatives (within the capacities of governmental bodies) could have made a big difference in the environmental situation. The Bangladesh government's decision to ban the two-stroke three-wheeler diesel vehicles is a case in point.

Tackling all local environmental problems on the part of the governments of Bangladesh (the municipal governments and national government), however, is impossible because of scarcity of resources and environmentally friendly (green) technologies. This shows that Bangladesh needs support (such as financial aid, transfer of green technology and the like) from the developed world to address local environmental problems. It is worth noting here that assistance to Bangladesh on the part of the developed world is not obligatory at this level, but rather voluntary and supererogatory since the developed world is not the main cause of local environmental problems.

Another source of environmental problems, as has been observed here, is the Indian government's policy of interrupting the natural flow of water by commissioning barrages/dams on common rivers (which flow across the country's international borders). The major sources of obstruction in natural flow of water are: the Farraka Barrage, the Tipaimukh Dam and the Indian Giant River-Link Project. The future of

Bangladesh is thus, for the most part, dependent on a successful negotiation with India on the sharing of water of common rivers.

To safeguard its south-western region, including the coastal zone, from further deterioration (due to water withdrawal at the Farraka point), and to safeguard its north-eastern region from the impending danger caused by the Tipaimukh Dam, and also to safeguard it from the looming environmental disaster on account of the Indian Giant River-Link Project, Bangladesh thus must act towards a successful negotiation with India on the water sharing issue, because Bangladesh has no alternative to a mutual but fair solution to the water sharing problems of the common rivers.

What is more, as has been observed here, environmental problems that are distinguished as global are mainly caused by the policies and activities of foreign governments and/or people of the developed world(this has its clearest reflection in climate change due to global warming). Since Bangladesh is hardly culpable for global environmental problems, and since the governments or citizens of the developed world are responsible, it is rather an ethical obligation, not just a supererogatory task, for the governments and/or people of the developed world to provide Bangladesh with necessary assistance. Bangladesh has to be successful in motivating the developed world so that it performs its duty to help minimise the suffering of the people of Bangladesh, which is caused by its development policies and practices. The future of Bangladesh is considerably dependent on her success in so doing.

Chapter Five

3.5 Human Security Implication of Environmental Problems in Bangladesh: Rethinking Dominant Policies for Environmental Protection

The human security implications of the current environmental problems in Bangladesh are enormous, and gradually intensifying. It is apparent from the discussion in the previous chapter that the human security situation is extremely vulnerable in Bangladesh from both a sense of 'want' and a sense of 'fear' (which I introduced in Chapter Two of this Part). The first type involves loss of income and employment; decreased food production and lack of economic access to food; increased incidence of diseases and reduced access to health facilities; climate change and loss of biodiversity. On the other hand, security from a sense of 'fear' involves personal insecurity due to many other reasons, including: exposure to violence from fighting and increased crime rates; conflict and violence between different groups within societies; existing conflict and possible future wars about water between South Asian countries; violations of basic human rights and so forth. Almost all these human insecurities mentioned above have roots in the current environmental problems in Bangladesh.

Although security from 'fear' is no less important than security from 'want' in the context of Bangladesh, it is a less asked question. As has been concluded from the discussion in Chapter Two of this Part, the dimensions of security in the 'security-from-fear' sense are two-fold: local and regional. The local dimension involves potential civil violence, ethnic conflicts, insurgencies and coups d'état due to environmental scarcity

(dangers which are caused by degradation and depletion of renewable resources)[1]. Besides, the regional dimension involves a bloodless war with India over water that will sooner or later turn out to be the main source of conflict in South Asia. China's Greater Western Water Diversion Project has added to the conflict situation. International support in negotiating fair water rights is a pressing need.

Given this, even though the UN Millennium Declaration does not explicitly specify any goal related to these issues, the Government of Bangladesh has adopted several measures to improve and protect both humans and the environment. Among the key measures are: the formulation of a national water management plan, a land use policy, policies for controlling water, air and noise pollution, and a comprehensive coastal zone management plan. In terms of achievement, Bangladesh seems to be on track to attain some of the UN Millennium Development Goals such as universal primary school enrolment and gender parity. A recent UNDP report says that 'Bangladesh demonstrates that it is possible to sustain strong human development progress across a broad front even at relatively modest levels of income growth' [2]. (For more see chapter three of Part Four).

Independent assessment, however, casts doubt about the prospect of achieving the MDGs in their totality in the country. At least two impediments are obvious. One is the country's institutional inability to effectively implement policies and programmes, given the abysmal record of poor governance in terms of inefficiency and corruption, lack of transparency and accountability, and, above all, poor law and order conditions. The other constraint is that of limited domestic resources that will fall far short of the requirement to implement programmes to achieve the MDGs. Moreover, the country will

[1] Homer-Dixon, T.F., and Blitt, J., (eds.), *Ecoviolence: Links among Environment, Population, and Security*, (Lanham: Rowman and Littlefield, 1998), pp. 223-228.
[2] United Nations Development Programme, *Human Development Report*, (New York: UNDP, 2005), p.23.

need a lot more resources to achieve some non-MDG targets such as the development of infrastructure, improved management of power ports, and achievement of a better investment climate, without which sustaining economic progression and consequently poverty alleviation efforts will suffer.

Now the question remains what policy or method of development is both capable of addressing the crucial situation of the Bangladesh environment and related issues of security? As this study shows, the bulk of the population of Bangladesh is insecure both from a sense of 'want' as well as from a sense of 'fear'. People are concurrently vulnerable to environmental and economic insecurities, and paradoxically each reinforces the other. This study also reveals that the more the people are vulnerable to economic insecurity, the more their activities become damaging to the environment and vice versa.

Given this, the pressing need for Bangladesh is a policy proposal which involves a balanced relationship between urgent development needs and concern for the environment, but unfortunately, no such policy has yet been collectively recognized. While some scholars place more emphasis on environmental protection than economic development, many others argue that it will be foolish to give environmental protection priority over the need for economic development for those who are in need of supply of food for their daily survival. For example, according to Ramachandra Guha, focusing on environmental protection over pressing human economic need is the trend of radical American environmentalism or its wilderness agenda, which causes serious deprivation, and is thus inappropriate and unjust when it is applied to the developing world.[3]

Going one step further, Susan George asserts that concern over pesticide use may be appropriate in the developed world, but entirely inapposite in a developing world

[3] Guha, R., 'Radical American Environmentalism and Wilderness Preservation: A Third World Critique', *Environmental Ethics*, 11.1 (1989), 71-83.

country which could feed its starving people if it had the food protection that the developed world already has.[4] One might argue in reply that if the starving poor are fed at a huge cost to environmental security then the poor are protected for the time being, but not from the long term harm of such environmentally unacceptable activities. A balanced and appropriate development policy should, then, be conceptualized not only in terms of economic development but also in terms of environmental limits in order to sustain it. It seems relatively less problematic to practice such a balanced development policy in a developed country than a developing country. For while in a developed country the concerned party (i.e., government) can attain the objective of the policy in question through reducing economic growth in order to strike a balance between the two (economic development and environmental limits), the concerned party in a developing country (where among the main barriers are: resource scarcity, unavailability of green technology and lack of skill) has to increase economic development to attain the same policy objective. However, for some, articulating such a development policy on the part of a developing country (even under the above mentioned barriers) is not impossible. The policy of redistributive development of the Indian state of Kerala is a case in point. As Govindan Parayil puts it:

> …Kerala has made remarkable progress in lowering infant mortality, decreasing population growth, increasing life expectancy at birth, achieving full literacy, and eliminating extreme poverty and deprivation, all despite very low per capita income.[5]

---

[4] George, S., *Feeding the Few: Corporate Control of Food* (Washington DC: Institute for Policy Studies, 1981), p. 21. For more see van den Bosch, R., *The Pesticide Conspiracy* (Garden City, NY: Doubleday and Company, 1978).

[5] Parayil, G., 'Sustainable Development: The Fallacy of a Normatively Neutral Development Paradigm', *Journal of Applied Philosophy*, 15.2 (1998), 179-194 (p. 190).

This seems to be applicable to developing countries, particularly in the case of Bangladesh, but as a matter of fact, it is still not adequate since Bangladesh has many other distinct (environmental) problems (such as sharing the water of international rivers) which need to be covered in the policy.

A sizeable population growth and a scarcity of economic opportunity due to environmental degradation as well as climate change seem to generate migration or resettlement within and outside the country. In Bangladesh the climate victims (now widely called 'environmental refugees') move to the capital Dhaka for shelter. But as the newcomers have to struggle greatly to adjust to life in the world's fastest-growing megacity, Dhaka, there should be other places in other countries, especially in those countries whose inhabitants are chiefly culpable for climate change, where they can move. The climate-induced displacement of refugees to the neighbouring country, India, will introduce a new dimension to the regional conflict, and accelerate progress towards regional security and cooperation. The relocation of environmental refugees from Bangladesh to India has serious implications for the relationship between the two countries; particularly, this will impose an adverse effect on the fair sharing of water from the common river.

Tackling human security challenges rooted in environmental problems (caused by the activities of governments and people at regional level) thus largely depend on the possibility of a shared policy initiative proposed and implemented, and also monitored by a regional forum. Thus, in addition to a local policy plan, which would obviously involve developmental needs and environmental limits for the people of Bangladesh, Bangladesh should focus on the need of strengthening its existing regional forum the 'South Asian Association for Regional Cooperation' (SAARC). This is not less than a must for Bangladesh, as without strong assistance or governance on the part of a regional forum

like this, no national level policy plan alone can be effective in addressing the security challenges in question.

Taking into account her own as well as the regional security and cooperation, Bangladesh should also try developing a connection with China; a new regional forum can be developed (and/or membership of SAARC can be expanded) to achieve this goal. The participation of China as a member can be a strong basis for regional cooperation between countries in the South Asian region to resolve environmentally sensitive regional issues, in particular the river water dispute. Granted this, Bangladesh should try strengthening the SAARC.

One further finding is in place. The unstable human security condition in Bangladesh, as has been observed, is partly due to unskilful environmental interventions of the local inhabitants and the lack of integrity in managing problems emerges therefrom. Thus, besides a suitable policy plan, issues such as efficiency and reliability of the staff of governmental bodies are vital for success in this regard. A policy appropriate for Bangladesh has to have the scope and capacity of motivating people towards efficiency and commitment in addition to its capacity for addressing Bangladesh's developmental needs; environmental limits; the need for regional governance in the South Asian region; and the need for assistance from the developed world.

Various forms of assistance, such as greater aid flows and trade liberalization to smooth the progress of greater access for exports, on the part of rich countries and international organizations, including the UN, are also vital in tackling or at least minimizing current environmental problems in Bangladesh. A policy plan, therefore, has to have the scope and capacity to offer guidelines in understanding the need for enthusiasm and integrity on the part of the individuals working for government bodies

and also has to have the capacity for explaining the need for a regional forum as well as the need for involvement on the part of international organizations and governments across the world. All the above mentioned policy aspects, taken together, are characteristic of every issue of environmental concern in Bangladesh and may well be considered to offer material from which a tenable and ethically sound environmental policy vision can be elicited. The next Part looks into the challenges to and limitation of the currently dominant economic practice. In particular it explores advantages as well as limitations of the practices of 'ecological modernization' and 'economic democracy' under an untrammelled capitalistic political economy. The main thrust of this part will be to offer a fuller version of a plausible policy framework for sustainable development and defend its applicability to Bangladesh and other developing countries like her.

PART FOUR

CHALLENGES TO AND LIMITATION OF THE UNTRAMMELLED CAPITALISTIC POLITICAL ECONOMY: CONTOURS OF AN ETHICAL FRAMEWORK FOR POLICY AND DECISION MAKING IN DEVELOPING COUNTRIES SUCH AS BANGLADESH

Chapter One

4.1: The Untrammelled Capitalist Political Economy: Revealing the Potential of Ecological Modernization and Economic Democracy in Delivering Sustainable Development

In the preceding Part, I concluded that the traditional economic practice is not the appropriate paradigm to use to address existing economic inequality (or insecurity) and environmental degradation. Instead, development activities that are oriented to ever higher economic growth have been held to be the main reasons for this inequality and degradation across the world. The paradigm of such economic practices is widely known as the capitalistic political economy. It has also been noted that the economic gap between the poor and the rich is unremittingly increasing due to the inequality in the distribution of benefits resulting from economic growth.[1]

The capitalistic political economy has two hands: invisible and visible. The invisible hand is the one 'that is implicit in the pricing mechanism' while the visible hand is the one 'that is explicitly managed by government through a legislature and a bureaucracy'.[2] Therefore, an understanding about the actual functioning and evaluation of the capitalistic political economy requires a clear understanding about the functioning of its hands, i.e., markets and governments. While states set the rules that individual entrepreneurs and multinational enterprises must follow, markets (particularly, their

[1] In Part Three, it was argued that human economic security depends on how, among humanity, the benefits of economic growth resulting from development activities are distributed, not on higher rates of economic growth. The current poverty situations in Brazil and India have been referred to as examples of the case in point; despite managing good progress in economic growth, countries like Brazil and India have not managed to solve their problems of poverty, unemployment and inequalities to any considerable extent.

[2] Scott, B. R, *The Political Economy of Capitalism* (Harvard Business School Working Paper, No. 07-037, 2006) < http://www.hbs.edu/research/pdf/07-037.pdf > [accessed 20 June 2011] (p.1).

economic and technological forces) work as a definitive force in determination of economic and political affairs. In other words, markets shape the policies and interests of individual states and the political relations among states.[3]

The capitalistic political economy measures a nation's development in terms of economic growth, based on Gross National Product (GNP) and Gross Domestic Product (GDP).[4] Defenders of the capitalistic political economy essentially focus on growth in output, putting profitability at the centre of this economic practice. The threat to capitalist profitability comes from competitors in the marketplace. However, competitiveness in the marketplace, both within the country's domestic market and internationally, assists individual owners and capitalist firms with the growing concentration of wealth and private ownership of resources, alongside their control of the means of production, through stimulating them for more investment and technological innovation. The legislature and bureaucracy of the state governments are found to be supportive of the current economic practice. The state-backed consolidation of private ownership is the driving force in the the global economy. Instead of being operated by the visible and invisible hands (states and markets), such extensive private ownership gives the aforementioned hands extensive influence and manipulates their course towards ever greater private accumulation of wealth and resources, creating enduring sets of barriers to poverty alleviation and environmental protection. Further upshots of this practice include: ever-growing environmental degradation and imbalance of (economic) power between the poor and the rich, between corporations and small business, and between developed and underdeveloped countries.

---

[3] Ibid

[4] GDP measures all production within a state by whoever happens to be working there while GNP measures the production of all citizens, wherever they happen to be working. Although the two measures are fairly close numerically, GDP is definitely the preferred measure among economists and is gaining popularity in general conversation as well. For more information see Moneychimp, *Gross National Product (GNP)* <http://www.moneychimp.com/glossary/gnp.htm>[accessed 21 June 2011]

All these elements suggest that profitability or commitment to higher economic growth and competitiveness are characteristic traits of the current economic system and are thus inseparable from the economic practice in question. These elements suggest that the current economic practice is not only far from being conducive to human well-being (let alone that of non-human living entities), but also a journey towards the human suffering of an untold proportion. Furthermore, the capitalistic political economy, which humans appear to be committed to, is posing ever-growing challenges to communities and nations (who are keen to secure sustainable development as well as preferring to secure broadly distributed benefits coming therefrom to their population), defining and restricting the economic and environmental choices of people all over the world.

It is worth mentioning here that no private owners of wealth and resources, neither individuals nor capitalist firms, either are secure from the self-inflicted harm of the current economic practice. Therefore it is plausible to state that if humans wish to secure themselves against the ever-growing economic and social inequality and environmental destruction, an alternative form of economic paradigm needs to be made available to them.

Brain Baxter argues that the capitalistic political economy is defective for being unable to tackle two important issues involved in this area: (1) the material viability of current economic practice; and (2) the human significance of our economic activity.[5] In Baxter's formulation, the question of the material viability of the capitalistic political economy includes two problems: (A) the resource problem and (B) the sink problem.[6] While the former problem concerns the availability of natural materials (e.g., land, water, fuels, ores and so on) to sustain the economic activities of a rapidly growing population,

[5] Baxter, B., *Ecologism: an Introduction* (Edinburgh: Edinburgh University Press, 1999), p.188.
[6] Ibid

the latter concerns the human ability to dispose of the waste products of their economic production in a way which does not poison or destroy their sources of clean water, land and air.[7]

The second issue concerns the human implications of the current economic practice. As Baxter argues, humans do not produce merely to fulfil material needs. Instead they transform their lives through the course of production in many significant ways. Over and above the fulfilment of material needs, humans exercise their imagination, emotions, moral sense, and religious beliefs.[8] There is no indication of recognition of the significance of issues 1 and 2 in the practice of the capitalistic political economy.

Baxter is correct in criticising the capitalistic political economy for not recognizing issues 1 and 2. Environmentalists clearly agree with Baxter on this issue and add another point to this list of issues. They[9] argue that even if we succeed in finding a particular form of economy which avoids or minimizes the resource and sink problems, e.g. efficiently deals with the problem of human poverty, it might still not be able to satisfy the requirements of ecological health and justice. These are issues of different categories. Environmentalists were among the first to recognize the issue of environmental justice over and above the problem of human poverty. In different environmentalists' formulations, environmental justice is the equal or alternatively appropriate[10] treatment of all living entities that have a good of their own, i.e. all bearers

---

[7] Ibid

[8] Ibid, pp. 188-89

[9] Examples include the proponents of different branches of biocentrism such as deontological and consequentialist biocentrism. As we observed in Part Two, biocentric consequentialists extend concern for individual well-being further arguing that by having a good of their own, all living entities are bearers of intrinsic value; therefore they ought to be taken into account.

[10] Some biocentrists are utterly egalitarian, such as Paul Taylor (1981 and 1986), while others follow the principle of equal consideration of equal interest, such as Robin Attfield (1987). Taylor's version of biocentrism is an example of what we can call biocentric deontologism. This version maintains that each individual living entity in nature (an animal, a plant, or a micro-organism) is a 'teleological-center-of-life' that has a good or well-being of its own which can be enhanced or damaged. In addition, as a 'teleological-

of intrinsic value, and involves the meaningful involvement of all people irrespective of their race, sex, colour, origin or economic strength with regard to the development, implementation and enforcement of environmental laws, regulations and policies.[11] Therefore, the issue of environmental justice is not possible to tackle at all on the part of a form of economy that does not even manage to deal with the problem of human poverty.

Having argued that we are correct to be concerned about the economic and environmental implications of unrestricted economic activities, we need to contemplate a new form and level of economic activity that, unlike the current economic practice, satisfies the requirements of environmental justice while also satisfying the development needs of both present and future generations of humans without destroying the biological basis of life, as well as guaranteeing their security from various 'wants' and 'fears', particularly economic and environmental ones. This consideration immediately directs us to the concept of sustainable development which we discussed in Part One.

Let us recall the general outline of the Brundtland definition of sustainable development. This definition, as explored and adjusted in Part One, suggests a change in capitalist political economic practice. In order to deal with the wide-ranging problem of human poverty, this definition of sustainable development allows developing countries to

---

center-of-life' all living entities have equal intrinsic value which qualifies them for equal moral respect. On the other hand, Attfield's version of biocentrism (i.e., biocentric consequentialism), which we defended in Part Two, maintains that although all living entities have intrinsic value by virtue of having a good of their own, the moral significance of those entities can differ based on their capacities and interests (it is worth recalling here the example of the humans' capacity to vote and its relation to their interests). And this capacity and interest-led valuation process is run through guidance of the principle of equal consideration of equal interest. To be specific, defenders of this version prioritize different interests differently. Attfield's version of biocentrism has been found to endorse a form of consequentialism to take account of priorities between the many (and possibly conflicting) recognized values.

[11] Miller, Jr. G. T., ed., *Environmental Science: Working with the Earth,* 9th edn. (Pacific Grove, California: Brooks/Cole, 2003), p.5; Schlosberg, D., *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford: Oxford University Press, 2007)

have economic growth to a certain extent. The parameter of the relevant level of development is basic human basic needs, which are viewed as a precondition for sustainable lifestyles, and which are also compatible with the aim of protecting the habitat or ecosystems upon which all the bearers of intrinsic value (i.e., all living creatures including human beings) depend.

Another significant characteristic trait of the adjusted definition of sustainable development is implicit in the assumption that it is the responsibility of present generations to establish a process to attain a certain level of development which ensures a satisfactory quality of life in perpetuity, and which also involves acting so that they can bestow a world to their successors that is as good as the one they have inherited from their predecessors. This version of sustainable development tackles the issue of both intra-generational and inter-generational justice for all living entities, irrespective of species, and is committed to a moderate version of strong sustainability, but not to the extremely strong version of strong sustainability (for more on this see chapter three of Part One). Accordingly, as I concluded, the moderate version of the strong sustainability model warrants acceptance and needs to be practised if humans want to make their development more sustainable. Supporting this stance, Giuseppe Munda asserts that sustainable development must employ the criterion of strong sustainability; we just need to develop non-monetary indicators of ecological sustainability to measure sustainable development.[12]

Criticising the concept of sustainable development, Baxter states[13] that, even though it is of significant interest to environmentalism, it remains at a high degree of abstraction unless important qualifications are made. Therefore, for him it is inherently a

[12] Munda, G., 'Environmental Economics, Ecological Economics and the Concept of Sustainable Development', *Environmental Values*, 6 (1997), 213-233 (p.18).

[13] Baxter, p.200

problematic task to measure this concept precisely. He goes on to say that the measurement of sustainable development is subject to scientific uncertainty (as we do not possess full scientific knowledge about how the biosphere functions nor even about its precise role in enhancing our economic method) and political negotiation (as different actors attempt to persuade decision-makers to adopt their preferred version). According to Baxter, sustainable development thus requires the development of democratic processes for the expression and negotiation of incommensurable values and considerations. Robin Archer labels this undertaking 'economic democracy'[14], in that it democratises the internal structure of capitalist firms. Furthermore, Archer says that 'ecological modernization' can serve as a precise strategy for greening the capitalist political economy.

Let us now first embark upon analysis of the concept of ecological modernization and the concept of economic democracy before we begin to envisage whether or not the supplemented version of sustainable development, which I offered and defended in chapter three of Part One, is free from Baxter's criticism of sustainable development as being too abstract a concept. In Dryzek's formulation, ecological modernization signifies the restructuring of the capitalist political economy along more environmentally sound lines.[15] According to this view, no inherent environmental difficulties stem from the capitalist political economy itself. The productive and organizational process developed within the capitalist form during the late twentieth century is responsible for the current economic inequality and environmental problems. Therefore, the trick here is to induce the appropriate form of economic reorganization within this capitalist form in a way that

[14] Archer, R., *Economic Democracy: The Politics of Feasible Socialism*, (Oxford: Oxford University Press, 1995), pp. 27-63

[15] Dryzek, J. S., *The Politics of the Earth: Environmental Discourses* (Oxford, New York: Oxford University Press, 1997), p. 141

protects profitability as well as the environment by reducing or minimizing the adverse environmental effects of the activities of capitalist firms.

Dryzek argues that ecological modernization is a viable and effective alternative. To justify this claim he refers to those capitalist economies, namely Germany, the Netherlands, Japan, Sweden and Norway, which have been successful in increasing the energy efficiency of national income by reducing the harmful emissions and waste products from economic activities.[16] He adds that the aforementioned states have developed a corporatist political culture together with a settlement and collaboration between government and the capitalist firms on suitable measures. To specify two obvious achievements, Dryzek refers to the creation of the Dutch National Environment Policy Plan (which was adopted in 1989) and the relative willingness of enterprises in Germany in taking a longer view, in other words bringing about a widespread acceptance of the 'precautionary principle' [17] among nationals and corporations.

Dryzek lists five advantages of the restructuring of the current political economy through ecological modernization; these are[18]:

- less environmentally harmful forms of production are less inefficient;
- tackling problems at an early stage obviates higher costs later;
- employees are happier and work better in good environments;
- there is money to be made in selling goods and services with 'Green' credentials to an increasingly environment-conscious market;
- profits can be made from producing and selling products designed to reduce or prevent pollution.

The advantages listed in this passage suggest that capitalist firms seem willing to recognize the authority of governments to intervene in altering the existing production and distributional process for the sake of the wider public benefit, and that

[16] Dryzek, p. 137

[17] The gist of this principle is that the absence of scientific certainty about the nature and degree of an environmental threat does not justify doing nothing to tackle it. For more see Raffensperger, C. and Tickner, J. (eds), *Protecting Public Health and the Environment: Implementing the Precautionary Principle* (Washington DC: Island Press, 1999)

[18] Dryzek, p.142

environmentalism, which could without loss be understood as biocentric consequentialism, can be recognized by both government and capitalist firms. In addition, Baxter claims that this appears to suggest that 'ecological modernization is something which at least reveals the potential for a form of political economy within which ecological justice can be found a place – although, of course, this is still a long way off.' [19]

This is unquestionably a matter of great hope if it is, in effect, possible to tackle, considerably reduce or minimize the adverse effects of the current political economy through restructuring the capitalistic political economy as suggested above (i.e., through ecological modernization). What does reality say? One of the most significant concerns here is that the main goal of the capitalist firms is to make a profit. Therefore, whatever changes take place with regard to productive and distributional processes within these firms, in other words whatever environmental improvement capitalist firms achieve, they must make them without compromising their main goal of making a profit; this goal does not disappear from the central position in the lists of capitalist goals.

Tom Jackson has shown how a capitalist political economy (which he refers to simply as capitalism) and profit are inseparable. These two phenomena are deeply connected through the capitalist financial markets. In this regard he refers to the inevitable regulation of the charging of interest on loans for capital investment. Generally, he asserts, there can be no investment without loans, no loans without interest being charged, no payment of interest without an income being made, and so no continuation of production (and thus protecting of a trade) without further investment

[19] Baxter, p.202

being paid for by additional loans, more interest and greater productivity and/or lower costs to pay them back, all of which contributes to economic growth. [20]

The implication of the above mentioned argument is that its criticism does not rely on the common analysis of capitalists as greedy or avaricious. Instead it points to forces within the structure of capitalism which explain why growth is inevitable for the continuation of the capitalist system. It also implies that any endeavour to remedy or reverse the growth trend in a capitalist political economy is nothing but a futile exercise, signifying that Dryzek's conceptualization of the currently dominating economic system and his idea of the restructuring of the current political economy are misrepresentations. In Baxter's words, 'the cure for growth fixation will not come about as the result of making sure that capitalists are not subject to such vice'.[21]

Given this, ecological modernization appears to be a trick of the capitalist actors (or the rich), in an attempt to achieve some specific, albeit limited, environmental improvements within their sphere of operation. Two issues of concern are raised by this: (1) the essential driving force behind such environmental improvement is profit (through economic growth), and (2) such ecological modernization activities may well not be affordable for developing countries. Concerns such as these obviously turn the capitalist efforts of environmental improvement into 'window dressing'. Activities, such as exporting of toxic wastes to poor countries and conducting testing of raw materials at a low rate of remuneration within these countries, justify these concerns. Therefore the attempt to reduce the environmental impacts of corporate activities to a minimally required level under the impulse of the capitalist political economy remains an unattainable hope, arguably suggesting that there is no alternative except to seek a new

[20] Jackson, T., *Material Concerns: Pollution, Profit and Quality of Life* (London: Routledge, 1996), pp. 167-168

[21] Baxter, p.204

political economy that is able to tackle world poverty (i.e., able to meet human development needs or basic needs) and environmental limits (and thus limits effects on the human habitat).

The question now arises: should we remain silent in anticipation of the emergence of an appropriate new political economy in the future? The fact of the matter is that the capitalist society is spreading to new areas of the world with, as yet, no serious obstacles, making the current economic inequalities and environmental hazards the main source of life threatening troubles for the vast majority of the world's human population, as well as creating lots of life-threatening troubles for non-human living entities. Doing nothing to tackle the current economic and social inequalities and environmental crisis (in other words a strategy of inaction) in anticipation of the emergence of an appropriate paradigm of economic practice, seems therefore to involve taking a high risk, and thus is implausible.

Given this, it seems there is a pressing need to take the initiative to tackle such problems without delay. By the same token it can be said that the citizens of Germany, the Netherlands, Japan, Sweden and Norway, who have given rise to widespread recognition of the precautionary principle, and who have also been successful to some extent in reflecting this principle in their economic activities, merit appreciation. As mentioned earlier, examples of this include some countries' successes in increasing the energy efficiency of national production, and reducing harmful emissions and the amount of waste products created during economic activities. Whatever degree of success these countries have achieved up to now has mainly been possible through pressure from citizens/consumers. Citizen pressure has also been found to compel the governments of the aforementioned countries into changing their governmental regulations and regulating market activity. As was observed earlier, the capitalistic political economy is

committed merely to profitability, not to economic equality or environmental sustainability. Therefore, the very system of the capitalistic political economy has nothing to do with resolving the problems in question, but instead functions as the main source of such problems. Therefore, the main forces of consumer pressure, governmental regulations and market activity of a sustainable kind that can keep the current economic practice pointing in a greenish direction naturally have to come from outside.[22]

One might now reasonably argue that there is still a need for economic growth to continue for a certain period of time under the present form of economy to generate improvements in human wellbeing in the poorest countries. However, here the problem is that the poor countries cannot afford the costs related to ecological modernization so they have no option but to follow the current dominant economic practice unless an affordable method of ecological modernization can be made available to them. Given this, one might further argue that as nothing of this kind is available at the moment, a certain amount of environmental degradation has to be allowed to let the poor meet their basic needs. This sounds quite plausible from the point of view of environmental justice. Considering the nature of environmental justice, it seems that at this stage there is no alternative to the pursuit of growth-based economic practice until and unless an acceptable alternative method of ecological modernization becomes available to the poor. Nevertheless it is also reasonable to say that this does not remove the need to seek a method of ecological modernization that is both effective and affordable to the poor. Control of the current growing environmental pollution depends to a considerable extent on success in discovering and transferring forms of affordable ecological modernization technology for the poor countries (we can think of environmental impacts of economic growth activities in a range of developing economies such as China, India, Brazil, South

[22] Ibid. p.205

Africa and Mexico) in order to address the environmental degradations that occur during economic activities.

The points I have hitherto considered imply that the poor countries are allowed to begin practising ecological modernization once their basic needs are fulfilled; in other words, once they can afford to. In addition, they are allowed to continue with this like the developed countries unless an acceptable alternative to the current capitalist political economy becomes available to practise. It is argued that ecological modernization, under the currently dominant economic practice, can even help reduce the adverse effects of human economic activities. As has been shown, there are examples to support of this claim, but concerns come from the thought that although ecological modernization can reduce the environmental impacts of current economic practice, in the long run it cannot sustain its achievement (in terms of environmental improvement) at whatever level it brings this about because the vital commitment of the current economic practice is profitability (through economic growth). This whole process ultimately leads to the growing use of natural capital and the accumulation of wealth, making it materially more intensive and environmentally more deleterious.

As Baxter mentions, with the intention of overcoming this difficulty, some might argue that

> the material needs of a stable human population would be met in a manner which minimised material throughput and human beings' primary concern would switch from the accumulation of material wealth to non-material needs, such as affection, creativity, the contemplation of beauty and the pleasures of human intercourse (presumably themselves satisfied on a predominantly non-material basis).[23]

What the proponents of this view are highlighting is that the justification of an acceptable alternative paradigm of economic practice depends largely on its capacity to

[23] Ibid

switch humans' focus from the mere realization of their material needs to non-material needs. However, from the point of view of biocentric consequentialism, as I outlined it in chapter three of Part Two, it is not possible to satisfy the requirements of environmental justice just by shifting humans' focus from material needs to non-material needs. The actions of an agent, to be moral, have to include the good of affected non-human living entities in the agent's moral deliberations. This in turn suggests that by omitting the issue of the good of non-human living entities, the proponents of the abovementioned view fail to achieve a green and sustainable solution for economic practice as compared to the currently dominant one.

Let us now go on to discuss the concept of economic democracy. In conceptualizing the concept of economic democracy, Robin Archer recently wrote that it is all about democratizing the internal structure of capitalist firms. The case for such a democratic process, according to him, derives from the case for autonomy, which is the basic value of individual human beings that permits individuals to make their own choices about what to do, how to act and the like. In the case of collective decision-making, this basic value leads humans towards the case for democracy. In addition, for him, this human value leads to two specific principles: (1) the 'all affected principle', and (2) the 'all subjected principle'. The 'all affected principle' is the understanding that individuals whose ability to make decisions and act upon them that are affected by decisions of an association (e.g. a capitalist firm) should share in control over the process through which such decisions are made.[24] On the other hand, the 'all subjected principle' is the observation that individuals who are subjected to the authority of an association,

[24] Archer, p. 29

such as its employees, should have direct control over the decisions of the association in question.[25]

Principle one implies that stakeholders (a class which comprises employees, consumers, shareholders, suppliers of raw material, financial institutions and local/non-local residents whose lives are affected by the firm's externalities), by virtue of being bearers of autonomy, warrant two indirect methods of control: (1) the power to exit, or to remove themselves from their relationship with firms, and (2) government regulation, particularly where option one cannot be put into practice. Principle two, on the other hand, involves an appeal to the creation of direct decision-making opportunities within the enterprise for the employees. In formulating the basis of principle two, Archer argues that while employees are entitled to be involved with firms' decision making by virtue of them being bearers of the value of autonomy, they are in fact governed by the choices of the manager(s) of their firms, not by their own choices.

The concern arises of whether or not the two abovementioned human-autonomy-oriented principles have any adverse effect on the economic efficiency of an enterprise. In replying to this concern, Archer argues that it is intuitively clear that an enterprise that is running inefficiently would itself be harmful through depriving the affected people of the ability to make some of their choices to the practice of humans' own choices. This implies that it is less likely that a firm will become economically inefficient when the decision-making process of the firm is run by the two abovementioned principles.

Archer also goes on to say that there is no major difficulty even if acceptance of these principles does result in economic inefficiency for a firm. For him the validity of any economic system is value-laden. He argues that if we agree that economic efficiency

[25] Ibid .p, 32

is not the sole goal of human (development) activities, and if we also agree that over and above economic efficiency there are other goals which are significant and need to be realized, then we can plausibly accept a less efficient economic paradigm for the sake of the realization of other important goals. A range of human social and environmental goals (namely literacy, health, equal distribution of economic benefits and pollution free air, water and land) may well be envisaged here as examples of other important goals.

There are two significant recognitions in Archer's assumption which warrant appreciation: (1) he recognizes human autonomy as the central issue to the case for collective decision making (i.e., democracy). In Part One we have already defended the significance of the practice of human autonomy for sustainable development. (2) He also recognizes the non-material goals of human economic activities, which justify the obligation and entitlement of humans to reduce current economic inequality and environmental problems by ordering their preferences appropriately by focusing on their various non-material needs. More importantly, Archer's abovementioned principles seem to address human development needs plausibly, which is one of the key requisite conditions for sustainable development.

However, the question remains of whether these principles satisfy the other requisite conditions for sustainable development? The answer is partly implicit in the formulation of biocentric consequentialism. As observed earlier in chapter three of Part Two, biocentric consequentialism holds the view that each living creature has a good in itself which amounts to its intrinsic value and that, as a bearer of intrinsic value, each creature is subject to moral consideration, but there is no recognition of this (i.e., the good of non-human entities) in the formulation of the two abovementioned principles of Archer. The indirect controls that Archer adduced in the two principles, namely exit and government regulation, are not applicable or available to non-human living creatures;

non-human creatures, unlike human stakeholders, cannot usually gain exit from their relationship with a firm which adversely affects them through its activities. Also, being non-participants in politics, non-human creatures are unable to achieve direct government regulation.

As can be observed, there is nothing inbuilt in the idea of any kind of democracy that guarantees environmental justice. For example, none of its forms recognize the wellbeing of non-human living creatures, and all fail to address the long-term values of biological and genetic diversity. Therefore, Archer's analysis of economic democracy, as one kind of democracy, remains open to criticism on account of leaving the issue of environmental justice unaddressed.

It could be argued that the claim that there is nothing inbuilt in the idea of any kind of democracy that guarantees environmental justice is an exaggeration because, in a sense, democracy is a system that is highly dependent on how people actually think. Therefore, if people decide that they will not make economic profit at the cost of the values and interests of nonhuman creatures and the value of ecosystems then democracy could be supportive of environmentalism and so the two can go hand in hand. This argument is quite plausible. However, here the concern is that such pro-environmental aspiration, as has been mentioned earlier, cannot substantially be realised under the dominant capitalistic political economy which primarily relies on uninterrupted profitability. A radical change in the currently dominant economic and political system is needed to achieve such a transition.

Having studied the reason why environmentalists, in particular the proponents of biocentric consequentialism, should disapprove of the capitalistic political economy, and having also studied the problems and prospects for the concept of ecological modernization and the concept of economic democracy concerning the possibility of

transforming the currently dominant paradigm of political economy in an environmentally-friendly direction, we must now return to the concept of sustainable development that I argued for in Part One, a concept which has the capacity to produce a policy framework for sustainable development that satisfies the requirements of environmental justice or which is, to say the least, able to reduce the current degree of economic inequalities and environmental degradation.

However, I have one more issue to discuss; that is, Baxter's criticism of sustainable development as being too abstract a concept; he is understandably critical of any version of sustainable development which is unqualified. The history of the debates on the meaning of sustainable development (as discussed in Part One) suggests that measuring sustainable development is not an easy task. However, this difficulty should not distract from recognizing the positive advances that I attempted to make in Part One by rectifying and reformulating the two central definitions of sustainable development (the Brundtland definition and the definition of Caring for the Earth), and by introducing the concept of basic needs as centrally relevant.

As we concluded, in order to improve human wellbeing, human development activities can be continued in perpetuity if individual basic needs can be set as the central objective of the the human activities in question. The implication of employing the concept of basic needs in conceptualizing the concept of sustainable development is clear as it functions as a limit to the ever-expanding economic growth-oriented human development process. In so doing, it not only opens a tangible, clear-cut and durable development path, but also helps develop a process for improving various opportunities, which in turn allows individuals, particularly those in poor communities, to achieve their aspirations and potential for a continued period of time whilst maintaining the resilience of the environmental systems.

This raises further questions, such as what would be the framework and contours of an appropriate policy of sustainable development? More importantly, how would such a policy vision tackle the challenging task of incorporating and implementing seemingly competing policy objectives into its contours? Examples of this include how such a policy would tackle combining seemingly competing policy objectives, such as the need to practice growth-oriented economic policy in the poorest countries for a certain period of time to protect their people's lives and improve their wellbeing, alongside the moral obligations of protecting non-human creatures as bearers of intrinsic value and the moral duty of protecting the environment as the habitat for all living entities, including humans. Therefore, the most important task now is to outline a framework for a policy vision along the lines of the version of sustainable development I have defended, which is based on biocentric consequentialism. An investigation of such a policy framework with sustainable development as its target comprises the theme of the next chapter.

Chapter Two

4.2: Ethical Dimensions of Environmental Problems: Planning a Policy Framework for Sustainable Development

In the previous chapter I argued that, neither 'ecological modernisation' nor 'economic democracy' is able to advance the cause of substantial improvement in the current environmental crisis under the currently dominant economic practice. One of the major sources of problems with the practice of ecological modernisation under the currently dominant economic practice, as I explained, is the inseparable attachment of the currently dominant economic practice to profitability, which implies that if economic practice is to reduce the rapidly growing environmental degradations and economic inequalities (which are caused by the currently dominant high-growth-seeking economic practice), there is no alternative except for a new policy paradigm. The problem with the concept of economic democracy, as has been identified in the previous chapter, is its incapacity to address the issue of environmental justice. This charge of incapacity is grounded on the thought that (1) there is nothing inbuilt in the concept of economic democracy (a charge which is also applicable to every other standard form of democratic practice) which ensures that environmental justice is taken seriously and (2) even though people want democratically to uphold environment-friendly policies, they can hardly realise substantially such policies under the currently dominant economic practice.

The concern of the current chapter is to outline a policy framework, with the focus on the ethical dimension of environmental problems. The policy issues considered in this chapter are those affecting entire societies and increasingly encompassing all

humanity as well as nonhuman living creatures in their entirety. In so doing, I will first explore and extract ethical principles that stem from a wider understanding of the notion of environmental problems and sustainable development, and then will consider how problems with the framework of the dominant economic practice (which often results in policy failure) might be overcome through incorporating various ethical values and concerns about the environment into a policy framework.

Before I consider a policy framework for sustainable development, the notion of policy should briefly be introduced. A policy is a set of normative guidelines directed at practice. It could be private or public. A private policy is a set of normative guidelines chosen by someone to practice at the individual level. On the other hand, a public policy is a set of enforceable normative guidelines (directed at practice) which is accepted and governed by official public bodies or a party, such as an agency of government, or a legislature. There is a close relationship between public policy and law, inasmuch as all laws constitute public policies. Nevertheless a public policy need not be explicitly formulated or codified as law,[1] for not all policies are, in the conventional sense, laws. In advancing a public policy proposal, one enjoys much autonomy (i.e. one is not obliged to act along the lines of an existing or agreed public policy directive) as opposed to one's obligation to abide by the rule of law. In the light of this, sustainable development, as a public policy, means a plan of action which governs (or warrants an external control on) development activities (an area of human activities that can cause environmental problems), pursuing a set of enforceable normative guidelines (directed at practice). Regulations and guidelines of public policies are generally accepted and promulgated by official public bodies such as an agency of government, or a legislature.

[1] For more see Beauchamp, T. L. and Childress, J.F., *Principles of Biomedical Ethics,* 3rd edn (Oxford: Oxford University Press, 1989), pp. 13-14.

Since the Rio summit in 1992, governments all over the world have been practising and promulgating numerous influential regulations made in line with the UN standard definitions of sustainable development. But as the standard definitions of sustainable development face some serious problems, and as some of these problems suggest the need for revisions, while others seem fatal to the definitions as they stand (as I discussed in Part One), a great deal still remains to be done in order to devise a satisfactory framework for sustainable development.

It is widely recognised that the key objective of planning a sustainable policy framework is to contribute to securing a sustainable future through setting out suitable concrete policies. As I argued on several occasions in the earlier Parts, achievement of this objective is essentially reliant on whether or not human development needs and environmental limits (in other words, sensitivities) are given the required priority, as opposed to the sheer pursuit of high economic growth, in a given concrete policy. One of the key underpinnings of this verdict is a wider understanding of the notion of environmental problems. As was suggested in Part Three, there are at least two distinctive traits of environmental problems. They are as follows: (1) just as with standard environmental problems (such as resource degradation and depletion, pollution and waste, and biodiversity loss), problems of human insecurity (which stem from a lack of security from various 'wants' and 'fears') also amount to environmental problems; (2) environmental problems are not only about the efficient use of various resources, but also are about various ethical responses we make to them.

The first trait of environmental problems, mentioned in the paragraph above, implies that a policy framework for sustainable development can not accomplish its objective of a sustainable future without recognising the importance of the integration of standard environmental problems (which extend to issues ranging from resources to

biodiversity) with the ones relating to human security threats, which, as I contended in Part Three, stem from various 'wants' and 'fears'. And the second trait of environmental problems entails that it is far from clear that a policy framework for sustainable development will make the difference to policy-making that it is expected to make (i.e. securing a sustainable future) if all the ethical concerns which arise from various undesirable implications of human environmental interventions with those creatures which deserve to be sustained are set to one side.

To deliver a sustainable future, policy-makers, therefore, must make efforts to get the above mentioned traits of environmental problems covered by the sustainable policy framework. But in so doing, policy-makers at the outset need to know clearly about the solution to the query 'what to sustain', to be more precise 'which creatures are entitled to be sustained?', before they begin to set out concrete policies simultaneously to address developmental and environmental predicaments.

Given this, before I begin to explore 'how to secure a sustainable future', it is important to clarify 'what to sustain'. Responding to this query is not a straightforward task, if not impossible, for there has not appeared hitherto any solution to this query that ethicists accept in common. A number of traditional ethicists, including the environmentalists who promote anthropocentrism, maintain the view that since human beings are the only moral agents, they are also the only qualified contenders for moral consideration. As was argued in Part Two, this traditional human-centred view clearly fails to address some issues, which are envisaged to be central to 'environmental problems' in the wider sense of these words. Examples include human beings' relationship with and responsibilities towards non-human living creatures, species, ecosystems and future generations.

In chapter three of Part Two, I defended Attfield's variety of biocentric consequentialism as a strong contender as an acceptable value theory, as opposed to non-biocentric normative ethical theories. In responding to the query 'what to sustain', biocentric consequentialism argues that the flourishing or wellbeing of living creatures (present and future) is the locus of intrinsic value, and having capacity to flourish and also having goods and interests of their own, all living creatures are bearers of intrinsic value, and should be recognised and sustained as such.

Furthermore, it has been observed that biocentric consequentialism supplies a foundation for seeking to sustain (or conserve) species and ecosystems (habitats). It is argued that, despite having no intrinsic value (according to this stance only living creatures or members of a species possess intrinsic value, not the collection to which they belong), species and ecosystems, being the bearers of instrumental value and instrumental plus inherent value (see Part Two for details) respectively, have immense implications for the enduring existence of all living creatures. Just to recapitulate, the types and implications of the various values of ecosystems and species for bearers of intrinsic value, while ecosystems involve inherent value (in the sense that appreciators can be benefited through appreciating the aesthetic value of ecosystems) and instrumental value (in the sense that ecosystems are the only source of habitats for many bearers of intrinsic value), species involve instrumental value (in the sense that the continued existence of members of a species depends on the continuance of the species they belong to, and species contribute to ecosystems and their health). (For more see chapter three of Part Two).

So far so good. But a serious question might be asked: do all living creatures possess an equal strength of intrinsic value? As I maintained in the same Part, Wilfred Beckerman is right in saying that it would be morally repugnant if it was suggested that

we should preserve each and every beetle in the name of their intrinsic value at the cost of leaving human poverty unremedied. The standpoint of biocentric consequentialism, regarding this matter, is very clear. It recognises that intrinsic values found in various living creatures have different degrees of strength and concentration, and also argues that the difference in degrees of strength and concentration explains why the extensive presence of intrinsic value does not make this approach counterintuitive, or pointless.

In preference to the holistic environmentalist's views and the animal liberationist's (individualistic) view, biocentric consequentialism -- as a middle-of-the-road view [2] -- thus maintains that neither every drop of nature nor the whole of nature generate duties for us, but rather that our duty is to protect the bearers of intrinsic value as well as species (biodiversity) and the intactness of suitable ecosystems (such as a forest) for their immense value in helping to continue the bearers of intrinsic value (which thus underpins a moderately strong sustainability view). Concerning our duties towards species, it has been recognised that whilst the continuation of a species solely depends on the survival of the last remaining members of a species, our duty is to prioritise their protection as opposed to that of the members of species which are plentiful. In so arguing, this stance makes its arguments more persuasive; and more importantly it keeps itself away from drawing two bizarre conclusions, to say the least: (1) each and every member of a species should be preserved, and (2) every drop of every ecosystem should be a cherished and preserved (which upholds the 'absurdly strong

[2] Biocentric consequentialism, as opposed to single-value monistic theories, and also as opposed to any radical variety of moral pluralism (which maintains and highlights that values are always incommensurable, and thus implies that clashes between values are never rationally resolvable), recognises that there is a range of values (such as health, the development of capacities, worthwhile life, autonomy, justice, etc.) which are commensurable, and conflicts among them can be adjudicated through meta-principles being used. For details see chapter three of Part Two.

sustainability' view[3]). Thus it seems that overall biocentric consequentialism not only protects itself from being exposed to conclusive criticisms, but also protects itself from being ethically repugnant since it upholds strong sustainability theory without being committed to the view that everything valuable in nature must be preserved.

Two characteristic traits of Attfield's version of biocentric consequentialism appear to justify it as a strong theoretical basis for the policy framework required for a sustainable future. They are: (1) as a variety of needs-consequentialism (which is based on needs, not on happiness nor on wellbeing defined in terms of preferences either), it takes present and future needs adequately into account; (2) as a variety of biocentric theory, it transcends human interests, taking into account the interests of nonhuman creatures and importance of biotic systems (but doing so without prioritising these systems over the valuable creatures which they sustain) and species (without prioritising species over their individual members).

From the above discussion it is now apparent that, in line with biocentric consequentialism, our responsibilities concern all living creatures (present and future), and species and ecosystems because of their respective values. Going back to the query 'what to sustain', it can now be replied that all living creatures merit being sustained; but if the situation requires us to make decisions through making comparisons between the bearers of intrinsic value, then it should be based on degrees of strength and concentration of their intrinsic value. Species and ecosystems are immensely significant

[3] See Holland, A., 'Substitutability: Why Strong Sustainability is Weak and Absurdly Strong Sustainability is Not Absurd', in *Valuing Nature? Economics, Ethics and the Environment*, ed. by Foster, J. (London: Routledge, 1997), pp. 119-134; Holland, A., 'Nature - Every Last Drop - is Good', in *The Ethics of the Environment* ed. by Attfield, R.(Aldershot: Ashgate, 2008), pp. 79-95; and Holland, A., 'Must We Give up Environmental Ethics?', in *Environmental Ethics and International Policy*. ed. by ten Have, H.A.M.J. and others (Paris: UNESCO Publishing, 2006), pp. 191-216.

for their instrumental and inherent values, and thus merit being sustained, but for the sake of the bearers of intrinsic value.

In light of this value stance, it seems that there are at least four ethical issues of concern, with four types of responsibilities corresponding to the wider notion of environmental problems. The four ethical concerns which immediately generate duties are:

- increasing concern for the growing economic gap between the affluent and the poor of the world (through worsening the condition of security from want this gap contributes to degradation of the environment), which appeals to a variety of justice called 'intra-generational justice' (see chapter 3, Part One). (One of the responsibilities is to eliminate evils such as extreme poverty from societies, and to ensure access for everyone to nature/ natural resources to fulfil their basic needs.);
- increasing concern for future generations, which leads to enlargement of the concept of justice; this can thus be called 'inter-generational justice' (which involves a duty to preserve natural resources for future generations to meet their basic needs: see chapter 3, Part One);
- increasing concern for non-human living creatures, which leads to further transformation of the concept of justice; this can thus be called 'inter-species justice' (which involves a duty to ensure that no goods and interests of any bearers of intrinsic value are unrepresented in our ethical deliberations);
- and increasing concern for species and ecosystems, which requires a policy of conserving species and habitats and of preventing unnecessary destruction of ecosystems. It involves the need for protection of species and habitats for the sake of the survival of all the bearers of intrinsic value (which involves a duty to preserve ecosystems).

Thus, to be acceptable a policy framework must be able to set out concrete policies which recognise the four issues of concern mentioned in the paragraph above, and also pursue the presupposed related responsibilities in an integrated manner, looking for solutions (to challenges of environmental problems) which deliver the relevant goal, a sustainable future. The four issues of ethical concern, listed in the paragraph above, seem to have implications for mapping out the contours of sustainable policy and understanding its framework. They also attest that no policy decision can succeed in

realising its objective of a secured sustainable future (i.e. desired economic, social and environmental goals) if it sidesteps the issue of environmental justice. In fact, however, ethical issues such as the ones listed in the paragraph above are central to the success of a nation as regards those goals.

In a recent working paper, Glotzbach and Baumgartner have categorised different theoretical stances about the nature of interaction between intra- and intergenerational justice as regards ecology into three distinct varieties: (1) the independent justice hypothesis (there is no distinguishable link between the achievement of the two types of justice); (2) the facilitation hypothesis (intergenerational justice increases the chance of achieving intragenerational justice and intra-generational justice helps securing intergenerational justice); and (3) the rivalry hypothesis (the demands of intergenerational justice conflict with those of intra-generational justice; by attaining one the other becomes more inaccessible).[4] One might now argue that this distinction can be applied more generally to intra- and intergenerational contexts of justice, which means that it is also applicable to the classification of justice I have made in the two paragraphs above; and the theory presented here belongs to the second variety-- the facilitation hypothesis.

Intra-generational justice is indubitably distinct from intergenerational justice in the sense that, while the former focuses on lines of cleavage between contemporaries (namely economic disparity between the rich and the poor and differences between states in the international systems), the latter focuses on justice between generations. But the question is whether or not this dissimilarity creates any theoretical or practical problem for us in recognising interdependences between the types of justice. It is a fact that, if

[4] Glotzbach, S. and Baumgartner, S., *The Relationship between Intra-generational and Intergenerational Ecological Justice*, (Lüneburg: Working Paper Series in Economics at University of Lüneburg 141, 2009) <http://www.leuphana.de/fileadmin/user_upload/Forschungseinrichtungen/ifvwl/WorkingPapers/wp_141_Upload.pdf> [accessed 20 January, 2012] (pp. 1-33)

either of the two hypotheses -- i.e. the independent justice hypothesis or the rivalry hypothesis (classified by Glotzbach and Baumgartner above) -- turn out to be true, then the facilitation hypothesis has to be discarded. Consequently our understanding of the framework of sustainable development which concerns four ethical issues (intra-generational justice, intergenerational justice, inter species justice and duty to protect ecosystems) becomes open to criticism.

This, however, is not the case because the chance of achieving one can be increased by achieving the other, which justifies the facilitation hypothesis. Consider the argument:

> A1: If there is an increase in the degree of intra-generational justice, then there will be a reduced amount of inequality in societies;
>
> B1: If there is a reduced amount of inequality in societies, then overuse, misuse and inefficient use of natural resources will be reduced;
>
> C1: If overuse, misuse and inefficient use of natural resources are reduced, then there will be enough natural resources reserved for future generations;
>
> D1: If there are enough natural resources reserved for future generations, then intergenerational justice will be upheld;
>
> E1: If there is an increase in the degree of intra-generational justice, then intergenerational justice will be upheld;
>
> Therefore, F1: The facilitation hypothesis is true with regard to intra-generational justice facilitating intergenerational justice.

Consider another argument:

A2: If intergenerational justice is upheld, then there will be enough resources reserved for the use of future generations;

B2: If there are enough resources reserved for the use of future generations, then the degree of overuse, misuse and inefficient use of natural resources will essentially be reduced;

C2: If overuse, misuse and inefficient use of natural resources are reduced, then inequality in societies will tend to be reduced;

D2: When inequality in societies tends to be reduced, then intra-generational justice will be upheld;

E2: If intergenerational justice is upheld, then intra-generational justice will tend to be upheld;

Therefore F2: There are grounds to hold that the facilitation hypothesis is true with regard to intergenerational justice facilitating intra-generational justice.

It can be assumed that all the premises of both the arguments are true in view of the fact that many proponents of the independent justice hypothesis and the rivalry hypothesis could accept them without difficulty except for certain problems within the third premises (i.e. C1 and C2) of both the arguments. One might express one's perplexity about C1 and C2 by saying that the truth of C1 and C2 is not straightforward like other premises. C1 (if overuse, misuse and inefficient use of natural resources are reduced, then there will be enough natural resources reserved for future generations) can be said to be applicable only to the societies or countries where there is already a standard level of reserves of natural resources, not to those societies/countries that are extremely resource–poor. The perplexity expressed here is understandable. For while the target of

maintaining a sufficient quantity of reserves of natural resources for future generations is unlikely to be able to be achieved on the part of countries such as Somalia, Sierra Leone and Burundi in Sub-Saharan Africa (where resource-scarcity has long been a reason for extreme poverty and other related problems), through reducing overuse, misuse and inefficient use of natural resources the goal in question is realisable to a considerable extent on the part of countries with current reserves of natural resources, such as South Africa, Algeria and Bangladesh and many others.

But this problem does not rule out the possibility of the premise being true in a qualified sense and the argument being sound as well. I can read C1 as saying that although the above version of C1 can be false in some cases, it can at the same time be true for other circumstances depending on the existing reserves of natural resources of the country in question. C1 was used in the first argument to refer to countries where there are standard quantities of resources in reserve. Accordingly C1 (if overuse, misuse and inefficient use of natural resources are reduced, then there will be enough natural resources reserved for future generations) is true if understood on this basis. Thus C1, understood in this way, will succeed in avoiding the problem it seemed to involve.

The difficulty with C2 may well be claimed to be more significant. The criticism of C2 is that the thought rooted in this premise (if overuse, misuse and inefficient use of natural resources are reduced, then inequality in societies will tend to be reduced) is not justifiable. For, one might say, there are societies where a thorough practice of the imperative that prohibits overuse, misuse and inefficient use of natural resources may well not be able to bring about equality (a social goal of sustainable development) in those societies. Undoubtedly there are grounds for this criticism. For benefits that come from this practice can play no role in alleviating inequality unless they are justly distributed among the individuals in societies.

Despite the criticism being significant, C2 seems to turn out to be true in a qualified sense. The sense is that, if the conditions of distributive justice are satisfied in a society (i.e. if a society, by virtue of various forms of economic and social reform, is able to enjoy the benefits of the practices in question and distribute then fairly), and also if the society has a standard quantity of reserves of natural resources, then C2 (if overuse, misuse and inefficient use of natural resources are reduced, then inequality in societies will tend to be reduced) turns out to be true.

One might, however, now raise the concern that there is still a time-factor problem here, e.g. one might argue that fairness in 2100 is not fairness in 2015, and this facilitates reverse discrimination, amounting to a violation of intergenerational justice. Undoubtedly, there is a point in this concern, for the controlled and skilful use of natural resources on the part of the current generation requires them to shoulder an unfair share of burden or sacrifice to reduce inequality in later societies across the entire future of humanity. Nevertheless, from another perspective the practice implicit in C2 seems justified in a qualified sense. The perspective is that we, the current generation, have been benefited (through fulfilling our basic needs) with the reserve of natural resources left by our predecessors; this support ('sacrifice' if you like) has been crucial for the survival of our current contemporaries in a world of limited resources; thus what the predecessors did for us (i.e., their sacrifice) was indispensable and desirable. By the same token, our successors require a minimum reserve of natural resources to fulfil their basic needs for survival; thus we are obliged to pursue or are justified in pursuing the policies of controlled and skilful use of natural resources to assist our successors to realise their basic needs (in other words, to protect their existence) on the same moral ground. Thus it seems that, given the necessity and fairness of the controlled use of natural resources

(as suggested by the basic needs approach), we can overcome the above mentioned time-factor problem. Thus C2, understood in this way, can become a defensible premise.

In addition, the empirical evidence, which could indicate the general reliability of the other premises (excepting C1 and C2) used in the two arguments above, is available to be referred to.[5] Hence the two arguments formulated above justify the view that there is a discernible link between the achievement of intra-and intergenerational justice, and this link gives expression to the view of the two-fold division of justice, that by achieving one the other becomes rather easier to achieve, attesting to the view that there is no theoretical or practical difficulty in recognising the interdependence between intra- and intergenerational justice as claimed in F1 and F2.

Going back to the currently dominant economic practice, the existing two dominant economic approaches (i.e. the economic capture approach and the moral expert approach[6]) are not capable of combining widely held ethical values about the environment and processing them into relevant decision-making. One of the major problems that these two approaches face is that they cannot capture individuals' values about the environment by their willingness to pay (WTP) (because WTP is not sensitive to humans' ethical obligations to the environment and relevant concerns about justice).

---

[5] For a discussion of sustainability and justice yielding support for the premises I have used here in the two arguments, see Vanderheiden, S., 'Two Concept of Sustainability', *Political Studies*, 56(2008), pp. 435-455; and Streeten, P., 'The Distinctive Features of a Basic Needs Approach to Development', *International Development Review,* 19.3 (1997), pp. 8-16, (p. 50).

[6] According to the economic capture approach, 'existing economic method can be successfully extended to include ethical concerns. For example, stated preference methods, especially contingent valuation, have been developed to try to capture ethical responses as "non-use value" of the environment. [On the other hand], a moral expert approach [is the one] which confines economic methods to the analysis of welfare gains, and assumes a committee of ethical experts will complement economic expertise'. O'Neill, J., and C. Spash. 'Conceptions of Value in Environmental Decision-Making', *Environmental Values* 9.4 (2000), 521–35 (p. 521).

Another major problem with these approaches is that they fail to satisfy democratic legitimacy in the procedures they apply in environmental valuation. Normative assumptions made in these approaches offer conflict resolution and policy without public debate. For example, cost-benefit analysis, one of the dominant methods used in environmental decision-making, appears to measure the strength and weakness of the intensity of preferences of individuals, not the strength and weakness of reasons for them.[7] These limitations have a significant implication for the legitimacy and effectiveness of decisions that are made under the dominant economic approaches in question.

Furthermore, the tradition associated with the standard economic paradigm of discounting future costs and benefits by a social discount rate appears to be incapable of addressing the issues of justice and the responsibilities listed above. As has been mentioned earlier, biocentric consequentialism suggests that the range of 'moral patients' extends beyond those currently alive or conceived, and thus our responsibilities expand to the extent to which the predictable impacts of current activities extend. But the fact of the matter is that, if the percentage of discounting is high, then the interests of more than thirty years from now become underrated, and thereby the interests of the distant future are effectively disregarded.[8] Over and above its other limitations (such as a sheer focus on profitability), the practice of the standard economic paradigm of discounting future benefits and costs discloses the unsuitability of this paradigm in delivering a secure sustainable future, thus making it worthy of rejection.

I now go on to revisit the UN formulation of sustainable development to see whether or not it accommodates the various aforementioned issues of justice and related

[7] Ibid. p. 523.
[8] Attfield, R., 'Environmental Ethics and Global Sustainability'. In: ten Have, H. A.M.J. et al. eds. *Environmental Ethics and International Policy*, (Paris: UNESCO, 2006), pp. 69-87 (p. 70).

responsibilities in its framework. Arguments adopted in Part One uphold the view that the conceptualisation of sustainable development in *Our Common Future* does not reveal that it represents an inclusive solution to the range of environmental problems facing humanity. While it warrants praise for articulating the conscious point that sustainable development entails as integration among economic, social and environmental elements, it can be criticised for being incomplete (as it leaves out reflection on other values such as justice).

It is worth repeating here that sustainability and desirability (in this connection, justice) are not inseparable. As was argued and defended in Part One, sustainable solutions need not be just in themselves, but the importance of justice means that they should be supplemented or qualified to make them morally attractive as well as sustainable. For practical measures for promoting sustainability recurrently involve the problems of justice. For example, the accomplishment of the objectives of sustainability significantly depends on the realisation of measures such as global limits upon consumption and waste management. Thus a justifiable version of sustainable development must be able to accommodate this overall concern, without making justice a constituent element of sustainability.

Given this, I have supplemented the solutions proposed by the Brundtland commission in *Our Common Future* through recognising and adopting the aforementioned issues of justice: intra-generational, inter-generational, and inter-species justice as well as responsibilities to species and ecosystems. Through this modification, the framework of this version sets out policies that accommodate development that meet the basic needs of the present generation without undermining environmental limits. As has been observed earlier, the practice of ecological modernisation and economic democracy can hardly address these competing significant issues, namely, developmental needs and

environmental limits, which in turn strengthen the framework of the proposed version of sustainable development as a satisfactory alternative grounded on solid ethical foundations at variance with currently dominant economic policy and practices.

The main force of the supplemented version of sustainable development, as is apparent from the paragraphs above and also from chapter three in Part Two, is implicit in its consilience with the value theory of biocentric consequentialism. Consider this example: in Part Two, I mentioned that biocentric consequentialism allows the use of a small tract of an ecosystem (e.g. of a forest) to meet human basic needs. To be more specific, building a hospital in a clearing in a rain forest is allowed to vaccinate the children (living within the area of the forest) against malaria. Approval of the use of a small tract of forest (to meet human basic needs) implies that there is no contradiction between an increased level of development (at least to the extent it is necessary to meet human basic needs) and protecting and enhancing the relevant ecosystems. Also ecosystems have an economic role over and above their environmental role; hence a policy framework will not be adequate without recognising the multiple values and roles of ecosystems.

As I have argued on several occasions in this chapter and also in earlier parts, a plausible way to secure a sustainable future is to accommodate both developmental needs and environmental limits within the policy framework. Since the supplemented version of sustainable development satisfies this requirement, and also since it adequately focuses on the aforementioned issues of justice, the framework of the supplemented version of sustainable development seems to be the right answer to the query 'how to secure a sustainable future'. Thus to tackle the challenges in question, we need to uphold the core normative force of the supplemented version of sustainable development in our concrete policy decisions. To be more specific, a satisfactory handling of the current socio-

economic and environmental problems to a large extent depends on whether or not the policy framework that we follow reflects the concept of sustainable development with due focus on its ethical dimension (the issues of intra- and intergenerational justice, inter-species justice and the duty to protect ecosystems) and also whether or not the framework has the capacity to transform ethical values and duties into concrete policy decisions as regards development activities.

Now a question might be asked: who will assist in applying the supplemented policy framework in our concrete policy-making process? As I mentioned in Part One, the UN has assisted in many ways, including its declaration of MDGs to address some significant economic and social challenges implicit in the Brundtland definition of sustainable development. But as this definition does not address the above-mentioned issues of justice, it warrants criticism, and needs to be supplemented in line with our supplemented version of sustainable development. To overcome the limitation of the Brundtland Commission's policy framework, UNESCO established the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) in 1998, to advise it on ethical issues regarding scientific knowledge and technology.[9] And since the birth of the Commission, the Division of Ethics of Science and Technology of UNESCO has been working with COMEST jointly, and has published outcomes of a number of interdisciplinary dialogues (in particular between environmental scientists and environmental ethicists) in the form of books[10] so as to encourage the scientific community to examine fundamental ethical questions and to motivate them in taking

[9] ten Have, H.A.M.J., 'Introduction: Environment, Ethics and Policy', in *Environmental Ethics and International Policy*, ed. by Henk A.M.J. ten Have (Paris: UNESCO Publishing, 2006), 11-22 (p. 12).
[10] Example includes*: Environmental Ethics and International Policy,* ten Have, H.A.M.J., ed. (Paris: UNESCO; 2006); *Nanotechnologies, Ethics and Politics,* ten Have, H.A.M.J., ed. (Paris: UNESCO; 2007)

necessary measures if they find any early indications of a risk situation. Plainly stated, it is an attempt to motivate relevant members of the scientific community and policy-makers to concentrate on promoting the best ethical guidance for concrete policy actions as regards sustainable development, rather than merely conceptualising the ethical issues (of environment and development) as such.

This initiative surely represents an improvement, but to make this effort a fruitful move, frequent dialogues should run among relevant scientists, ethicists, policy-makers, special interest groups and the general public, and they must identify and recognise various values and goals (in particular economic, social and environmental) along with the ethical commitment that sustainable development involves. The supplemented version of sustainable development, which was offered in Part One, could be discussed in that forum, and there should be clear incorporation of the outcomes of such interdisciplinary dialogues (on the proposed four ethical concerns and our responsibilities corresponding to them) into concrete policy decisions and practice.

The UN is not, however, the only international organisation that works for people to increase their opportunities and prospects. There are several other supra-national economic and military institutions as well as international legal processes that largely determine the opportunities and prospects of humanity. Examples include the World Bank, the IMF and WTO, NATO and the international court of justice. Given this, a supra-national institution seems necessary to deal with socio-economic and environmental matters and also such institutions need to be accountable to a higher elected body. Held, in this context, has been found to refer to a directly elected global parliament, i.e. a democratically elected second chamber of the UN.[11]

[11] For an explicit expression of this proposal, see Held, D., *Democracy and the Global Order* (Stanford: Stanford University Press, 1995), p. 279.

The policy implications of issues of justice for the governments of developed and developing countries are not always identical. Consider the following two assertions: (1) it is now widely accepted that the environmental impacts of development activities are global in scope; thus underdeveloped/developing countries are considerably affected by the development activities of the developed world. As underdeveloped/developing countries become (environmentally) victims of the development activities of the developed world and also as the victims are in no way culpable for such sufferings and in no way benefited from those development activities either, the policy of such development activities raises a serious problem of justice.

Thus a policy framework for the development practised in the developed world cannot be sustainable, unless it is capable of addressing transboundary environmental impacts as such. (2) As has been observed in Part Three (on several occasions), while the immediate challenge of the environment for the poor communities who are based in underdeveloped and developing countries is not an issue of the quality of life but is a matter of survival, the issue of quality of life is primarily just a matter of the quality of life of the affluent (who are mostly located in the developed countries). Given this (and here we reach assertion (2)), the pressing need for the poor communities is to achieve economic (and then social) sustainability, while the pressing need of the affluent is to ensure environmental sustainability. Thus while the principal task of governments of underdeveloped countries is to set out policies with a view to attaining economic goals (such as poverty alleviation), the major task of the governments of developed countries is to introduce policies to attain environmental sustainability (recognise environmental limits). Thus a development policy of an underdeveloped or a developed country cannot be acceptable (or sustainable either) without being capable of addressing the pressing needs of the country as appropriate.

Through upholding the four principles of justice and recommending responsibilities corresponding to them, the framework of the supplemented version of sustainable development seems to take into account various implications of developmental activities relating to the issue of justice as well as the implications mentioned in the above-mentioned two arguments. Thus the supplemented version of sustainable development seems to provide comprehensive guidance in setting out national, regional and international development policy decisions satisfying the requirements for sustainable development.

To deliver their duties in the face of the current environmental challenges, governments of underdeveloped/developing countries therefore first need to address (extreme) poverty, which means that they must inevitably prioritise economic goals (i.e. economic growth) over social and environmental goals. Now a question may well be asked: does this undermine the two other goals of sustainable development: social and environmental sustainability? The answer is no. For these two goals (social and environmental sustainability) are not capable of being achieved through ignoring economic goals. Evils such as poverty, malnutrition, and economic inequality, as observed in Part Three, are among the major reasons for growing environmental problems in the underdeveloped and developing countries; in other words, these evils have been found as the major barriers to the attainment of environmental sustainability. And this suggests that there is a strong connection between the attainment of economic goals (in other words, fulfilment of all unsatisfied basic needs) and the achievement of environmental sustainability. Thus it seems that addressing economic sustainability (and overcoming evils such as poverty, economic inequality and malnutrition) on the part of the governments of underdeveloped and developing countries does not undermine social and environmental goals; rather, it is a step toward them.

On the other hand, the governments of the developed countries (in particular, countries that have already fulfilled the basic needs of their inhabitants) are required to prioritise the values and goals of sustainability as appropriate for them. As they have already crossed the basic needs threshold, they are required to prioritise environmental and social goals over economic ones. Whatever they are doing now as regards development, it is mostly for further improvement of the quality of people's lives. But this very frequently affects the poor wherever they are located through undermining the social and environmental aspects of sustainable development (in particular, through expanding the economic gap between the rich and the poor, and adversely affecting the environments locally and globally because, as I have mentioned earlier, some impacts of environmental problems are global in scope). This directs us to the consideration that policy objectives for the poor can never in fact be realised entirely without co-operation from the other part of humanity, the affluent.

The subject matter of sustainable development policy, as a public policy, involves issues of choice and decision that essentially become objects of governance at all levels of society – local, national, regional, transnational, intergovernmental and nongovernmental. Options for delivery accomplishment eventually involve institutions and practices of (political) government through which public choices are made. Hence the success of the policy framework of our suggested version of sustainable development significantly depends on its universal recognition and implementation (i.e. it should be recognised by all sectors of society and should be practised universally; in other words, both in developed and underdeveloped/developing countries across the world all together). This

directs our attention to a cosmopolitan theory of justice. But there is no scope here to go into the details of this view.[12]

From the above analysis it is now apparent that the limitations of the currently dominant policy framework of sustainable development are implicit in the imperfect perception of poverty-linked environmental problems, and also in its exclusion of social and environmental values and goals in deliberation about sustainable development. These limitations are illustrated in most of the recent policy-decisions revealed in the areas of international trade, agriculture and forestry.[13] Contrariwise, as has been observed here, the proposed framework for sustainable development does not have such limitations.

Now another question may be asked: is the practice of gearing towards each set of sustainability goals in line with the priority of the day truly supportive of realising the ultimate goal of a sustainable development, a sustainable future? The answer is 'yes'. For, as has been argued on several occasions, if the constitution of sustainable development with its economic, social and environmental values and goals is prioritised appropriately, as well as the basic needs approach being relatedly maintained, then a framework for sustainable development can be made defendable. Our supplemented version can be envisaged as an attempt to achieve that end, since it is able to accomplish the key objective of sustainable development, a sustainable future. It follows from this that considerations about environmental protection and social goals would begin as soon as we took into account the economic issues, and vice versa. In other words, to embrace the economic goals of sustainable development does not give us grounds or even the option

---

[12] For discussion of cosmopolitan theories of justice, see: Pogge, T., *World Poverty and Human Rights: Cosmopolitan Responsibilities and Reforms*, 2nd edn (Cambridge: Polity, 2008) ; Pogge, T. and Moellendorf, D., *Global Ethics: Seminal Essays: Global Responsibilities* (St.Paul, MN: Paragon, 2008); Cohen, G. A., *Rescuing Justice and Equality* (Cambridge, MA: Harvard University Press, 2008); Cohen, G. A., 'Incentives, Inequality and Community**',** *Oxford Online Resource Centre*(Oxford: Oxford University Press, 2012). <www.tannerlectures.utah.edu/lectures/documents/cohen92.pdf>[accessed 1 February 2012]

[13] Lele, S.M., 'Sustainable Development: A Critical Review', *World Development* 19.6 (1991), pp. 607-621.

to reject its social and environmental goals; rather it requires us to reconcile the exigencies of these goals: economic, social and environmental.

Post-war European Union experience, which seems to be supportive of the proposed framework for sustainable development, can consider here as an example where development (regional level) did not begin from the objectives and goals of sustainability straightaway, but rather advanced from phase to phase: at the earliest stage these countries focused on continuous economic growth, and then proceeded to attempt to balance economic growth with social goals followed by efforts to balance economic growth with environmental limits. Thus it seems that sustainable development is not something that can be attained by a country overnight, and it is not something of which all the standard goals can be realised at once either. But rather it is something that a human society absorbs in the course of its ongoing development through realising its goals in succession as time and opportunities permit.

Thus when a government of an underdeveloped country gives priority to economic goals, if its policies are sound and consistent it cannot overlook social and environmental goals. It prioritises economic goals, as a response to a demand or the pressing needs of a given time, to help people to realise their basic needs, and once such needs are accomplished, the government in question is required by the theory of sustainable development to change the order of priority so as to balance economic goals with social and environmental goals. But this is not always as easy as it seems to be. It could at times be a really hard task to strike a judicious balance between economic goals and ecological ones, or vice versa. For an overpopulated (developing or underdeveloped) country, where the population-growth rate is still on the rise, can hardly be able to uphold environmental sustainability when this conflicts with the growing demands of the growing population. In this situation, concerned countries should take immediate and

effective measures to cut the excessive growth of their population. There is no space to say more about this in the present context. I will come back to this issue in the next chapter which explores the prospects of the supplemented version of sustainable development in the case of Bangladesh, one of the most densely populated countries in the world.

Simon Caney writes that we 'consider the argument that it is unfair if persons are disadvantaged in terms of their opportunities because of their cultural identity [such as national or civic identity], and, hence, that persons should enjoy equality of opportunity.'[14] Caney's point is well taken in view of his unswerving concerns about the equality of opportunities, which advances the cause of sustainable development through tackling the issue of distributive justice. For example, as a concern about equality of opportunities, Caney's view upholds the following value assumptions with reference to distributive justice: (1) attempts should be made so as to ensure that basic needs are fulfilled at the individual level; (2) the governments of underdeveloped /developing countries are justified in attempting to utilise their (financial) resources for economic development to facilitate access for their starving people to food, drinking water and to other basic needs; and (3) the governments of developed countries are not justified in attempting to increase economic growth as their people already have access to food and their basic needs are fulfilled; but rather they should attempt to promote energy efficiency among other relevant policies[15].

---

[14] Caney, M., 'Cosmopolitanism, Democracy and Distributive Justice', in *Global Justice Global Institutions,* ed. by Daniel, W. (Alberta: University of Calgary Press, 2005), 29-64, (pp. 30-31).

[15] Such as policies about developing methods of storing CO2 underground, planting a growing number of trees, and developing mechanisms for raising public awareness about the necessity and implications of transforming materialistic and consumptive lifestyles which have a very harmful carbon footprint, and so on.

There is one more reason, at least, for which Caney's view merits recognition: this view concerns equality of opportunities for individuals to participate in policy-decisions that affect them. This is another important aspect of justice between contemporaries, which can be called 'participatory justice'.

Caney's view suggest that over and above equality of opportunity to fulfil basic needs, every individual deserves to have equality of opportunities to participate in decision-making processes that have an effect on them. This view suggests that it is justified to use natural resources in underdeveloped and developing countries for attaining economic development and in developed countries for energy efficiency, which runs parallel with the normative assumptions and requirements of the supplemented version of sustainable development.

As almost all countries signed up to sustainable development at the Rio summit of 1992 and afterwards their commitment was reinforced at its successors of 1997 and 2002, and as one important type of sustainable development, namely policies of maximum sustainable yield, is endemically flawed (for more see chapter three of Part One), it is a pressing need to have a new framework for sustainable development to be followed by governments, institutions and individuals, which is internationally cohesive and ethically sound as well. From the above discussion it can be argued that the framework for sustainable development that I have proposed in this study merits being envisaged as a sound alternative, for over and above the central goals of sustainable development (economic, social and environmental), people in policy making positions can address ethical concerns as regards development activities and humans' corresponding duties relating to them by adopting the supplemented version of sustainable development.

It is now apparent that policy-makers can tackle a range of current environmental problems, such as the challenge of global warming, the world's inequality and poverty,

and the ongoing diminution of natural resources (both renewable and non-renewable) because of their misuse and overconsumption etc., by adopting the supplemented version of sustainable development. The major ethical concerns with reference to environmental problems are various issues of justice, and the supplemented version can tackle such concerns by commending equitable approaches to them. The underpinning of such equitable approaches, as has been observed here, is the (intrinsic) value of living creatures (including human beings) and the enormous instrumental and inherent value of species and ecosystems as well as various normative principles and duties that derive therefrom.

Global warming, for example, causes vast damage to other living creatures as well as humans. All living creatures located in and around coastal areas are most significantly affected by sea level rise on account of global warming. Here the disproportionate suffering of innocent people (in the sense that they are hardly responsible for global warming) generates ethical concerns. It is a manifest violation of intra-generational justice. Part of the solution to global warming is to reduce the total of greenhouse gas emissions towards as much as 85 per cent by 2050 as recommended by the International Panel on Climate Change (IPCC).[16] To achieve this target, the burden of reducing greenhouse gas emissions has to be shared fairly among humans as well as governments. One form of policy is famously known as the Greenhouse Development Rights Approach, which attempts to strike a balance between issues of GHGs emissions and issues of development needs.[17]The cost of greenhouse gas mitigation and of supporting

[16] *Combat Global Worming* (Brussels: Bellona Environmental CCS Team, 2009) <http://bellona.org/ccs/home/bellona-and-ccs/bellona-studies/combat-global-warming.html>, [accessed 29 January, 2012]

[17] Baer, P., Athanasiou, T., Kartha, S. and Kemp-Benedict, E., 'Greenhouse Development Rights: a Framework for Climate Protection That is "More Fair" Than Equal Per Capita Emissions Rights', in *Climate Ethics: Essential Reading*, ed. by Gardiner, S. M., Caney, S., Jamieson, D., and Shue, H. (Oxford: Oxford University Press, 2010).

development, according to this approach, should be shouldered by people who are at or above a certain level of development (who would be taxed accordingly). The success of this policy, as it seems now, depends on the recognition and practice of the supplemented version of sustainable development, which explicitly focuses on multiple forms of justice including that of intra-generational justice. It is in this sense that the framework of the supplemented version of sustainable development seems to require progress in tackling global warming.

As I mentioned earlier, the same framework is equally applicable to other issues arising from global problems, such as the world's inequality and poverty, the diminution of natural resources (both renewable and non-renewable), contamination of water, air and soil, and the lessening of the restorative capacities of over-stressed species and ecosystems often to the point of annihilation because of misuse and overconsumption of resources and overpopulation. Addressing all these issues requires the application of the same framework.

It thus appears overall that environmental problems ((local or global, standard (which extends to issues ranging from resources to biodiversity) or the ones relating to human security threats (which stem from various 'wants' and 'fears')) are not just about efficient utilisation of resources. As has been disclosed above, they involve, at the very least, four aspects of justice, which mainly encompass some basic ethical values, such as the issue of justice in the sharing of environmental burdens and benefits, equality in environmental decision making processes and the ethical claims of non-human creatures and ecosystems. This gives good reason for our responses to environmental problems. The proposed framework seems satisfactorily to tackle issues of development needs and

environmental limits without failing to respect the ethical dimension of environmental problems.

Chapter Three

4.3 The Case of Bangladesh

In the previous chapter I proposed a framework for sustainable development which entails a radical reform of human systems. In this reform it is suggested that human beings' economic well-being and social development (i.e. economic and social sustainability) must be addressed, but without undermining the issue of environmental sustainability (i.e. without disregarding environmental limits), and vice versa. Omitting any one of these can render a development policy unsustainable. This chapter explores the possible application of the proposed policy framework for sustainable development to the case of Bangladesh. Bangladesh is a developing country where poverty (i.e. economic sustainability) is still the foremost challenge. The main concern of this chapter is to show how the seemingly opposing objectives of the proposed framework for sustainable development - economic, social and environmental sustainability - can satisfactorily be addressed in a developing country like Bangladesh, if this is possible at all.

Before such concerns can be addressed, first I need to look back at what the environmental and security impacts of development activities are which obstruct sustainable development in Bangladesh. In chapter three of Part Three, I presented a thorough discussion about major sectors and means of human development activities, and the current and potential environmental impacts of these activities on the major components of the Earth: water, ground-water, air, coastal or marine areas and land. Bangladesh has been covered in chapter four of the same Part as a case in point.

The overriding conclusion regarding environmental challenges in Bangladesh, drawn in the relevant chapter of Part Three, is that inhabitants of this country face diverse environmental problems which are both widespread and alarming, and which can be categorized into local and global environmental problems. As has been pointed out there, pollution caused by pollutants from local factories, as well as other environmental problems originating from human activities within the land, belongs to the former category, local environmental problems. Among the major environmental impacts of human activities that are labelled 'local environmental problems' are: water, land and air pollution through unplanned disposal of excreta and litter, air pollution on account of various activities, such as increased use of motor vehicles, open burning and cooking with biomass fuels, unplanned city expansion, impairment of drinking water quality, reduced ground water owing to the growing demand for irrigation and drinking water and frequent changes in morphological features such as rivers, due to erosion and siltation which have been caused through growing deforestation, emergence of unprecedented environmental threats and a huge decline of biodiversity, caused by the destruction of mangrove forests and coastal ecosystems through various anthropocentric activities, namely harvesting of timber and many other forest resources, fishing inside forests areas, destruction of natural habitat through farming and developing human habitation within the forest area.

On the other hand, environmental problems include problems (such as global warming through releases of CO2 and greenhouse gases, river bank erosion and siltation[1] and more frequent occurrences of floods due to reduced water carrying capacity in rivers as a result of deforestation in and around the territory) which are shaped by the

[1] As previously mentioned in Part Three, hitherto one million people, mostly the poor, have been affected, which in monetary terms has resulted in an economic loss of $ 40 million per annum.

ecological systems of the planet (which have thus been called the systemic kind of global environmental problems). They also include ones (such as reduction in biodiversity and wetlands which provide a large number of fauna and flora) which occur worldwide and affect global economic and financial systems (which have thus been called the repetitive kind of global environmental problems). These environmental problems all belong to the second category, global environmental problems.

The most typical kind of human-caused environmental problems (endured by the inhabitants of Bangladesh both presently and even more prospectively), which I covered in chapter four of Part Three, is the lack of water (for irrigation and other uses) due to the withdrawal of water by India at different points on a number of common rivers for an indefinite period of time. Examples include water withdrawal at the point of the Farakka Barrage[2], at the connecting point of the Brahmaputra and Teesta rivers, and the launching of the Indian-Giant-River-Link Project, which indicates that such activities are set to continue into the future.

A further Indian project, as I mentioned in chapter four of Part Three, is the Tipaimukh Dam, a hydroelectric project. Despite repeated assurance from the highest administrative level in India that it would not authorize anything that might harm Bangladesh, a treaty has recently (on 22 October 2011) been signed by the heads of India, Manipur state and the allied hydroelectric company, and work on the dam

[2] Water withdrawal at the point of the Farakka barrage by India, as has been referred to in chapter four of Part Three, has already resulted in the current deadly conditions of drought and salinity in the south-western region of Bangladesh, and has also resulted in an unfavourable change to the weather and to the vulnerable ecosystems of this region, including the ecosystems of the world's largest mangrove forest - the 'Sundharbans'. Also it has caused severe salinity intrusion in the south-western coastal area as well as desertification and soil erosion in the north-western region of the country.

construction will begin very soon in line with the agreement.[3] The potential threat of the Tipaimukh Dam is utterly destructive to the ecosystems and all living entities including humans of the whole north-east region of Bangladesh, as well as to ecosystems of the dam area of Manipur state.

What emerges from the above recapitulation is that the government of Bangladesh can and should set out and execute policies that address environmental problems that have emerged from local sources. Nevertheless environmental problems which are trans-boundary in terms of their source cannot be expected to be successfully addressed through policy initiatives by the government of Bangladesh or other local organizations alone. Solutions to regional and global environmental problems need regional/global involvement and initiatives.

Thus if Bangladesh wants to tackle current environmental problems and accomplish sustainable development, then she has to set out policies in view of the framework for sustainable development that are capable of addressing current environmental problems caused by human activities at various levels: namely local, regional and global. In so doing, firstly the government of Bangladesh has to set out policies to address environmental problems that are rooted in human activities within the territory. Furthermore the government must take the initiative to explain and influence regional and global governments, international organizations and non-governmental bodies to set out appropriate policies about trans-boundary problems. Much the same applies to the government of Bangladesh as regards its task with reference to global

---

[3] India did not even inform Bangladesh before they signed the Tipaimukh agreement on 22 October, 2011, which is a clear violation of all laws, policies, and agreements that have been practised hitherto globally on sharing water of cross-boundary rivers. For more see Khalequzzaman, M., 'Impact of Tipai Dam on the *haor* Regions', *Daily Star*, 10 January, 2012, p.9

environmental problems. The government in this case also must take initiatives to explain and influence global governments and relevant international organizations as well as non-governmental bodies, in particular the governments/countries which are culpable for global environmental problems that inhabitants of Bangladesh have been suffering from (without being responsible for creating such environmental problems, such as climate change), to persuade them to cooperate with Bangladesh in realizing appropriate policies to protect her inhabitants, both human and non-human. For, even though Bangladesh sincerely tries her level best to comply with international agreements and combat the adverse effects of climate change, she is not capable of tackling such environmental challenges unaided. So she requires assistance in managing and adjusting to the changes (adaptation), which is not a favour, but a duty on the part of the developed world as they have a role in causing such changes and sufferings.

Now the question arises whether or not the framework for my supplemented version of sustainable development is applicable to Bangladesh. The prime task of the government of Bangladesh, in line with our proposed framework for sustainable development, is to set out policies to fulfil basic human needs. This involves eradication of poverty, which in turn addresses the issues of security from 'wants'. And through fulfilling basic human needs, one of the issues of justice is addressed. As has been argued earlier (in the previous chapter), to fulfil human basic needs is to fulfil economic sustainability, which is one of the pillars of sustainable development, and also a way forward towards fulfilling another two pillars of sustainable development: social and environmental sustainability. For the proposed framework for sustainable development searches for a cure to poverty, which is required to make provision for the value of life and to ensure participation of affected individuals, and in so doing this framework encompasses some central prerequisites of social justice, and is foreseeably compatible

with others. In so doing the framework seems to be able to assist in removing major causes of insecurity due to 'fears' as well. On the issue of environmental protection, this framework involves a considerable environmental sensitivity and advocates defence of natural values, in particular through recognizing and reflecting in policy decisions the intrinsic value of non-human entities and the immense inherent and instrumental value of species and ecosystems respectively (which are essential for the continued existence of all the bearers of intrinsic value).

Given this, it is apparent that the government of Bangladesh should set out policies in such a way that in the first place all unfulfilled basic human needs are fulfilled. And for this a certain level of economic development is required. But, as I have just argued in the paragraph above, the proposed framework for sustainable development does not advocate that economic development can be made to happen at the cost of social and/or environmental sustainability.

However, being grounded on biocentric consequentialism, the proposed framework for sustainable development, as has been mentioned in the previous chapter, discards the view that everything in nature must be preserved. This keeps the theory of biocentric consequentialism and by the same token the proposed framework for sustainable development grounded on it away from drawing bizarre conclusions, such as that each and every member of a species should be preserved; every drop of every ecosystem should be sustained. This proposed framework has further been strengthened through the implications of biocentric consequentialism that the bearers of intrinsic value overall merit to be sustained, but that if the situation requires us to take decisions through making comparisons between the bearers of intrinsic values, then they can be taken on the basis of the degrees of strength and concentration of their intrinsic value. I have discussed in detail and defended in the previous chapter and in Part Two how, in

addition to other major characteristic features, this very feature of biocentric consequentialism make it a strong contender for a defensible normative ethical theory.

What the proposed framework for sustainable development says is that economic development should receive first priority as without accomplishing economic sustainability, social and environmental sustainability are not possible to attain. The justification, as I have argued in the previous chapter, of the proposed framework for sustainable development is implicit in the four concerns of justice it involves: intra-generational justice, intergenerational justice, inter-species justice and the need for and duty to protect biodiversity and ecosystems for the sake of the continued existence of lives on earth.

Recognizing economic sustainability as the pressing need for underdeveloped and developing countries, Ramachandra Guha argues that intervention with nature should be guided primarily by human needs (arguably human basic needs), not by the needs of biotic integrity.[4] For him, the proximate reasons for current environmental problems are the violation of this principle at both macro and micro level: at macro level the proximate reasons are the violation of this principle in the dialectics of economic and political structure; and at micro level the proximate reasons are violation of this principle in lifestyle choices at individual level. Given this, criticizing the Deep Ecology (or American wilderness) view (which manifests itself with a far greater emphasis on equality and the integration of ecological concerns with livelihood and work), Guha asserts that the implementation of such a wilderness agenda is thus unjustified when applied to the Third World.

[4] Guha, R., 'Radical American Environmentalism and Wilderness Preservation: A Third World Critique', *Environmental Ethics* , 11.1(1989), 71-83, (p.74).

Ramachandra Guha's argument, mentioned in the paragraph above, rightly says that addressing economic sustainability (human basic needs) in the Third World countries is a pressing need, and in the light of this understanding the implementation of a wilderness agenda to the case of Bangladesh will be unjustified. On several occasions, in particular in the previous chapter, I argued that a policy decision cannot be adequate and sustainable if it ignores or remains silent about any of the three pillars of sustainable development: economic, social and environmental sustainability. Focusing on two pillars of sustainable development (economic and social sustainability) and remaining silent about the third pillar (i.e. environmental sustainability), Guha's view seems to remain open to criticism.

As opposed to the wilderness agenda as well as Guha's view, the proposed framework for sustainable development thus seems to offer details of the fundamental requisite conditions which an adequate framework for sustainable development must tackle. Furthermore this framework can also be envisaged as a 'guideline' by which the plausibility and comprehensiveness of any proposed strategy for sustainable development in Bangladesh can be judged. Given this, it is both crucial and justified for the government of Bangladesh to set out policies along the lines of the proposed framework for sustainable development. In the light of the proposed framework for sustainable development, some local, regional and global policy initiatives, which the government of Bangladesh needs to set out and act on earnestly for the accomplishment of sustainable development in this country, are now provided:

Policy decisions should be made urgently at national level (by the government of Bangladesh and non-government local organizations):

- Effective policies should be set out in order to reduce poverty by a considerable amount, if not entirely, with immediate effect. For fulfilment of

the unfulfilled basic needs of the inhabitants is a pressing need, which addresses the issue of economic sustainability; and this is the first step towards a sustainable future in line with our proposed framework for sustainable development. Yet there is no mention of the concept of sustainable development in the constitution of Bangladesh. As to recognizing sustainable development as its key policy objective, there has not hitherto been set out any comprehensive and proactive national policy of sustainable development either. The closest action plan that the government of Bangladesh has been found to adopt are the policies of the Bangladesh: Poverty Reduction Strategy Papers (PRSP)[5]. Albeit not a proactive policy of sustainable development, the Bangladesh Strategy for the Millennium Development Goals (MDG) has also been found to be consistent with as well as supportive of the goals of sustainable development.

In view of the goal of sustainable development, the abovementioned action plans (i.e., the policies of PRSP and the MDGs) need to be implemented with greater priority until a comprehensive proactive national policy of sustainable development is set out and introduced by the government of Bangladesh. However, it is worth noting here that the policies

[5] Dated October 16, 2005, and jointly prepared by the World Bank and the IMF member countries in a board meeting with development partners and stakeholders, Poverty Reduction Strategy Papers (PRSPs) illustrate various policies (such as macroeconomic, structural and social) for economic growth and poverty reduction in Bangladesh. It also describes related overseas funding needs and key supplies of financing for this country. This document seems to be very significant in attaining the three pillars of sustainable development: economic, social and environmental sustainability. Among the major issues covered in this document, which seem to be supportive of sustainable development in Bangladesh, are: Roadmap for Accelerated Poverty Reduction (pp. 61-181), Medium-Term Macroeconomic Framework (pp. 185-189), Target-Setting on Major Goals Against Benchmarks (pp. 191-196) as well as the proposal for up scaling Micro-Credit (at p. 49), and its emphasis on pro-poor economic growth (pp. 61-120) , participation, and social inclusion and empowerment (of women, children, ethnic minorities, disabled people and other disabled groups) (pp. 148-150), criminal justice reform and affordable justice for the poor (p. 166), and caring for environmental and sustainable development (pp. 176-181). For details see International Monetary Fund, *Bangladesh: Poverty Reduction Strategy Paper*, IMF Country Report No. 05/410, (Washington, D.C.: International Monetary Fund, 2005)

<http://www.imf.org/external/pubs/ft/scr/2005/cr05410.pdf.> [accessed 19 February, 2012]

(or recommendations) of PRSP are mainly made in general terms, and the allocation of responsibilities for bringing about sustainable development is weak. Formulated and set out by the UN, the goals and targets of the MDGs are undeniably the most significant global initiatives ever. These mutually reinforcing and time-bound goals have been universally acknowledged as a framework for measuring development progress. Nevertheless they seem to be oversimplified in places. Having a dollar-a-day poverty line, for instance, was possibly too modest a target. The release of poverty figures by the World Bank in August 2008, which were based on cost-of-living data of 2005, justifies the abovementioned concern and leads us to the view that MDGs income poverty target needs to be upgraded.

The Millennium Development Goals: Bangladesh Progress Report 2009, jointly prepared by the General Economics Division (Planning Commission, Government of the People's Republic of Bangladesh), the UN system in Bangladesh and the five Thematic Working Groups (who prepared five thematic papers on poverty and hunger, education, gender, health and environment) notes that whilst Bangladesh has made good progress in several key areas of the MDGs, it is yet to make progress in attaining satisfactory levels in some other key areas. The list of areas of progress involves primary schooling, gender parity in primary and secondary level education, reducing the under-five mortality rate, lowering the occurrence of communicable diseases and improving indicators of environmental changes. The reduction of poverty programme is well placed for reaching relevant targets, provided there are macroeconomic stability, economic growth and employment creation in the remaining period.

Contrariwise challenges involving key areas of MDGs that are yet to be tackled include maternal health, retaining of students at the primary level to complete primary education, gender parity in tertiary education, better sanitation and access to safe drinking water. Furthermore, as expressed in the report, foremost among the reasons for not achieving the hunger target have been the challenges of food security in the country. And the main difficulties with future poverty reduction, as it further notes, include lack of diversity in food crops, constant under-nutrition of children, occurrence of small pockets of high poverty, lack of clear targets and related competence, lack of programme organization and coordination, and structural constraints. These difficulties show that necessary steps on the part of the government have to be taken immediately in order to face the challenges of hunger and poverty in Bangladesh.

Considerable difficulties are present as obstacles to achieving gender equality. Useful and capable linkage between different relevant ministries is needed for tackling women's and development issues as well as various socio-cultural factors that strengthen their exposure. Proper implementation of policies, improving delivery of health care services, and the addressing of the limited supply of technical and managerial manpower, of the limited supply of drugs and commodities, and of the lack of information for making strategic and policy level decisions are required to face the challenges for reducing child mortality. Inadequate coordination between health and family planning care services, improper skill mix and insufficient numbers of the health workforce, sector planning based on insufficient data, inadequate government funding and underlying socio-cultural factors are the main

barriers in addressing the challenges of achieving improved maternal health, MDG 5. Inadequate coverage of the Most at Risk Population, limited technical and managerial capacity and inadequate government funding in the government bodies in charge of control of these diseases, and lack of strategic information management have been the main reasons for not being able to continue the trend of the low incidence of communicable diseases. Absence of broad mechanisms for the production and distribution of quality planting material and efficient use of forest resources, lack of facilitating technology, institutional support and dedicated financing to reduce greenhouse gas emissions, lack of proper regulation that addresses the present gaps in fisheries sector development, poorly planned development programmes, upstream withdrawal of water, lack of policies and strategies to ensure conjunctive use of water resources, and to ensure developing water efficient agricultural practices, are the foremost among the reasons for current environmental challenges in Bangladesh.

Given this, the authors of the Millennium Development Goals: Bangladesh Progress Report 2009 have mentioned that Bangladesh needs substantial resources; immediate efforts need to be undertaken by Development Partners to examine the gaps and strengthen support to achieve the MDGs. The global menace of climate change, which Bangladesh is most vulnerable to, warrants urgent support from the developed world that is morally responsible for this. Adequate financial support will enable Bangladesh to start work on the additional challenges that climate change poses to its MDGs gains.

Given this, Bangladesh should set national poverty thresholds to ensure a goal which is contextually more suitable. As is reflected in the MDG report or in the Poverty Reduction Strategy Papers, upper and lower poverty thresholds have been estimated in line with the expenditure required for basic needs. But no information is supplied in either of the two documents (in the MDG report or in the Poverty Reduction Strategy Papers) on how these two boundaries were estimated. The Poverty Reduction Strategy Paper of October 2005 seemed slightly more ambitious than its original target of reducing income poverty. It sets specific targets for reducing the number of people living below the upper threshold to 25 per cent by 2015 and those living in the lower bracket to 9.5 per cent, which was far more ambitious than its original targets of reducing the upper group to 29 per cent and extreme poverty to 14 per cent. Given this, the success of reaching the poorest of the poor in Bangladesh (which is the key objective of economic sustainability) through MDGs and PRSP plans requires making appropriate adjustments in their goals, targets and indicators as required. The *Millennium Development Goals: Mid-Term Bangladesh Progress Report 2007* seems to recognize that although having succeeded in halving income poverty, the MDGs have not been able to meet the target of halving the proportion of the poorest cohort (which is 20 per cent of the total population) in both national income and consumption.[6]

Bangladesh is a signatory to the Rio Convention on Biodiversity (1992), and the Kyoto Protocol that came into effect from 17 February 2005. In addition to the two action plans (the PRSP and the MDGs) mentioned

[6] United Nations, *Human Rights and the Millennium Development Goals in Practice: A Review of Country Strategies and Reporting* 2010 (New York, Geneva: United Nations, 2010)
< http://www.ohchr.org/Documents/Publications/HRAndMDGsInPractice.pdf >[accessed 18 February, 2012]

above, the government of Bangladesh has also been found to adopt and enact some acts of legislation, such as the Protection (Amendment) Act 1974, the Environmental Protection Act, 1995, the National Environment Management Action Plan (NEMP), 1996, and the Wild Life and Environmental Court Act 2000. Among these acts of legislation, the NEMP seems to be more close to sustainable development than others. Through identifying key environmental issues, creating a large database of environmental vulnerabilities of the country, giving emphasis to grassroots participation, improving in some measure environmental conditions and raising the human quality of life, the NEMP has proved its suitability towards the accomplishment of the objective of sustainable development.[7]

Another action plan, called the National Conservation Strategy (NCS) and agreed as a draft in 2005, is formulated mainly on the basis of the NEMP, and now awaits parliamentary approval. The NCS is the upgraded version of The Bangladesh Conservation Strategy, 1995 (BCS). And this has been done to make this action plan more suitable in attaining sustainable development. Furthermore, a sectoral implementation approach has been recommended in the restructured version of the NCS.[8] The rate of the progress of implementing the NEMP, however, has considerably diminished owing to funding constraints. Given this, to achieve progress or significant achievement in terms of sustainable development, the NEMP and the NSC have to be made more comprehensive and also the government of

[7] Hossain, I., and Tamim, M., '2005/2006: Energy and Sustainable Development in Bangladesh', *Sustainable Energy Watch 2005/2006* (Dhaka: Helio International, 2007) <http://www.helio-international.org/reports/pdfs/Bngldesh-EN.pdf> [accessed 18 February 2012] (p.7)
[8] Ibid, p.9

Bangladesh should arrange adequate funding for these action plans. Since the government cannot provide adequate funding for implementing these action plans without external assistance, it should take precise and rapid initiatives to persuade world governments and relevant national and international institutions to assist Bangladesh to implement the action plans in question and achieve her objectives of sustainable development.

From the forgoing analysis, it seems that the policy of sustainable development in Bangladesh is a blend of a range of strategies (which include the ones in the MDGs, the PRSP and the NCS) and agreements (which include the Rio Convention on Biodiversity and the Kyoto Protocol). But to carry out responsibilities pertaining to the formulation and implementation of sustainable strategies in different sectors, a high-powered body is needed. Through setting up a national Commission for Sustainable Development under the head of state, the challenge in question may be addressed in a more successful manner.

- Micro-credit, an anti-poverty innovation in Bangladesh, which won world recognition and has been practised to eradicate poverty by many governments all over the world, has been playing a considerable role for over a decade in alleviating poverty in Bangladesh. More importantly, it helps alleviate gender discrimination mainly through giving security to women as the main recipients of loans under this programme (according to documentation, 90 per cent of the borrowers are women[9]). Thus the significance of the micro-credit policy for the empowerment of women,

[9] Ibid, p.7

achieving gender equality and enhancing the rural economy in Bangladesh is undeniably substantial. Thus the micro-credit programme can be of great support in attaining the goal of gender equality and MDGs can be benefited from continuation of this policy.

- Non-government sectors as well as private sector bodies should be encouraged to make efforts alongside the government. This will considerably help to achieve the goals and targets of MDGs, and thereby sustainable development in Bangladesh.
- Energy policies that encourage inferior technology utilization and wastage and also discourage efficiency improvements should be rejected. However, low energy prices can greatly assist in attaining the MDGs, but there is a risk of energy profligacy and hence of increased per capita GHG emissions. Taking into consideration the issue of clean energy investment, World Bank funding for the energy sector has started shrinking since the early nineties.

However, as the per capita carbon emission in Bangladesh is still below the global average, Bangladesh can continue to develop unless and until it manages to fulfil all unfulfilled basic needs of her inhabitants. But it should move to renewable energy generation. Possible options include hydroelectric energy, tidal energy, wave energy, wind energy, energy from biomass and solar energy. Yet Bangladesh needs funding for this. Thus if global leaders want countries, in particular developing/underdeveloped countries like Bangladesh not to increase their carbon emissions any further in order to help to save life on the Earth then they have to assist these countries to procure technology for renewable energy generation, and also have to persuade international funding agencies like the World Bank to be proactive

about their funding assistance for the energy sector in countries like Bangladesh.

- Government should make available affordable treatment plants for excreta disposal, should develop road communication infrastructures and simultaneously should ensure control on the rapid increase in the number of motor vehicles. All municipalities should have a waste collection service, sanitary landfills or incinerators to control solid disposal (in particular, landfill and composting projects can be very useful for the management of municipal solid disposal). Introduction of sanitary toilets in all villages is essential to keep surface and ground water clean. Distinctive environmental regulation as regards these matters should be set out, and also as regards environmental degradation caused by point sources of pollution caused through disposing of untreated industrial wastes (as well as metal contamination of soils, for example, by the Hazaribagh tannery in Dhaka), and releasing medical, chemical and liquid wastes as effluents into rivers and streams. And relevant departments of the government should be charged with the implementation of these regulations.

Execution of a correctly constructed 'Polluters Pay Policy' (PPP) can be an effective principle in such cases.[10] Setting such regulations is urgent as the causes of death and illness in Bangladesh, in particular in urban areas, are frequently environmental diseases, namely diarrhoea, cholera, typhoid,

[10] The PPP states that 'whoever is responsible for damage to the environment should bear the costs associated with it' For more see, United Nations Environmental Programme, *Taking Action*, Chapter 2, <www.rona.unep.org.action.02.htm>[accessed 28 July 2012] (p.3). Although a number of scholars criticize this principle, a correctly construed property rights-based polluter pays principle, according to Roy, would resolve several of these troubles. For more see, Roy, E.C., *The Polluter Pays Principle: A Proper Guide for Environmental Policy* (Washington: The Institute for Research on the Economics of Taxation, 2001) <http://iret.org/pub/SCRE-6.PDF> [accessed 28 July 2012]

respiratory infections and vector-borne diseases. A huge amount of health costs can be saved by setting out and implementing the abovementioned regulations and projects. Through such measures, the quality of water could be improved and the depletion of the fish population and degradation of the quality of fish (which is one of the main sources of protein for the poor of riverine Bangladesh) could be prevented.

- A suitable land management policy has to be set out to address agricultural non-point sources of contamination, such as fertilizers, arsenic, detergent, pesticides, pathogens, sediment, animal waste and solid wastes. For, among other aspects, agricultural non-point source pollution is one of the key types of land-based source pollution in Bangladesh. This measure appears costly for the peasant farmers of Bangladesh in the short run, but in the long run it is less costly in preference to tougher environmental cures and destruction of major natural resources. But the fact of the matter is that peasant farmers will be less interested in slowing down soil erosion at the cost of short-term agricultural production and economic gain. Thus the land management policies have to be attractive (in the sense that they are capable of bringing about short-term benefits) to the peasant farmers besides their effectiveness in retaining the quality of land. It means that over and above its environmental function, a suitable and effective land management policy has to involve some recognizable incentives (namely economic gain in the short term) for peasant farmers who are being asked to practise it. For example, farmers would more happily agree to retain moisture (which ultimately retains soil) of their land to increase agricultural production rather than to lessen the degradation of the land. 'Erosion control measures in Haiti have

been adopted only when they were shown to result in economic gain to a farmer in the short term, not because they save soil.'[11]

Policy initiatives should be taken to halt or at least to reduce deforestation activities immediately. Government regulation should be set out to penalize the relevant criminals who are actually well off, but have taken this course of action to fulfil their greed for profit. The poor who are involved in such activities to fulfil their basic needs, however, should not be punished in the beginning, but rather they should be offered suitable and legitimate opportunities to earn their living. Through these initiatives river bank erosion, siltation and the frequent occurrence of floods can be reduced to a considerable extent.

- The policy of land redistribution should be implemented in order to remove the root of many social inequalities. For a number of social evils, such as poverty, marginalization, social exclusion, discrimination (in particular gender discrimination) and numerous other social inequalities are largely connected to the discriminatory distribution of land. Emancipation from landlessness should be ensured without delay through setting out and implementing a suitable land reform policy.

- As a densely populated country, the people of Bangladesh may not be benefited at the expected level from the land reform policy. Under that condition a more powerful policy would be to make people aware of their

[11] United Nations Environment Programme (UNEP), *Best Management Practices for Agricultural Non-Point Sources of Pollution*, CEP Technical Report No. 41 (Jamaica: Caribbean Environment Programme, 1998) <http://www.cep.unep.org/publications-and-resources/technical-reports/tr41en.pdf > [accessed 1 June 2012]

well-being through the spread of literacy. The power of literacy may be expected to influence every aspect of people's life, which in turn is able to help develop a distinctive realization among them, and with that realization their being satisfied with the attainment of standard (including basic) needs, and being successful in keeping themselves away from overconsumption and misuse of resources.

One might argue that implementation of the proposed framework for sustainable development would stabilize economic development at a certain level, making unemployment and underemployment a permanent problem for Bangladesh. This concern is not beyond repair. National and international initiatives can address this problem. The government could introduce a liberal pension scheme, and an underemployment compensation law, in addition to land reform policy. Unemployed people could be engaged with various local environment-friendly social businesses supported by local and non-local NGOs and multinational companies and international aid agencies. But for these forms of help to come to the doorstep of the unemployed, government has to take initiatives to attract them, and also has to provide necessary forms of support (such as infrastructure, legal and administrative support).

The proposed policy of reasonable consumption is not just a dream; it is difficult but not impossible. The triumph of hope over a non-sustainable over-consumptive life style in Kerala is an example before not only Bangladesh, but also before all countries developed, developing and underdeveloped all over the world. As Bill McKibben puts it, 'Kerala may be

as significant a school house for the rich world as for the poor'.[12] Kerala shows the possibility of making an enlightened choice between two approaches, the traditional development goal of 'higher economic growth' and living lightly on the earth, producing less waste and consuming fewer resources. Furthermore, McKibben adds: 'Kerala demonstrates that a low-level economy can create a decent life, abundant in the things - health, education, community - that are most necessary for us all.' [13]

- The Bangladesh government should apply stricter laws to control housing and other construction activities on the flood plain, and should set out and foster (as well as encourage people to follow) a more environmentally sound housing strategy, such as cluster housing and compact townships. For construction of new houses and roads on a flood plain can eventually result in disastrous upshots, such as frequent flooding and a decline in the ground water table owing to reduced amount of the total run-off and reduced recharge areas for ground water.

- Another most significant task of the government of Bangladesh is to set out effective policies to stabilize the ever-expanding population of Bangladesh. According to some evidence, the density of population of this country is 50 times higher than in the United States, an intimidating situation.[14] For rapid population growth has placed incredible stress on the country's economy and on both its renewable and non-renewable resources.

---

[12]McKibben, B., *What is True Development? The Kerala Model*
< http://www.ashanet.org/library/articles/kerala.199803.html> [accessed 6 July, 2011] (p.6).

[13] Ibid
[14]Khalequzzaman,M., *Environmental Philosophy in the Context of Bangladesh*
<http://www.lhup.edu/mkhalequ/Earth%20Resources%20&%20Env/Env.Philosophy.pdf> [accessed 19 February 2012] (p. 3)

Given this untrammelled rapid growth of population, Bangladesh arguably needs laws to control such growth, regrettable as such use of power would be. The one child policy of China is a case in point to refer to. The Chinese government has managed to contain its population through implementing this policy, a population that otherwise would have grown beyond China's ability to support it.

But this policy can be criticized for two reasons: (1) it raises moral concern on account of a possible undermining of human autonomy[15] (2) and it loses its effectiveness in the light of the view that 'compulsion does not work except in the very short term'.[16] Against this, one might argue that if the Chinese are freed 'from the grip of communists, the demand for children may well touch off a massive baby boom'.[17] This is not the only way to achieve the goal of a stabilized population. There is an example of achieving such a goal in a non-coercive way. Kerala, a state of India, defying traditional wisdom, did manage to reduce the birth rate to replacement level back in 1992. This was '40 per cent below that of India as a whole and almost 60 per cent below the rate for poor countries in general'[18]. Kerala achieved this goal through the spreading of education throughout the state. This literacy policy

[15] It is a controversial issue whether or not a compulsory 'one child policy' is morally sound. One may well argue that human autonomy cannot be compromised under any circumstances. Thus implementation of this policy in Bangladesh would essentially raise moral concerns. But another person may well argue that if such a compulsory policy is not adopted in Bangladesh for the sake of human autonomy, then this country might have to face a time in future when there will be a serious scarcity of resources to fulfil people's basic needs, let alone other needs that contribute to the improvement of the quality of life. So, bearing in mind this dire consequence, one may well argue that it would rather be harmful to human well-being overall (both for present and future generations of Bangladesh) not to implement a policy that can reduce the present rate of growth of the already very densely populated country of Bangladesh.

[16] Harrison, P. *The Third Revolution*: *Pollution Environmental and a Sustainable World* (London and New York: Penguin, 1993), p. 45
[17] McKibben, p.2.
[18] Ibid, p. 3.

equipped people in general with essential knowledge, especially women, who are the people best placed to take charge of family life, and managed to implement a one child policy under no compulsion, just through using the guidance of wisdom acquired through literacy. This is well illustrated in Bill McKibben's account of the statement of the representative of the International Family Planning Association about Trivandrum, the capital of Kerala, who said that ' …when we send our surveyors out, people are embarrassed to say if they have more than two kids. Seven or eight years ago, the norm was three children and we thought we were doing pretty well. Now it's two, among the most educated people, it's one.'[19]

Thus since compulsion does not work for at all long, and also since compulsion is unnecessary if people can be enlightened through literacy, a compulsory one child policy can and should be implemented for the time being in Bangladesh, and a policy of mass education has to be set out and implemented purposefully as in Kerala. When people with an enlightened understanding are able to realize the benefit of a one child policy, then a legally compulsory one child policy on the part of the government will not be needed at all, and hence this policy will be redundant. Thus, understood this way, implementation of a one child policy can be a justifiable option for the government of Bangladesh before the size of the population goes beyond repair. But, as I have mentioned earlier, this policy cannot or should not be practised for long, for a literate and enlightened future generation will foreseeably bring an end to it. Provision for affordable health care for women and children in the rural areas as well as slum dwellers' areas in cities,

[19] Ibid

and also provision for free and easy forms of birth control can be effective to attain the goal in question.

- The majority of polices proposed above involve command-and-control types of regulation, and hence it will be hard for elected politicians to convince people who are already faced with financial hardship to adopt them. The spread of education, through developing awareness about the significance of environmental problems for their overall well-being, can help enormously in this regard.

- Over and above the spread of literacy, economic (i.e. market) instruments, as opposed to a command-and-control approach, can help Bangladesh in attaining the objectives of the abovementioned policy proposals. Bangladesh has traditionally used restrictions and regulation to restrain environmental damage from economic activity. This command-and-control approach gives rise to a standards-driven environmental policy that employs quantity constraints to control levels of pollutants and limit the depletion of resources. Experience in developed countries suggests that mandated environmental standards and technologies may act as an effective constraint on economic growth and costs, but it may not be of use within the means of low-income economies like Bangladesh. Thus the challenge of integrating environmental and economic (sectoral) policies may be addressed for the most part by economic instruments. The effectiveness of economic instruments in harnessing a sustainable shrimp culture in Bangladesh can be used as an example in this context. For example, economic instruments such as a land use tax, an effluent charge on water pollutants and a soil

conservation fund can be of significant help in attaining the goal of a sustainable shrimp culture in Bangladesh.[20]

The shortage of funds is the single most significant factor that to one degree or another influences all other factors necessary to attain sustainable development in Bangladesh. Despite knowing about the right strategy, sometimes decision makers follow a path which is contrary to sustainable development because of a shortage of funds. For instance, because of this circumstance, Bangladesh chooses inferior technology, and in so doing causes damage to the environment. This is well illustrated in the declining energy strength of the economy. Addressing these complex funding difficulties requires liberal, sustained and long-term assistance from developed countries.

- In many instances policy makers are not fully aware of the implications of sustainable development for the development path they are pursuing. Thus capacity building of government agencies is essential in planning or choosing a development path that is sustainable. They should also look at the chosen development path to see whether or not it satisfies moral requirements.

---

[20] (1) There is no tax on the users of agricultural land for shrimp cultivation. Because of the free goods it involves, this practice thus tends to be misused for private gain. A 'Land use tax' can significantly reduce such misuse and also can raise substantial revenue. The revenue collected through this process can in turn be used in reducing degradation of natural resources as a result of shrimp cultivation. (2) Through imposing an effluent charge on pollutants of water, the shrimp firms can be required to employ more environmentally sound production practices. Water treatment plants can be constructed with the revenue raised. (3) A soil conservation fund can encourage the shrimp firms to employ environmentally sound technologies to reduce salinity and water logging.

For more see, United Nations Environmental Programme (UNEP), *Environmental Impacts of Trade Liberalization and Policies for the Sustainable Management of Natural Resources: A Case Study on Bangladesh's Shrimp Farming Industry* (New York, Geneva: UNEP, 1999)
< http://www.unep.ch/etu/etp/acts/capbld/rdone/bangladesh.pdf > [accessed 19 February 2012]

- A significant concern is the political instability in Bangladesh. It is one of the major obstacles in attaining economic sustainability, and hence a hurdle to sustainable development. Despite all the odds, the democratic process has started going along the road ahead adopted in Bangladesh in 1990, but constant disagreement and conflict among the political parties, especially between the two major parties, results in frequent strikes and shutdowns. A mutual understanding and working relationship between the two major parties seems to be a prerequisite for Bangladesh to practise democracy and to prepare an ideal constitutional framework to implement the framework for sustainable development.
- Corruption is envisaged by scholars and people in general as one of the worst evils in the society of Bangladesh. It has significantly been hindering the overall development of Bangladesh since its birth. Corruption is widespread at all levels of government, politics and economics. Political corruption and its expansion over time seem to be the most vital concern of the government of Bangladesh. For it endures and flourishes in different kinds of bureaucratic corruption. Considerable progress in combating all levels of corruption including the political one is likely to depend on economic development and enhancement of the state's capacities through the entire range of state functions.[21] Economic development, it may well be expected, will allow the country to collect tax and redistribute more resources partly in order to achieve political stability. On the other hand, enhancement of state capacities (through the entire range of state functions)

[21] The Anti Corruption Commission (ACC) Bangladesh was created through an Act promulgated on 23 February 2004 that came into force on 9 May 2004. The aim of this commission is to carry out the purpose of the Anti Corruption Act, 2004, and the commission has been vested with the power to make rules by notification published in the official Gazette with the prior approval of the President.

enhances good governance through considerably increasing the prospects of economic development and political stability being attained.

The government of Bangladesh should set out suitable policies to enhance state initiatives to get rid of the chronic evil of corruption. The Anti Corruption Commission of Bangladesh, which should be composed of ethically insightful, politically unbiased and dedicated individuals, should be freed from all kind of political and governmental influences, and should be operative at its highest capacity under the Act promulgated in 2004.[22] Given this, good governance seems to be a possibility for Bangladesh. But for some, to what extent 'good governance' is dependable in the context of a country like Bangladesh raises a question to which there is no straightforward answer.

Relevant policy decisions should be made urgently at regional level (involving regional governments and other relevant regional organizations, in particular the South Asian Association for Regional Cooperation - SAARC):

In connection with environmental problems that stem from sources located outside the territory (in particular India), the first and foremost problem for Bangladesh is the unfair withdrawal of water by India from common rivers, on which subsistence agriculture and all other irrigation-based cultivation and water-based activities of the inhabitants of Bangladesh are dependent. As I explained in chapter four of Part Three, India has been unilaterally withdrawing water at the point of the Farakka Barrage, which significantly reduces the discharge of water of the Ganges River (from an annual

[22] Khan, M., 'Corruption and Governance in South Asia 2009', In: *Europa South Asia Yearbook 2009* (London: Europa, 2009) < http://eprints.soas.ac.uk/11683/> [accessed 21 February 2012]

minimum discharge of 1297 m^3/sec in April 1966 to 135 m^3/s in April 1996[23]). The reduction of freshwater flow to the Bangladesh area has adversely affected the dynamic function of ecosystems, desertifying the northwestern region and degrading mangrove wetland ecosystems, and increasing inland salinity intrusion in the southwestern region of Bangladesh. Thus, one of the key tasks of the government of Bangladesh is to reach an agreed and fair solution to the water sharing of the river Ganges.

Three short-term water sharing agreements (i.e., the Ganges Water agreement of 1977 and the Memorandums of Understanding of 1982 and 1985) had been signed by India and Bangladesh, before Bangladesh managed to persuade India finally to agree to sign a 30-year water-sharing Treaty of the River Ganges in 1996. There are, however, some fundamental limitations to this Treaty.[24] This treaty needs to be revised in order to get rid of existing loopholes and to ensure fair sharing of the water of the river Ganges. The experience of Bangladesh concerning the implementation of the existing Treaty is not satisfactory. For India has been releasing a lesser amount of water to Bangladesh at the point of Farakka compared with her quantum

[23] Mirza, M.M.Q., ed. *The Ganges Water Diversion: Environmental Effect and Implication* (Dordrecht: Kluwer Academic Publications, 2004), p. 22

[24] 24. Among the major loopholes are: ' 1. The instruments signed by Bangladesh and India do not provide entitlement to the former to participate or to become party to negotiations on any water course or in any consultations thereof e.g. Bangladesh cannot participate in the bilateral negotiations between India and Nepal which aim to implement projects on major tributaries of the Ganges river emanating from the Nepalese territory like the Pancheswar and Saptkosi High Dam Projects. 2. Over the last three decades the Bangladesh government has repeatedly requested India for upstream hydro-meteorological data of the Ganges, Brahmaputra and other rivers. The Indian side has declined to supply or exchange such upstream data and information. The 1996 treaty and other Indo-Bangladesh agreements are totally silent about the provisioning of this information. 3. The 1996 Treaty and other Indo-Bangladesh [agreements] do not provide for any third-party arbitration on settlement of disputes.' For more see: Munshi, M.B.I., 'Water Scarcity and the Threat of Water Wars in South Asia - A Bangladesh Perspective'. < http://groups.yahoo.com/group/MuktoChinta/>, [accessed 27 February, 2012], p. 3.

mentioned in Annexure II of the Treaty.[25] In addition to this, India together with Nepal and Bhutan has undertaken a planned programme of exploiting and controlling more water resources of the Brahmaputra, Meghna and some of their tributaries along with the Ganges. India has been undertaking these activities without informing the downstream riparian country Bangladesh, let alone involving her.[26]

Since the treaty of 1996 is defective, Bangladesh should make efforts to adjust this treaty without delay. The adjustment work should be based on conventional international law, particularly the provisions of the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses and on the Berlin Rules on Water Resources.[27] These regulations involve worldwide expected protections and assurances, but unfortunately these have been omitted from the 1996 treaty.

- Furthermore, as I discussed in chapter four of Part Three, the giant River Linking Project (RLP) considers inter-linking of major rivers at different points (which is labelled 'Peninsular Rivers Development') as well as construction of storages on the principle tributaries of the Ganges and Brahmaputra in India, Nepal and Bhutan (which is labelled 'Himalayan Rivers Development'). This is unquestionably a source of trouble. The

[25] Ibid
[26] Ibid
[27] The 1996 treaty seems to be in breach of Articles 7, 8, 12, 13, 16, 17, 29, 56, 57, 58, 59, 60, 68,72 and 73 of the Berlin Rules. See Loibl, G., et al., *International Law Association Berlin Conference 2004: Water Resource Law* (Berlin: ILA, 2004)< http://www.internationalwaterlaw.org/documents/intldocs/ILA_Berlin_Rules-2004.pdf > [accessed 28 February 2012] . For detail on 'UN Convention on the Law of Non-Navigational Uses of International Watercourses' see, United Nations, *Convention on the Law of the Non-navigational Uses of International Watercourses* (New York: the General Assembly of the United Nations, 1997) <http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf>[accessed 28 February 2012]

effects of this project on Bangladesh are devastating and catastrophic. Unfortunately the damage this project has caused to the ecosystems of Bangladesh is immense. Thus, there is no alternative for Bangladesh but to develop a bilateral relationship with India with the aim of convincing her to refrain from operating the giant RLP, which has incalculable and irreparable catastrophic impacts (in particular environmental and economic) on millions of people, nonhuman creatures and the ecosystems of Bangladesh.

The government of Bangladesh should not simply depend on the conventional diplomatic devices (such as developing its relationship with India through arranging meetings on a regular basis, and discussing the most recent status of the water sharing matter at diplomatic levels including with the head of India's government) to meet the challenge in question. For, despite many meetings and efforts over the last three decades, (1) the experience of Bangladesh hitherto as regards the sincerity of the Indian side in executing the terms of the Treaty of 1996 is not satisfactory, and also (2) India - without informing and involving Bangladesh - has undertaken the giant River Linking Project (RLP) with a view to withdrawing a larger quantity of water at several points along the course of major crossborder rivers, in particular the Ganges and the Brahmaputra (which jointly provide 85 per cent of the total surface water accessible in Bangladesh[28]). Thus the government of Bangladesh should set out new strategies in such a way that it becomes able to keep the Indian side under pressure and stop it from withdrawing water unilaterally and unfairly at several points along the course of Cross Border Rivers under the River Linking Project (RLP).

[28] Munshi, A.B.I., *Water Scarcity and the Threat of Water Wars in South Asia – A Bangladesh Perspective* (Untold Facts, 2008) http://www.untoldfacts.com/bangladesh/water-scarcity-and-the-threat-of-water-wars-in-south-asia-%E2%80%93-a-bangladesh-perspective >[accessed 27 February 2012](p.4)

- This is not the whole story. As I have mentioned earlier in this chapter and also discussed in detail in chapter four of Part Three, another vital environmental and survival concern of Bangladesh is the declaration of the construction of the Tipaimukh Dam on the Barak river in Manipur state on the Indian side and the completion of official formalities in constructing this dam despite repeated appeals and protests from the Bangladesh side, and also repeated assurances from the Indian side saying that India would not do anything which is harmful for Bangladesh. But by breaking its promise to the people of Bangladesh, the government of India has seriously hampered the bilateral relationship between the two countries, as it has made the people of Bangladesh suspicious about its sincerity regarding the bilateral relationship between the two countries through breaching the terms of the Treaty of 1996 (i.e., through releasing a lesser amount of water to Bangladesh than its quantum as per the terms of Treaty of 1996).

In addition to its noncompliance with all key recommendations of the World Commission of Dam Framework (WCD),[29] the decision to construct

[29] Key WCD recommendations: '1. Development needs and objectives should be clearly formulated through an open and participatory process, before various project options are identified. 2. A balanced and comprehensive assessment of all options should be conducted, giving social and environmental aspects the same significance as technical, economic and financial factors. 3. Before a decision is taken to build a new dam, outstanding social and environmental issues from existing dams should be addressed, and the benefits from existing projects should be maximized. 4. All stakeholders should have the opportunity for informed participation in decision-making processes related to large dams through stakeholder fora. Public acceptance of all key decisions should be demonstrated. Decisions affecting indigenous peoples should be taken with their free, prior and informed consent. 5. The project should provide entitlements to affected people to improve their livelihoods and ensure that they receive the priority share of project benefits (beyond compensation for their losses). Affected people include communities living downstream of dams and those affected by dam-related infrastructure such as transmission lines and irrigation canals. 6. Affected people should be able to negotiate mutually agreed and legally enforceable agreements to ensure the implementation of mitigation, resettlement and development entitlements. 7. The project should be selected based on a basin-wide assessment of the river ecosystem and an attempt to avoid significant impacts on threatened and endangered species. 8. The project should provide for the release of environmental flows to help maintain downstream ecosystems. 9. Mechanisms to ensure compliance with regulations and negotiated agreements should be developed and budgeted for, compliance mechanisms should be established, and compliance should be subject to independent review. 10. A dam should not be constructed on a shared river if other riparian States raise an objection that is upheld by an independent panel.' The International Rivers, *The World Commission on Dams Framework - A Brief Introduction* (WCD, 2008)

the Tipaimukh Dam on the Barak, a crossborder river, is a clear violation of article 9 of the Treaty of 1996.[30] It also conflicts with the Rio Declaration on Environment and Development, 1992.[31]

- Given all this, if India fails to resolve this dispute peacefully, the government of Bangladesh should form a strong uniform consensus including the party in opposition and the population in general to make India abstain from constructing the Tipaimukh Dam. Bangladesh should also raise this issue at the level of influential global governments and international forums including the relevant department of the UN.

Now one might be suspicious about the positive outcome of the recommendations that I have hitherto suggested. For very recently on 22 October, 2011 a Treaty has already been signed by the related parties of the Indian side; and thus there is no official barrier for them to start construction work on the dam site. This very suspicion is penetrating but still there is hope. The postponement order (8 December 2010) by the regional governments (which comprise four neighbouring countries: Cambodia,

---

<http://www.internationalrivers.org/resources/the-world-commission-on-dams-framework-a-brief introduction-2654> [accessed 27 February, 2012]

[30] Article IX of the 1996 thirty-year Ganges Water Sharing Treaty reads as follows: 'Guided by the principles of equity, fairness and no harm to either party both the Governments agree to conclude water sharing Treaties/Agreements with regard to other common rivers.' See, Khan, M. A. M., 'Waging International Legal War against Tipaimukh Dam', *Blitz: Comprehensive Tabloid Weekly,* 12 January 2012, opinion and editorial section <http://www.weeklyblitz.net/2071/waging-international-legal-war-against-tipaimukh > [accessed 27February, 2012]

[31] The Tipaimukh hydroelectric project in particular conflicts with principles 2, 6 and 16 of the Rio declaration. In principle 2, the Rio Declaration recognizes the obligation of national states to guarantee that activities within their territory or control do not cause harm to the environment of the other States or of areas beyond the limits of national jurisdiction. In principle 6, it recognizes that the interests and needs of developing and least developing countries, in particular ones which are environmentally vulnerable, should be given special priority. And in principle 16, it recognizes that the polluter should bear the cost of pollution. See, UNEP, *Reo Declaration on Environment and Development* (New York: United Nations, 1992) <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163 > accessed 28 February, 2012]

Vietnam, Thailand and Laos, which jointly comprise the Mekong River Commission (MRC)) on a controversial plan of the government of Laos to build a hydro-electric Dam (the Xayaburi Dam) on the Mekong River can be envisaged here as a case in point. Taking into consideration the potential impacts on the fragile ecology and associated fishing industries of the Mekong river basin, the regional governments postponed the Xayaburi Dam project for the duration of further (10-year) environmental studies. Defying the decision of the regional governments taken in the MRC meeting, the government of Laos started initial construction work at the Xayaburi Dam site. But it has in effect failed to move ahead with the construction work as there has been widespread public opposition to the Dam project. Through creating widespread opposition to the Xayaburi Dam, the lower riparian countries of the Mekong river basin have succeeded in compelling the government of Laos to stop the construction work it had already started. The list of widespread campaigners involves relevant scientists, academics, civil society groups and members of the general public both from within the Mekong River region and from other parts of the globe.[32] The government

[32] More than 22,000 people from Vietnam and Cambodia submitted a petition to the prime ministers of Laos and Thailand on 30 November 2010 for the cancellation of the Xayaburi Dam project. And a day earlier, on 29 November, 2010 a resolution to protect the Mekong river and allocate funding towards research on sustainable alternatives to mainstream hydropower dams was unanimously approved by the US Senate Foreign Relations Committee. These protest initiatives have been very useful. The Lao government has attempted to justify its position with a report produced by a Swiss engineering company Poyry Energy AG. But an analysis of the report of Poyry Energy AG found numerous inconsistencies and scientific limitations, in particular impacts of the Dam on fisheries. Among the other campaigners are: International Rivers (formerly known as International Rivers Network) and the Save the Mekong Coalition. These campaigners have urged the government of Laos to halt immediately all construction at Xayaburi Dam site and withdraw all equipment from that place. For more see Reap, S., 'Mekong Governments Delay Xayaburi Dam Pending Further Study' *International Rivers*, 8 December 2011< http://www.internationalrivers.org/en/2011-12-8/mekong-governments-delay-xayaburi-dam-pending-further-study> [accessed 29 February, 2012]; and available at : http://www.bbc.co.uk/news/world-asia-16085584 [accessed 1 March, 2012].

of Bangladesh can adopt this strategy to create extensive opposition to the Tipaimukh Dam both within the Barak river basin (i.e. thousands of potential victims who live in the site area of the Manipuri state and millions of people who live in the lower riparian country of Bangladesh) and worldwide.

In order to meet the challenge in question, the government of Bangladesh can and should make earnest efforts to strengthen the Indo-Bangladesh JRC (Joint River Commission). It should be adjusted in such a way that the JRC receives clear and authorized responsibility for implementing and reviewing all the relevant agreements hitherto that have been signed by the two countries and will be signed in the future.

To reach its target of bringing India to the negotiating table, the government of Bangladesh can also consider raising this issue in the meetings of the South Asian Association for Regional Cooperation (SAARC). If Bangladesh succeeds in making other member countries of SAARC take a stance about her various problems with India, in particular the water-related one, then Bangladesh can be benefited from that. For India cannot undermine all of her neighbours' wishes if she really wants to adopt the leadership of the region of South Asia. This might also be of substantial help in keeping India in compliance with the signed Treaty of 1996. And more importantly it might be of great use in efforts to compel India to abstain from repeating the same policy initiatives in the future

In addition to the strategy mentioned a few paragraphs above, Bangladesh should wage an international legal campaign against India

through bringing her to the International Court of Justice with a view to compelling her to ensure that she would respect the principles of equity, fairness and a no harm policy to Bangladesh in resolving existing problems with regard to water-sharing and dam-construction, and also pursue the same principles before withdrawing water, or regulating water flow from or constructing any large dam (like the Tipaimukh Dam) on any cross-border river.

India has been trying to persuade the government of Bangladesh to let her have a land route (through the territory of Bangladesh) with her land-locked seven northeastern states (which are famously known as the seven sisters and are home to more than 40 million people, and also where political insurgencies have been taking place for a long time for the independence of the seven-state cluster from mainland India). The transit facility is of paramount importance to India in terms of trade and politics. The present government of Bangladesh has already started responding positively to the Indian demand for transit by allowing her to use the Ashuganj river fort (located in the present Brahmonbaria district) to transship goods from Kolkata to Agartala (under the Inland Water Transit Protocol 2010).[33]

It is quite a controversial matter whether or not Bangladesh should give transit to India. For one might argue that this will bring severe economic loss to Bangladesh through reducing the current dependency of the seven northeastern states of India on Bangladesh for manufactured goods. One

[33] Star Report, 'Kolkata to Agartala: Ashuganj Used for First Time for Transhipment', *Daily Star*, 29 February 2012 <http://www.thedailystar.net/newDesign/news-details.php?nid=204527> [accessed 29 February, 2012].

might add that it goes against the territorial integrity of Bangladesh. Given this, I would argue that before officially offering transit facilities to India, a detailed study must be undertaken of the problems and prospects involved for Bangladeshis. If the proposed studies allow the government of Bangladesh to consider giving transit to India, then this issue could and should be viewed as a bargaining counter, i.e., the government of Bangladesh could and should take advantage of it in order to ensure a fair and long-term solution to the longstanding water sharing problems of the crossborder rivers of the two countries. It should be noted here that theoretically the water sharing problem does not require to be integrated with other issues for its solution; customary international laws, rules and regulations are sufficient to address it. However, since India has not been cooperating with Bangladesh in solving the issues in question, the government needs to be determined about its diplomatic stance, and Bangladesh can be considerably benefited from such a diplomatic plan.

A further way of addressing the challenge of water sharing could be to ensure growing and enhanced initiatives on the part of academia and civil society to generate public opinion at national, regional and global levels. These multisectoral experts and activities can succeed in reaching their goal to a considerable extent through disseminating and illustrating the fact of the irreparable environmental catastrophe, huge biodiversity loss and incalculable economic loss that India has already caused to Bangladesh through withdrawing water from common rivers. They should also give emphasis to the view that if the abovementioned water withdrawal projects (in particular the River Linking Project - RLP) are not stopped immediately, and also if a

fair share of the water of the river Ganges is not made available now, Bangladesh faces more dire economic, social and environmental consequences in the future.

- As the implementation and outcome of most of the recommendations made above are a time-consuming matter, and also as the sufferings of the affected people of Bangladesh (especially people of the south and northwestern regions) are unbearable in many regards (economically, ecologically and on health grounds), relevant researchers must be encouraged to undertake appropriate studies to contribute to formulating a management plan for the mangrove wetland ecosystems, to help the surviving people and other living creatures located in the Ganges delta of Bangladesh.

The government and people of Bangladesh in general should continue their efforts to cope with the very style of war over water until appropriate and effective strategies for facing these challenges become available to them. Among the effective tactics of modern warfare are: demonstrations inside Bangladesh, contact of opposition leaders with the affected communities in the upstream county India, organising protests world in cooperation with environmentalists. As a tool of defensive warfare, the world media can be of immense help in this regard, being likely to succeed in forcing India to give fare share of the common rivers, and also dissuading India from further implementation of any environmentally and economically devastating projects.

Having argued that some sources of environmental problems are local and others are regional, and having also argued that we immediately need various national and regional initiatives to address these local and regional

environmental problems, I now go on to consider a different level of policy initiatives that satisfactorily tackle environmental problems of which the sources are global (e.g., global climate change), without distorting the requirements of development needs and environmental limits as well as the principles of environmental justice. This consideration immediately leads us to global climate change, which I discuss in the following chapter.

Chapter Four

4.4 Bangladesh and Global Climate Change

The impacts of some human environmental interventions are global in scope. Such global environmental problems therefore warrant global attention and participation. Climate change and global warming are the most striking examples of such problems. There has been a growing scientific consensus that climate change and global warming are human–induced, and are arguably the greatest global environmental problems that the world is facing now. As one of the world's largest deltas**,** the subsistence and livelihood of the inhabitants of Bangladesh are greatly climate driven. Thus the people of Bangladesh are amongst the worst victims of these global environmental problems, in particular the poor (as well as the non-human creatures) who live in and around the coastal area of Bangladesh. But these victims are not culpable for what they have been suffering. Future generations of humankind and non-human creatures will also be victims of these problems without being culpable for these damaging changes.

The largest share of historical and current global emissions of greenhouse gases (GHGs) has originated in the world's developed or industrialised countries (which represent only about 20% of the world's population)[1], entailing that the richer nations are responsible for these global environmental problems. It is in this context that the issue of ethical responsibility, or in other words of 'climate justice', arises.

[1] Boden, T.A., Marland, G., and Andres, R. J., *Global Regional, and National Fossil-Fuel CO2 Emissions*, (Oak Ridge, TN: Carbon Dioxide Information Analysis Center, Oak Ridge National Library, U.S. Department of Energy, 2011) <http://cdiac.ornl.gov/trends/emis/tre_usa.html> [accessed 10 March 2012]

Policy-decisions that should be made urgently at global level (involving global governments and relevant global organizations, in particular the United Nations) are now provided:

- The principles of distribution of responsibility to bear the costs of mitigation and adaptation (in other words burden-sharing) should be set out in such a way that it becomes compatible with a system in which people as a whole are capable of being sustained into the future. In this sense, responsibilities should not merely be calculated on the record of historical emissions; for, until the 1980s, the act of emitting GHGs was not an act of conscious pollution. Attfield, in this context, correctly distinguishes 'causal responsibility' from 'moral responsibility'. And he argues that it is implausible to write off moral responsibility from the record of historical emissions. Nevertheless, he recognizes that disproportionate current emissions of GHGs do point towards 'greater-than-average moral responsibility'.[2] Thus the negotiation of a climate change and global warming treaty seems to need to be founded on a global climate change agreement that pays due attention to the victim-countries like Bangladesh through reflecting on the principle of fair distribution of responsibilities.

This above mentioned principle has been adopted in the first principle of Article 3 of the Framework Convention on Climate Change (signed and ratified by 152 countries at Rio in 1992) which reads as follows:

> [T]he Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity

[2] Attfield, R., 'Climate Change: The Ethical Dimension', in *Ethics and Climate Change: Scenarios for Justice and Sustainability*, eds. by Matteo Mascia and Lucia Mariani(Padova : Fondazione Lanza, 2010) 77-84 (p.80)

> and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.[3]

This principle recognizes that there is a huge gap between the developed countries and developing countries in term of their contribution to global environmental problems, and allocates key responsibilities and burdens to developed countries for taking action to tackle these problems. This means that the Climate Convention, through assuming this principle, recognizes that the rich should take responsibility to make space for deprived countries to grow.

Principle 2 of Article 3 of the same document reads as follows:

> '[T]he specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.'[4]

Principle 2 here, on the ground of justice, disapproves of placing burdens on countries such as Bangladesh to tackle the challenges of climate change to which they have not contributed. Thus the Framework Convention on Climate Change, in particular its principles 1 and 2, appears to be supportive of the need for a global climate change agreement that endorses the responsibilities of developed (or industrialised) countries to help developing nations. Given this, it is an ethical obligation for developed countries to act

[3] United Nations, *United Nations Framework Convention on Climate Change*, UN Document, Principle 1, Article 3, (New York: United Nations, 1992) <http://unfccc.int/resource/docs/convkp/conveng.pdf >[accessed 2 March, 2012]

[4] Ibid

upon their commitments under the Framework Convention on Climate Change to assist the victims with an adaptation fund, transfer of knowledge and (cleaner) technology. Martin Khor expresses the sharing of knowledge and technology by the notion of 'negative emissions'.[5] This is quite significant in the sense that implementation of the Climate Convention largely depends on the effective implementation of the commitments of assistance of the rich countries to the developing countries under the same Convention.

Since Bangladesh is, as has been argued earlier, one of the worst victims of climate change and global warming, the relevant authority should immediately release the US$10 billion initial fund (Bangladesh looks forward to receiving a 15% share of the sum) which was promised by world leaders at the Copenhagen Climate Summit of 2009. Also the government of Bangladesh should make an earnest attempt to persuade world leaders to release the said fund.

- Furthermore as Bangladesh needs to attain her development objectives (at least to a certain level so as to be able to fulfil basic human needs), and also as the per capita carbon emissions in Bangladesh are still far below the desired global average, it seems unfair to expect a Bangladesh emission reduction in the same proportion as that of rich nations. According to our proposed framework for sustainable development, Bangladesh must attain economic sustainability but not at the cost of environmental sustainability. It is in this context, under the proposed framework for sustainable development, that Bangladesh has no alternative but making the attempt to

[5] Khor, M., 'Threat to Block South's Exports on Climate Grounds', *South Bulletin*, 40 (2009) 1-12 (p.1)

involve the rich countries (who are responsible for suffering related to climate change and global warming) to help provide her with means to switch to cleaner technology. In particular, the developed world should ensure funding for Bangladesh to invest in plants for renewable energy generation, such as hydroelectric energy, tidal energy, wave energy, wind energy, energy from biomass and solar energy plants. Such assistance should not be curtailed until Bangladesh can generate enough energy to address the basic human needs of her inhabitants. Also developed countries are morally obliged to assist Bangladesh in reducing the climate-change-related suffering of non-human creatures (which are bearers of intrinsic value just as human beings are), as this suffering is not acceptable in accordance with the proposed framework for sustainable development.

- To secure the victims of climate change in Bangladesh and other places in the world, developed countries must reduce the current growing rate of GHG emissions. The 'polluters pay' principle in this regard would not be as effective as it is usually considered to be. For, while we should plan at least to aim at a level of 400ppm, the current total of atmospheric carbon-equivalent gases is about 450ppm.[6] Thus there is no alternative to an obligatory reduction of the current rate of emissions by the big polluters so that the total falls to an acceptable level (of 400ppp). Thus the global community should reach an effective global climate change agreement to combat the current rate of emissions.

The target for reduction of emissions set out in the Kyoto protocol of 1997 has effectively been reneged on. As mentioned in chapter four of Part Three, while the USA still accounts for just over one-fifth of the world's

[6] Attfield, p.78

total GHG emissions, Bangladesh accounts for half of one per cent. The foremost among the factors that has contributed to making the Kyoto protocol a failure is that this protocol places the entire burden of reducing GHG emissions on developed countries and gives developing countries (in particular, China, India, Brazil, Mexico and Turkey, which are now known as the most rapidly growing economies of the developing world) relief from the burden as such. This has foreseeably demotivated developed countries from being committed to their assigned duty.

To achieve the key goal of a global climate change agreement, it now seems that issues of international justice must be reflected in the agreement in such a way that it remains reasonable as well as possible to motivate the participation of the developed world. This means that reductions in emissions require a workable global agreement unlike the Kyoto protocol.

Now the question arises: is there any approach that is able both to motivate the developed world and address the challenges of climate change together with the global problem of poverty, malnutrition and disease? To answer this question, it is worth thinking about two prominent approaches that have been recognized for their feasibility. They are: (1) the Contraction and Convergence Approach, and (2) the Greenhouse Development Rights Approach. As opposed to the Kyoto Protocol, the Contraction and Convergence Approach is founded on the thought that 'all human beings should be entitled to an equal share of the atmospheric commons'[7]. Thus national allocations, according to this approach, should be based on

[7] Brown, D., et al., ed. *White Paper on the Ethical Dimensions of Climate Change* (Philadelphia: Rock Ethics Institute, 2006), p. 20

population levels and unused entitlements could be traded by the relevant countries to countries emitting above the entitlements of their own populations. Execution of this approach combined with an annually contracting total for entitlements, as has been argued by the proponents of this approach, would produce a contraction sufficient for sustainability as well as an equitable convergence of human entitlements.[8] While this approach has won widespread recognition[9] for focusing on 'equal per capita emission allocation', it is, according to Robin Attfield, not beyond criticism. As he argues, this approach would not do enough to address the global problems of poverty, malnutrition and disease, since the redistributive elements of this approach would rapidly reduce due to the total of allowable emissions being contracted.[10] Due to this limitation (i.e., the incapability of addressing the issue of poverty and disease), this approach fails to address economic sustainability - one of the pillars of sustainable development – and thus it seems not compatible with our proposed framework for sustainable development. However an attempt at striking a balance between the problems of mitigation and of poverty, malnutrition and disease can help this approach turn into a more dependable one if separate provision for fostering development is introduced at the same time.

On the other hand, the Greenhouse Development Approach attempts to strike a balance between issues of GHGs emissions and issues of development needs. The cost of greenhouse gas mitigation and of

[8] Meyer, A., Contraction *and Convergence*, *The Global Solution to Climate Change*, Schumacher Briefing no. 5, (Devon: Green Books, 2005)

[9] George Monbiot and Peter Singer have supported this approach. For more see Monbiot, G, *Heat: How to Stop the Planet Burning* (London: Penguin Books, 2007); and Singer, P., *One World*: *the Ethics of Globalization* (New Haven, CT, and London: Yale University Press, 2002)

[10] Attfield, p.78

supporting development, according to this approach, should be shouldered by people who are at or above a certain level of development (who would be taxed accordingly).[11] Thus it advocates that everyone has a right to development as well as being entitled to a live a life at or above that level. More importantly while it takes into account the emissions of people who are at or above this level of development in calculating their country's contribution quota, it ignores the emissions of individuals who live below that level.

As opposed to the Contraction and Convergence approach, this approach seems more plausible on account of its being appropriately focused on issues of development. It assigns responsibilities upon wealthy individuals to meet the cost of greenhouse gas mitigation and funding development (to eradicate poverty, malnutrition and disease) irrespective of their country of origin. It means that the rich of the poor countries and the rich of the developed countries will share the same responsibility toward funding the goal in question. This system thus makes provision for the issue of 'economic sustainability'- one of the pillars of sustainable development. It is also compatible with the notion of intra-generational justice. Thus it seems that the Greenhouse Development Approach is compatible with the framework for sustainable development I have suggested.

[11] According to this approach, the key objective here would be realized through establishing the right to exempt from sharing the burden of climate protection up to a given income of $ 9,000 (Purchasing Power Parity, PPP). For more see, Baer, P., Athanasiou, T., Kartha, S. and Kemp-Benedict, E., 'Greenhouse Development Rights: a Framework for Climate Protection That is "More Fair" Than Equal Per Capita Emissions Rights', in *Climate Ethics: Essential Reading*, ed. by Gardiner, S. M., Caney, S., Jamieson, D., and Shue, H., (Oxford: Oxford University Press, 2010) pp.215-230

Furthermore, focusing equally on GHG emission mitigation and funding development, the Greenhouse Development Rights Approach seems to recognize the view that economic sustainability and environmental sustainability can not be attained in isolation in a sustainable manner. This is one of the major arguments that I have attempted to defend in our proposed framework for sustainable development.

What is more, the idea of 'at or above a certain level of development' used in the Greenhouse Development Approach and the idea of 'basic needs' used in our proposed framework for sustainable development also emerge as identical (both involving the level at which basic needs are satisfied). Thus not only is the Greenhouse Development Approach compatible with our suggested framework, but also the two are mutually supportive.

Despite its appropriateness at a theoretical level, the Greenhouse Development Approach could still be unsuccessful in the absence of an agreement about international institutions to co-ordinate its major objectives: greenhouse gas mitigation and development support. Given this, earnest global efforts should be made by global leaders and relevant global authorities and institutions to reach an agreement. The Greenhouse Development Rights Approach, as I have just argued, could be a serious possibility in this context, and one which seems to be reasonable and practicable as well as compatible with our proposed framework for sustainable development.

From the above discussion, it can now be concluded that all the recommendations I have made in this and in the previous chapter seem explicitly to

derive from the proposed guidance framework for sustainable development (which arguably meets all the requisite conditions that an adequate framework for sustainable development is required to satisfy). More importantly the proposed framework can play a significant role in harmonizing the three diverse and seemingly conflicting goals (pillars) of sustainable development. As has been suggested in the proposed framework, although all three goals are equally significant, they cannot all be prioritized simultaneously. At the early stage of development a developing country like Bangladesh, in line with the proposed framework, might advance through focusing on economic sustainability, but this must be done while preserving a balance with the other two goals or pillars of sustainable development: social sustainability and environmental sustainability. If the framework proposed here is not pursued consistently then, as has been argued here, a development activity cannot qualify as being sustainable or moral. For example, while exclusion of social issues of development from a policy of development undermines the value of social equity, exclusion of environmental issues of development undermines the value of non-human creatures and their interests (which already makes the policy immoral) as well as the inherent and instrumental value of species and ecosystems (that are of immense value for the survival of all the bearers of intrinsic value including humans), something which would make the policy of development both unsustainable and immoral.

The above list of recommendations, however, is neither exhaustive nor unalterable. But these recommendations are supportive of turning the process and end results of development activities in Bangladesh into sustainable ones. The items on the recommendation list can be expanded. But to do so one has to look at what the proposed guidance framework is meant to do functionally. What is more, as has been observed here, it is essential for Bangladesh to formulate a comprehensive national

strategy for sustainable development. The government of Bangladesh should make earnest efforts to implement the existing action policies (e.g. policies of PRSP, MDGs, NEMAP, NCS) until it becomes successful in setting up just such a comprehensive national strategy for sustainable development. The list of policy recommendations also involves calls on the government of Bangladesh and all political parties to agree on crucial measures that are required to be introduced urgently to combat the catastrophic environmental impact of water withdrawal by India from different cross-border rivers.

As has been observed, this chapter reflects the increasing impacts of climate change on Bangladesh. In particular, it discusses and recognizes the incalculable economic and environmental consequences of climate change for the poorer communities of Bangladesh as whole. Given this it urges that, since climate change is a global environmental problem, it needs a global solution. Part of the solution, as has been suggested here, is to reach an effective global agreement that can effectively address and resolve the challenge of global climate change for Bangladesh. As I have argued, through recognizing and combining a measure of responsibility on the part of emitters and their ability to pay as a potential ground for sharing the burden of climate change, and through recognizing such a burden-sharing principle as consistent with the level and exigency of development activities, and also through recognizing the implementation of precautionary protection of the climate, and the entitlement of everyone to the services of atmosphere, the Greenhouse Development Rights Approach turns out to be a possible basis for a post-Kyoto agreement, and hence applicable to the developing world including Bangladesh.

International co-operation is, however, needed to attain and implement such an agreement. For a large amount of investment will be needed to meet the expenditure mitigation of and adaptation to the devastating impacts of climate change in Bangladesh.

Thus to attain the key objective of sustainable development, a sustainable future, the government of Bangladesh should set out policies on a priority basis to persuade international organizations, the world governments and other relevant bodies to channel funds to help face the challenges in question. The government, academics, environmental activists and other relevant bodies of Bangladesh should work together to attract the attention of global governments and relevant international organizations, in particular the United Nations, to ensure their proactive participation in solving the multidimensional environmental problems of Bangladesh and bringing about sustainable development and human security. Failure to attain the suggested agreement (i.e. the one offered in the Greenhouse Development Rights approach) is not only a problem for Bangladesh but also for the whole of the developing and the underdeveloped world.

On a realistic calculation, one may well envisage the Greenhouse Development Rights approach merely as an illustrative model for arguing that while developed countries may well assume more responsibility in sharing the global cost of climate security, the developing countries will only assume a level of responsibility in proportion to their level of development.[12] This is surely not a pointless concern. But the framework for sustainable development that I have introduced in my thesis can plausibly be envisaged as a response to this concern. For the suggested framework for sustainable development will be able to address relevant issues of justice through suggesting a global allocation of 'shared but differentiated responsibility'.[13]

---

[12] Unite Nations, *World Economic and Social Survey* 2009: *Promoting Development, Saving the Planet* (New York: United Nations Publication, 2009), p. x http://www.un.org/en/development/desa/policy/wess/wess_archive/2009wess.pdf>[accessed 27 July 2012]

[13] This is not the place to discuss this issue in any further detail. Some further issues needing to be resolved if such an agreement is to be an equitable and sustainable one are discussed in Gardiner, S., *et al.* ed., *Climate Ethics: Essential Readings*, (Oxford: Oxford University Press, 2010), and in Arnold D. G., ed., *The Ethics of Global Climate*, (Cambridge: Cambridge University Press, 2011).

Conclusion

This study has set out to tackle the existing misrepresentations of and disagreements about the concepts of 'development', 'sustainability' and 'sustainable development'. Having identified and recognised the multiple and/or ambiguous usages of the concept of 'development' in chapter one of Part One, I argued that although there is a broad area of agreement about and a 'core' meaning of development over and above its 'specialised interpretative' meanings, it fails to capture all desirable goals (such as the well-being of non-human creatures and preservation of species and ecosystems). The importance of the values it omits suggests that not all types of development should be accepted or welcomed. Any improvement of a partial kind can be envisaged as development, but development, as thus understood and utilised, cannot in itself answer the question: 'need development be sustainable?'

In chapter two of this Part, I critically expounded the concept of 'sustainability' and argued that it is not a morally loaded concept. Introducing and justifying three conceptions of the concept of sustainability, I argued that 'sustainability' remains a crucial characteristic of a system or practice, which can be good in one context, and bad in another, i.e. the *moral* value of sustainability is context sensitive. To be more specific, albeit sustainable, a system or a practice can be bad, and vice versa. This leads to the observation that separate concepts are required to permit distinctive judgments to be made about the sustainability of a scheme, about its justice and about its advantage.

In chapter three of this Part, I discussed in greater detail the concept of sustainable development and argued that the UN (and standard) definitions of sustainable development face some serious problems. Some of these problems suggest the need for revisions, while others seem fatal to the definitions as they stand. I sought

here to defend the stance that 'sustainable development' is not a mere buzzword; rather, properly analysed and understood (in other words, supplemented) the existing standard definitions (in particular the UN ones) of sustainable development suggest that it has been a meaningful phrase all along. In so doing, I have considered the problems, together with revisions suggested by the 'capabilities' approach. Here I maintained that a different revision, suggested by the basic needs approach, can surmount the various problems, and I present and defend a revised definition accordingly. Overall, the findings here provide a case for a supplemented version of sustainable development, which reads as follows:

> It is the state or practice of society that implements a procedure leading to attaining a certain level of economic well being which is capable of satisfying the basic needs of contemporary and future human beings without compromising the opportunity for other living creatures to meet their basic existence needs, and which also is capable of being continued indefinitely both socially and environmentally.

This redefined (or in other words, supplemented) version of sustainable development affirms that sustainable development addresses economic sustainability subject to the demands of social sustainability and environmental sustainability (limits). As thus redefined, it has to be guided by the basic needs approach; that is, it cannot avoid addressing pressing development needs (economic sustainability) and social progress (social sustainability) in environmental decision-making. More importantly this entails that those policies that disregard this guidance (i.e. depriving the poor of satisfying their basic or survival needs and proper position in society) have often deserved to be described as unsustainable.

In chapter one and two in Part Two, I have introduced the genesis of environmentalism, and tackled some philosophical problems for it that Elliott Sober alleged in his influential paper, 'Philosophical Problems for Environmentalism'. The discussion in chapter one has shown that although environmentalism warrants

appreciation for adequately focusing on the issue of environmental limits, it remains open to criticism for omitting, at times, the issue of human basic needs (in other words, pressing development needs). Chapter one of this Part thus concluded that a defensible version of environmentalism must strike a balance between development needs and environmental limits.

The analysis of chapter two of this Part has revealed that Sober's criticisms (that environmentalism, whatsoever its 'practical political effectiveness', faces substantial philosophical difficulties of justification and that environmentalists cannot appeal to anything that could be used as the basis for species preservation without discarding the familiar principles of ethical arguments) are flawed. Contrariwise, in line with the proposal Robin Attfield has made in his article 'Sober, Environmentalists, Species and Ignorance', it defends the view that environmentalists can appeal to familiar kinds of approach that can readily be employed in support of environmental (e.g. species) preservation without disparaging traditional theories or endorsing holistic value.

In chapter three of Part Two, I have introduced and defended Attfield's version of biocentric consequentialism, and argued how environmentalists' arguments could best be defended on the basis of his biocentric value theory. I have critically analysed the exchanges between Alan Carter and Attfield on the plausibility of Attfield's version of biocentric consequentialism. The investigation uncovered the thought that by being able to cope with some infamous problems, such as the Non-identity Problem and the Repugnant Conclusion, and by being able to endorse a value-based rationale for choice between recognised values, and also, as opposed to any radical pluralistic value theory, by being able to recognise some meta-principles that can plausibly help to adjudicate conflicts between various recognised values, Attfield's version of biocentric consequentialism deserves to be a serious contender for an acceptable and defensible

normative ethical theory. The proposed framework for sustainable development, offered in Part Four, has therefore been formulated on the basis of this biocentric normative theory.

In chapter one of Part Three, I tackled different approaches to security. The investigation expounded how, as opposed to the conventional and new realists' approaches to security, the approach to human security depicted here seems less inadequate. In chapter two of this Part, I defended the view that the wider understanding of human security, which involves and envisages security issues such as security from 'want' and 'fear' as environmental problems, and also which amounts to sustainable security, offers much to the field of sustainable development. By recognising seven interrelated significant components of human security (i.e. economic, food, health, environmental, personal, community and political), as expressed in the 1994 UNDP report, as well as recognising all bearers of intrinsic value as referents of security, the wider approach to human security satisfactorily underlies the three major pillars of sustainable development: economic, social and environmental sustainability. The implications of the wider human security view for a sustainable future were found to be fairly similar to the implications of the supplemented version of sustainable development for a sustainable future, and hence mutually reinforcing. In sum, I argued here that it is hardly possible to attain the key objective of sustainable development, a sustainable future, while disregarding the human security view in its wider sense.

Chapter three of Part Three put on record the view that major human security concerns are rooted in the development activities of human beings. Consequently, these security concerns are anthropogenic, and thus the cures for them are not merely a matter of scientific or technological fix, but rather they are matters that require contributions from multidisciplinary discourses, such as economic, political, ethical, ecological, and so

on. Over and above the various kinds of air, water and land pollution affecting Bangladesh, chapter four of Part Three identified the withdrawing of water from cross-border rivers by the bordering countries India and China, through constructing barrages and dams on them, salinity increases, floods, droughts, river erosion and siltation, sea level rise, wetland degradation, deforestation, poverty, the impacts of shrimp cultivation, arsenic contamination in groundwater, and the disastrous impacts of global warming and climate change as the main environmental problems in that country. Environmental challenges that the people of Bangladesh are facing now are caused by excessive human intervention with nature within and across the countries. It has been argued here that people living in the south-western zone of Bangladesh have permanently lost the opportunity of subsistence agriculture due to water withdrawal at the point of the Farakka Barrage in India. This has in turn forced people of this area to resort to shrimp cultivation for their survival, further degrading their own habitat and cultivable land. It is also argued that a severe environmental catastrophe in the north-eastern zone of Bangladesh is now just a matter of time since the related parties have already signed the agreement as regards the commissioning of the Tipaimukh Dam on the Barak River in India.

Given my claim that there is a certain way we should use the term 'sustainable development' and the claim that biocentric consequentialism is defensible, empirical facts about the human security situation in Bangladesh, which I described in chapter five, support or lead us towards a revised framework for sustainable development which is defended in my thesis (in particular in chapter two of Part Four). For, according to many anthropocentric or non-biocentric normative theories, what is happening in Bangladesh is an economic or social matter, while from the perspective of biocentric

consequentialism, what is happening there is an ethical matter, and not addressing these issues in relevant policies is ethically unappealing.

Chapter one of Part Four revealed that the theories of ecological modernisation and economic democracy are inadequate to substantially advance the cause of the key objective of sustainable development: a sustainable future. The practice of the theory of ecological modernisation under the current capitalistic political economy fails to succeed mainly because of the over-reliance of the dominant economic practice on incessant profitability. The theory of economic democracy, on the other hand, proves defective in the sense that there is nothing inbuilt in the idea of any kind of democracy that guarantees environmental justice (i.e. none of its kinds recognise the well-being of non-human living entities, and all actual kinds fail to address the long-term values of biological and genetic diversity).

As opposed to potential criticisms of my conclusion that there is nothing inbuilt in the idea of any kind of democracy that guarantees environmental justice, I argue that even if people decide that they will not make economic profit at the cost of the values and interests of non-human creatures and the value of ecosystems, such pro-environmental aspiration cannot substantially be realised under the dominant capitalistic political economy that chiefly relies on perpetual profitability. A radical change in the currently dominant economic and political system, in this sense, is a requirement to achieve such a transition.

This reasoning simultaneously suggested the need for a radical reform of this pervasive human system (i.e. the capitalistic political economy) and the introduction of a satisfactory framework for sustainable development.

Considering these findings, as mentioned in the paragraph above, chapter two of Part Four investigated the possibility of a framework for sustainable development that appropriately focuses on the economic and social well-beings of humans (as well as the interests and well-being of non-human creatures) without undermining the indispensability of environmental sustainability in developmental and environmental decision-making. The investigation led to an insightful upshot. The upshot attested the view that environmental problems (local or global, standard (which extends to issues ranging from resources to biodiversity) or the ones relating to human security threats (which stem from various 'wants' and 'fears')) are not just about efficient utilisation of resources. These problems have an ethical dimension. Omission or misrepresentation of the ethical dimension in relevant policy-making processes, therefore, causes policy failure. Accordingly, this chapter suggested that we should first explore and extract ethical principles that stem from a wider understanding of the notion of environmental problems, and then should consider how problems arising from the framework of the dominant economic practice and the UN formulation of sustainable development might be overcome through incorporating ethical values and corresponding responsibilities into a policy framework.

On ethical principles that stem from a wider understanding of the notion of environmental problems, this chapter introduced the view that environmental problems involve four aspects of justice (intra-generational justice, intergenerational justice, interspecies justice and a duty to protect ecosystems), to say the least. These aspects of justice encompass some basic ethical values, such as the issue of justice in the sharing of environmental burdens and benefits, equality in environmental decision-making processes and the ethical claims of future generations, non-human creatures and ecosystems. Thus it is inevitable for a satisfactory framework for sustainable

development to embody concern for the four ethical issues mentioned above. These issues of justice supply further good reasons for my interpretation of environmental problems. Having properly focused on all bearers of intrinsic value, on the inherent and instrumental value of species and ecosystems, and on our corresponding duties towards them, and also having appropriately focused on equality and the integration of ecological concern with basic needs, the proposed framework for sustainable development seemed capable of tackling satisfactorily the issues of development needs and environmental limits without disregarding the ethical dimension of environmental problems, and in particular without causing deprivation in the underdeveloped/developing world.

As opposed to the existing frameworks for sustainable development (such as the framework of the dominant economic practice and the variant of the deep ecological view – radical American environmentalism), chapters three and four of Part Four explored the possible application of the suggested framework for sustainable development to the case of Bangladesh. Being a developing country the nature of environmental problems in Bangladesh is different in many respects from that of first world countries. Here I have argued that a policy framework that gives the guidance that intervention with nature should be mainly guided by the imperative to preserve the biotic community rather than basic human needs is not applicable to the case of Bangladesh; rather Bangladesh needs to adopt a framework for sustainable development that fits the pressing needs of the present without compromising the needs of the future to meet its basic needs. Here I have argued that the proposed framework for sustainable development is a satisfactory means to that end. For, as was argued there, the proposed framework is capable of harmonising the three seemingly conflicting pillars (goals) of sustainable development. Although all three goals are equally significant, there is no theoretical or practical obligation to prioritise all the goals at once. At the early stage of

development, as was argued there, Bangladesh, in line with the proposed framework, might advance through focusing on economic sustainability, but this must be done while preserving a balance with (and between) the other two goals or pillars of sustainable development: social sustainability and environmental sustainability. If the framework proposed here is not pursued consistently then a development activity cannot qualify as being sustainable. This claim is reinforced through supplying and defending the example of the post-war European Union experience of development practice, where development began with the target of attaining economic sustainability and then advanced to the attainment of environmental sustainability via achieving social goals.

The arguments of this chapter reveal that some of the environmental problems of Bangladesh have local origins and need local solutions. In connection with environmental problems (e.g. the unfair withdrawal of water by India from common rivers) that adversely affect subsistence agriculture and all other irrigation-based cultivation and water-based activities of the inhabitants of Bangladesh, this chapter strongly recommends that effective moves be taken to urgently agree and implement relevant policy-decisions at regional level (involving regional governments and other relevant regional organisations, in particular the South Asian Association for Regional Cooperation (SAARC)). Relevant sciences cannot successfully address these problems ignoring the ethical dimension they involve, for these problems and possible solutions to them cannot be recognised unless we have a framework for sustainable development that is defensible by good ethical theories and views. The framework for sustainability that I have introduced in this thesis is a way forward to that end.

In chapter four of Part Four I have examined the growing impacts of global warming and climate change on Bangladesh. In addition to many other impacts, this chapter has demonstrated that the economic and environmental consequences of climate

change for the poorer communities of Bangladesh as a whole are incalculable. There is an ethical dimension of this empirical claim. For global warming and climate change are largely caused by the rich North, while victims are mainly the guiltless people of the poor South. Thus I argued that such global environmental problems need a global ethical solution. It is not only an unduly onerous task for Bangladesh to address global environmental problems like the impacts of climate change alone but also an unfair burden on her, because people of this country are hardly responsible for global warming and climate change. Part of the solution, as has been suggested here, is thus to reach a global agreement that attempts to minimise such global problems through fairly allocating environmental burdens on nation states, multinational companies and so forth, which are responsible for the change and suffering in question. Success in formulating and implementing such a global agreement can effectively address and resolve the challenge of global climate change for Bangladesh. Finally it was argued that reaching a possible agreement at global level in the light of the Greenhouse Development Rights approach, as a possible basis for a post-Kyoto agreement, can guide all the affected countries like Bangladesh towards a possible way out of the global environmental problem in question. International initiatives, not least, but not only on the part of the UN, and necessary co-operation on the part of its member states, are needed to attain and implement such an agreement. Non-cooperation with victims of climate change in Bangladesh on the part of the developed countries and relevant international organisations would clearly be morally unacceptable from the perspective of biocentric consequentialism, as that would impinge on all living creatures, species and ecosystems.

The study has overall attempted to affirm the view that there are serious problems in the dominant economic practice. The over-reliance of the dominant economic practice on perpetual profitability is the main limitation of this practice. The

standard definitions of sustainable development of the UN have also been found subject to criticism. The possible solution to these problems, as I have suggested in this study, could be to formulate a new framework for sustainable development integrating social and environmental sustainability over and above the economic kind into relevant policy decisions. By offering a policy framework for sustainable development that strikes a balance between the development needs of the poor, the interests of non-human creatures and responsibility to protect biodiversity and ecosystems, the proposed policy framework for sustainable development is expected to make a positive contribution to sustainable developmental and environmental decision-making in developing countries like Bangladesh.

The main strength of the proposed framework for sustainable development as a guideline for sustainable policy-making in developing and underdeveloped countries alongside Bangladesh is implicit in the following principles that it upholds, to say the least:

- Environmental problems are anthropogenic.
- The poor are hardly responsible for global environmental problems like global warming and climate change. But the consequences of such problems are often borne unduly by the poor (i.e. racially and economically disadvantaged groups).
- Issues of environmental justice require enhanced attention worldwide (i.e. 1. distributional environmental justice which concerns equitable sharing of environmental benefits and burdens; and 2. participatory environmental justice which concerns participation of everyone in

environmental decision-making, in particular the potential victims of such decisions).

I would thus argue that being addressed (as it is) towards various issues of justice over and above the development needs of the economically disadvantaged groups, the proposed framework for sustainable development seems significant not only for Bangladesh, but also for all other developing and underdeveloped countries across the globe. However, as types and severity of environmental problem may differ from one nation to another, especially depending on their internal context, further research is required to expound to what extent the proposed sustainable policy framework fits in with or is suitable to be extended to other nations, developing or underdeveloped.

Further research is also needed on the implications for global governance and global ethics with a view to the effective implementation of the proposed framework for sustainable development. I have argued in the last chapter of Part Four that global environmental problems, such as global climate change, cannot be overcome without international agreement and combined action, and to give the agreement and concerted efforts a justified and practicable basis, an arguably acceptable global authority/body is required to monitor both developing and developed countries, so that the former receive required assistance to strike the proper balance between economic sustainability and socio-environmental sustainability in attaining a certain level of development that suffices to meet their basic needs, and the latter reduce the high economic growth and high consumption of resources and energy and give victims their due in mitigating global environmental problems caused by them in their territories. A global ethics is necessary for the global body as ethical guidance to help attain the key objective of sustainable development – a sustainable future – through setting out and implementing relevant sustainable policy decisions. This suggested further research is likely to contribute

significantly to improving conditions for adopting or acting on the proposed framework for sustainable development for the government of Bangladesh and also governments of developing and underdeveloped countries at large. There is no room here to continue with these significant issues. I would therefore suggest that scholars in this field should undertake further studies on global governance and global ethics.

Despite limitations, as has been mentioned in the paragraph above, this study has produced some interesting insights by focusing on the need to apply an ethical dimension in environmental and developmental decision-making. There is evidently a tension between the necessity of realising human development needs (in particular, those of the world's poor) and the need for environmental sustainability. The dominant economic practice prioritises economic growth as opposed to environmental sustainability, and thus fails to strike a balance between the two equally significant issues: development needs and environmental limits. Besides, radical environmentalism misguidedly prioritises the integrity of nature over human development needs. It is hoped that the findings of this study will advance responsiveness to the framework for sustainable development developed here among the relevant researchers in this field, and instigate further research in the areas of sustainable development and environmentalism.

Bibliography

Acharya, A., 'Human Security: East Versus West', *International Journal*, 56 (2001), 442-460

Adams, W. and Jeanrenaud, S. J., *Transition to Sustainability*, (Gland: IUCN, 2008)

Aiken, W. and La Follette, H., *World Hunger and Moral Obligation* (New Jersey: Prentice-Hall, 1977)

Albin, C., 'Can NGOs Enhance Effectiveness of International Negotiation?', *International Negotiation,* 4.3(1999), 371–387

Alkire, S., 'Dimensions of Human Development', *World Development,* 30. 2 (2002), 181-205

Anand, P.B., 'Capability, Sustainability, and Collective Action: An Examination of a River Water Dispute', *Journal of Human Development* 81 (2007), 109-132

Annan, K., 'Towards a Sustainable Future', *American Museum of Natural History's Annual Environmental Lecture 2002*(New York: 14 May 2002)

Annan, K., *Introduction: A Historic Opportunity in 2005* (United Nations, 2005) <http://www.un.org/largerfreedom/chap1.html# [accessed 1 February 2010]

Archer, R., *Economic Democracy: The Politics of Feasible Socialism* (Oxford: OUP, 1995), pp. 27-63

Armstrong, S. W., *Moral Scepticisms* (New York: Oxford University Press, 2006)

Arnold D. G., ed., *The Ethics of Global Climate* (Cambridge: Cambridge University Press, 2011)

Ashraf, Q., and Galor, O., 'Human Genetic Diversity and Comparative Economic Development', *Series Working Papers 2008* <http://www.brown.edu/Departments/Economics/Papers/2008/2008-3_paper.pdf> [accessed 3 August 2010]

Attfield, R., 'On Being Human', *Inquiry: an Interdisciplinary Journal of Philosophy* 17 (1974), 175–192

Attfield, R., 'The Good of Trees', *Journal of Value Inquiry,* 15 (1983), 35-54

Attfield, R., *The Ethics of Environmental Concern*, first edn (London and Basingstoke: The Macmillan Press, 1983)

Attfield, R., 'Development: Some Areas of Consensus', *Journal of Social Philosophy*, XVII (1986), pp.36-44

Attfield, R., *The Ethics of Environmental Concern*, 2nd edn (*Athens* and London: University of Georgia Press, 1991)

Attfield, R. and Belsey, A., eds, *Philosophy and the Natural Environment* (Cambridge: Cambridge University Press, 1994)

Attfield, R., *Environmental Philosophy: Principles and Prospects* (Aldershot: Avebury, 1994)

Attfield, R. and Wilkins, B., 'Sustainability', *Environmental Values*, 3. 2 (1994), 155-158

Attfield, R., *Value, Obligation and Meta-Ethics* (Amsterdam and Atlanta, GA: Editions Rodopi B.V., 1995)

Attfield, R., 'Saving Nature, Feeding People and Ethics', *Environmental Values,* 7(1998), 291-304

Attfield, R., *The Ethics of the Global Environment* (Edinburgh: Edinburgh University Press, 1999)

Attfield, R., ' To Do No Harm? : the Precautionary Principle and Moral Values', *Reason in Practice*, 1.3(2001), 11-20

Attfield, R., 'Are Promises to Repay International Debt Binding?', *Journal of Social Philosophy*, 32 (2001), 505-511

Attfield, R., 'Sustainability, Global Warming, Population Policies and Liberal Democracy', in *Sustaining Liberal Democracy: Ecological Challenges and Opportunities,* eds, by Barry, J. and Wissenburg, M. (Basingstoke: Palgrave Macmillan, 2001)

Attfield, R., 'Postmodernism, Value and Objectivity', *Environmental Values,* 10.2 (2001), 145-162

Attfield, R., *Environmental Ethics*: An *overview for the Twenty-First Century* (Cambridge, UK: Polity Press, 2003)

Attfield, R., 'Biocentric Consequentialism, Pluralism, and 'The Minimax Implication': A Reply to Alan Carter', *Utilitas*, 15.1 (2003), 76-91

Attfield, R. 'The Concept of Sustainable Development Revisited', *Yeditepe 'de Felsefe*, 1.3 (2004), 300-309

Attfield, R., 'Biocentric Consequentialism and Value Pluralism: A Response to Alan Carter', *Utilitas*, 17.1 (2005), 85-92

Attfield, R., 'Environmental Ethics and Global Sustainability'. In: ten Have, H. A.M.J. et al. eds, *Environmental Ethics and International Policy*, (Paris: UNESCO, 2006), pp. 69-87

Attfield, R., 'Climate Change: The Ethical Dimension', in *Ethics and Climate Change: Scenarios For Justice and Sustainability*, ed. by Matteo Mascia and Lucia Mariani (Padova : Fondazione Lanza, 2010), pp.77-84

Attfield, R., 'Sober, Environmentalists, Species and Ignorance', *Environmental Ethics,* 33.3 (2011), 307-316

Attfield, R., *Ethics: An Overview* (London and New York: Continuum International Publishing Group, 2012)

Attfield, R., 'Sustainability', Forthcoming in: LaFollette, H. ed. *International Encyclopaedia of Ethics* (Oxford: Blackwell, 2013)

Attfield, R., 'Development Ethics' (Cardiff University: ENCAP, Philosophy Section (unpublished))

Attfield, R. and Wilkins, B., eds, *International Justice and the Third World: Essays in the Philosophy of Development* (London and New York: Routledge, 1992)

Attfield, R. and Hattingh, J., 'Ecological Sustainability in a Developing Country Such as South Africa? A Philosophical and Ethical Inquiry', *The International Journal of Human Rights*, 6. 2 (2000), 65-92

Axworthy, L., 'Introduction', in *Human Security and the New Diplomacy: Protecting People, Promoting Peace,* ed. by McRae, R., and Hubert, D., (Montreal: McGill-Queen's University Press, 2001), pp. 3-13

Axworthy, L. 'Human Security and Global Governance: Putting People First', *Global Insight*, 7 (2001), 19-23

Bacon, F. (1605), *The Advancement of Learning*, ed. by Kitchen, G. W. (London and New York: Dent, 1973)

Baer, P., Athanasiou, T., Kartha, S. and Kemp-Benedict, E., 'Greenhouse Development Rights: a Framework for Climate Protection That is "More Fair" Than Equal Per Capita Emissions Rights', in *Climate Ethics: Essential Reading*, ed. by Gardiner, S. M., Caney, S., Jamieson, D., and Shue, H. (Oxford: Oxford University Press, 2010)

Bagayoko-Penone, N., 'Promoting Peace and Democracy through Security Sector Reform', *Insight*, 79 (2009), 1-3 (p.1)

Barman, D., *Moral Argents vs. Moral Patients*, (Chapel Hill: Dilip Barman's Home Page, 1994) <http://www.dilip.info/presentations/dkb-ar9.htm > [accessed 20 March 2012]

Barry, B., 'Justice between Generations', in *Law, Morality, and Society: Essays in Honour of H. L. A. Hart*, ed. by Hacker, P. M. S. and Raz, J. (Oxford: Clarendon Press, 1977)

Barry, B., 'Circumstances of Justice and Future Generations', in *Obligations to Future Generations*, ed. by Sikora, R. and Barry, B. (Philadelphia: Temple University Press, 1978)

Barry, B., *Theories of Justice. A Treatise on Social Justice,* Vol. I (London: Harvester-Wheatsheaf, 1989)

Barry, B., *Justice as Impartiality. A Treatise on Social Justice,* Vol. II (Oxford: Clarendon Press, 1995)

Barry, B., 'Sustainability and Intergenerational Justice', in *Fairness and Futurity. Essays on Environmental Sustainability*, *Social Justice, ed. by* Dobson A. (Oxford: Oxford University Press, 1999), 93-117

Baxter, B., *Ecologism*: *An Introduction* (Edinburgh: Edinburgh University Press, 1999)

Beanchamp, T. L. and Childress, J.F., *Principles of Biomedical Ethics,* 3rd edn. (Oxford: Oxford University Press, 1989)

Beckerman, W., "Sustainable Development': is it a Useful Concept?', *Environmental Values*, 3.3 (1994), 191-209

Beckerman, W., 'Sustainable Development and Our Obligations to Future Generations', in *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*, ed. by Andrew Dobson (Oxford: Oxford University Press, 1999), pp.71-92

Beckerman, W., 'The Chimera of Sustainable Development', *The Electronic Journal of Sustainable Development,* 1.1(2007) < http://173-45-244-96.slicehost.net/docs/The_Nature_of_Sustainable_Development.pdf>[accessed 22 April 2009]

Beder, S., *The Nature of Sustainable Development* (Newham, Australia: Scribe Publications, 1993)

Between a Rock and a Hard Place: the Science of Geosequestration (Australia: the House of Representatives Standing Committee on Science and Innovation, 2007) <http://www.aph.gov.au/house/committee/environ/chapter/report/chapter2.pdf.> [accessed 12 March 2012]

Bhuyan, A. R., *Millennium Development Goals (MDGs): A Review of Bangladesh's Achievements* <http://www.ibtra.com/pdf/journal/v2_n1_article4.pdf> [accessed 2 January 2011]

Boden, T.A., Marland, G., and Andres, R. J., *Global Regional, and National Fossil-Fuel CO2 Emissions* (Oak Ridge, TN: Carbon Dioxide Information Analysis Center, Oak Ridge National Library, U.S. Department of Energy, 2011) <http://cdiac.ornl.gov/trends/emis/tre_usa.html> [accessed 10 March 2012]

Booth, K., *Critical Security Studies and World Politics* (London: Lynne Rinner Publisher, 2005)

Bosselmann, K., *The Principle of Sustainability*: *Transforming Law and Governance* (Farnham, UK: Ashgate Publishing, 2008)

Brown, D., et al., eds, *White Paper on the Ethical Dimensions of Climate Change* (Philadelphia: Rock Ethics Institute, 2006)

Brown, J. N. and Quiblier, P., eds, *Ethics and Agenda 21: Moral Implications of a Global Consensus*, (United Nations Environment Programme (UNEP): United Nations Publications, 1994)

Brown, L. R., 'Challenges of the New Century' in *State of the World 2000*, ed. by Starke, L., (New York and London: W W Norton & Company , 2000), pp. 3-26

Brown, P.G., *Ethics, Economics and International Relations: Transparent Sovereignty in the Commonwealth of Life* (Edinburgh**:** Edinburgh University Press, 2000)

Callicott, J. B., 'Animal Liberation: A Triangular Affair', *Environmental Ethics*, 2.4 (1980), 311-338

Callicott. J. B., *In Defence of the Land Ethic*, (Albany: Suny Press, 1989)

Caney, M., 'Cosmopolitanism, Democracy and Distributive Justice', in *Global Justice Global Institutions,* ed. by Daniel, W. (Alberta: University of Calgary Press, 2005), 29-64

Carson, R. L., *Silent Spring* (Boston: A Mariner Book, Houghton Mifflin Company, 1962)

Carpenter. S. R., 'Sustainability', in *Encyclopaedia of Applied Ethics*, ed. by Chadwick, R. (San Diego: Academic Press, 1998), vol. IV, pp. 275-293.

Carter, A., 'Distributive Justice and Environmental Sustainability', *The Heythrop Journal*, XLI (2000), 449-460

Carter, A., 'Review of Robin Attfield: The Ethics of the Global Environment', in *Mind,* 110 (2001), pp.149-153

Carter, A., 'Inegalitarian Biocentric Consequentialism, the Minimax Implication and Multidimensional Value Theory', *Utilitas*, 17.1 (2005), pp. 62-84

Chadwick, R. and Schroeder, D., eds, *Applied Ethics: Critical Concepts in Philosophy* (London and New York: Routledge, 2002)

Chemistry for the Gifted and Talented : the Second Law of Thermodynamics (London: Royal Society of Chemistry :Advancing the Chemical Science, 2012)<http://www.rsc.org/learn-chemistry/content/filerepository/CMP/00/000/673/32.%20the%20second%20law%20of%20thermodynamics.pdf>[accessed 15 June 2012]

Choudhury, S., *Alternative Views of Environmental Security in a Less Developed Country: the Case of Bangladesh* (Fullerton: The Free Library, 2008) <http://www.thefreelibrary.com/_/search/Search.aspx?SearchBy=0&Word=year+of+publication&Search=Search&By=0>[accessed 10 May 2012]

Chowdhury, J. A., *Essays on Environment* (Dhaka: Botomul, 2007)

Christie, I. and Warburton D., *From Here to Sustainability: Politics in The Real World* (London and Sterling VA: Earthscan Publications Ltd, 2001)

Cohen, G. A., 'Incentives, Inequality and Community**',** *Oxford Online Resource Centre* (Oxford: Oxford University Press, 2012) <www.tannerlectures.utah.edu/lectures/documents/cohen92.pdf>[accessed 1 February 2012]

Coleridge, P. 'Development, Cultural Values and Disability: The Example of Afghanistan', in *Disability and Development: Learning from action and research on disability in the majority world,* ed. by Stone, E. (Leeds: The Disability Press, 1999), pp.149–167 <http://disability-studies.leeds.ac.uk/files/archiveuk/stone-chapter-10.pdf> [accessed 18 January 2008]

Cosgrove, D., 'Environmental Thought and Action: Pre-modern and Post-modern', *Transactions of the Institute of British Geographers*, 15.3(1990), pp. 344-58

Costanza, R. N. B. and Haskell, B., eds, *Ecosystem Health: New Goals for Environmental Management*, (Washington DC: Island Press, 1992)

Combat Global Worming (Brussels: Bellona Environmental CCS Team, 2009) <http://bellona.org/ccs/home/bellona-and-ccs/bellona-studies/combat-global-warming.html>, [accessed 29 January, 2012]

Commission on Human Security, *Human Security Now* (New York: Commission on Human Security 2003)

Conteras, R., 'How the Concept of Development Got Started' in *The E-Book on International Finance and Development,* ed. by Enrique R. C., (The University of Iowa : The University of Iowa Center for International Finance and Development,1999) <http://blogs.law.uiowa.edu/ebook/uicifd-ebook/part-1-i-how-concept-development-got-started>[accessed 1 July 2009]

Convention on Biological Diversity, *The Strategic Plan for the Convention on Biological Diversity 2011-2020, Including Aichi Biodiversity Targets* (Brasilia: UNEP, 2012) <http://www.cbd.int/sp/ > [accessed 5 May 2012]

Cowen, M. P. and Shenton, R.W., 'The Invention of Development', in *Power of Development*, ed. by Crush, J. (London: Routledge,1995), pp. 27-43

Crocker, D. A., 'Functioning and Capability: The Foundation of Sen's and Nussbaum's Development Ethic', *Political Theory*, 20.4(1992), 584-612

Daly, H., 'On Wilfred Beckerman's Critique of Sustainable Development' *Environmental Values*, 4.1 (1995), pp. 49–55

De Graaf, J., Wann, D. and Naylor, T.H., *Affluenza: The All-Consuming Epidemic*, 2nd edn (San Francisco: Berrett-Koehler, 2001)

Des Jardins, R. J., *Environmental Ethics: an Introduction to Environmental Ethics* (, Belmont, CA: Wadsworth, 2001)

Diamond, J., *Guns, Germs, and Steel: the Fates of Human Societies* (New York: W.W. Norton and Company, 1999)

Dobson, A. and Lucardie, P., eds, *The Politics of Nature, Explorations in Green Political Theory*, (London: Routledge, 1993)

Dobson, A. 'Environmental Sustainability: An Analysis and a Topology', *Environmental Politics*, 5.3 (1996), pp.401-428

Dobson, A. ed., *Fairness and Futurity. Essays on Environmental Sustainability*, *Social Justice* (Oxford: Oxford University Press, 1999

Dobson, A. and Derek Bell, eds, *Environmental Citizenship* (Massachusetts: MIT Press, 2005a)

Dobson, A. and Angel Valencia, *Citizenship, Environment, Economy* (London: Routledge, 2005b)

Dobson, A. and Robyn Eckersley, *Political Theory and the Ecological Challenge* (Cambridge: Cambridge University Press, 2006)

Dower, N., 'Sustainability and the Right to Development', in *International Justice and the Third World*, ed. by Attfield, R. and Wilkins, B. (London and New York: Routledge, 1992), pp. 93-116

Dower, N., *World Ethics: the New Agenda* (Edinburgh: Edinburgh University Press, 1998)

Dower, N., 'Security and Sustainability', unpublished paper delivered at Reykjavic University, 21 October 2005, 1-7

Dower, N. 'Security in the Modern World', (Aberdeen University: SDHP, Philosophy Section, (unpublished))

Dryzek, J. S., *The Politics of the Earth: Environmental Discourses* (Oxford, New York: Oxford University Press, 1997)

Dunning, B., *Sustainable Sustainability* (California: Skeptoid, 2006)< http:// skeptoid.com/episodes/4005>[Accessed 12 March 2009]

Edwards, M. *Future Positive: International Co-operation in the 21st Century*, (London: Earthscan, 1999)

Ellen, R., 'Local knowledge and Sustainable Development in Developing Countries', in *Global Sustainable Development in the 21st Century*, eds, Lee, K., Holland, A. and McNeill, D. (Edinburgh: Edinburgh University Press, 2000) pp. 162-186

Elliot, R. and Gare, A., eds, *Environmental Philosophy* (Milton Keynes: Open University Press, 1983)

Erdogan, I., 'Migration: As a Threat to Security?' *Journal of Turkish Weekly*. 27 February 2009, p. 1.

Esteva, G., 'Development', in *The Development Dictionary*, ed. By Sachs, W. (London and Atlantic Highlands, NJ: Zed Books, 1992), pp. 6-25

Finnis, John (1987), 'The Basic Value', in *Ethics*, ed. by Singer, P. (Oxford: Oxford University Press, 1994), pp. 229-235

Freeman, A. M. III, Haveman, R. H. and Kneese, A.V., *The Economics of Environmental Policy* (New York: John Wiley and Sons, Publication, 1973)

Friends of the Earth International, *UN Climate Conference Closes Without Adopting 'Copenhagen Accord' (*Amsterdam: Friends of the Earth International, 2009) <http://www.foe.org/un-climate-conference-closes-without-adopting-copenhagen-accord >[accessed 3 February 2010]

Gardiner, S., *et al.* eds., *Climate Ethics: Essential Readings* (Oxford: Oxford University Press, 2010)

Gasper, D., 'Culture and Ethics of Development', Paper for *Nationale Unesco Commissie Studiedag* (The Hague, 1993) (unpublished))

Gasper, D., *The Ethics of Development* (Edinburgh: Edinburgh University Press, 2004)

George, S., *Feeding the Few: Corporate Control of Food* (Washington DC: Institute for Policy Studies, 1981)

Goodpaster, K. E., 'On Being Morally Considerable', *Journal of Philosophy,* 75 (1978), pp. 308-325)

Goulet, D., *Development Ethics* (London: Zed, 1995)

Glotzbach, S. and Baumgartner, S., *The Relationship between Intergenerational and Intergenerational Ecological Justice*, (L Üneburg: Working Paper Series in Economics at University of L Üneburg 141, 2009) <http://www.leuphana.de/fileadmin/user_upload/Forschungseinrichtungen/ifvwl/WorkingPapers/wp_141_Upload.pdf> [accessed 29 January, 2012] (pp. 1-33)

Gray, J. N., 'John Stuart Mill: Traditional and Revisionist Interpretations' *Literature of Liberty*, 2.2 (1979< http://www.econlib.org/library/Essays/LtrLbrty/gryMTR1.html>) [accessed 20 January 2010]

Guha, R., 'Radical American Environmentalism and Wilderness Preservation: A Third World Critique', *Environmental Ethics* , 11.1(1989), 71-83,

Haberl, H., 'Human Appropriation of Net Primary Production as an Environmental Indicator: Implications for Sustainable Development, *AMBIO*, 26.3 (1997), pp. 143-146

Hardoy, J.E., *Environmental Problems in the Third World Cities: an Agenda for the Poor and the Planet,* (London: IIED, 1992)

Hardin, G., 'The Tragedy of the Commons', *Science*, 162 (1968), 1243-1248

Harrison, P. *The Third Revolution*: *Population, Environment and a Sustainable World*, Viking Penguin, 1993

Hattingh, J., 'The State of the Art in Environmental Ethics as a Practical Enterprise: a View from the Johannesburg Documents', in *Environmental Ethics and International Policy*, ed. by ten Have, H.A.M.J. (Paris: UNESCO Publishing, 2006), 191-216

Hassan, M. J., *Role of Non-state Actors in International Security and on Humanitarian Issues in Conflict Areas* (Kuala Lumpur: Institute of Diplomacy and Foreign Relations (IDFR) and the International Committee of the Red Cross (ICRC), 2008) <http://www.isis.org.my/attachments/397_MJH_RoleOfNon-StateActors.pdf.> [accessed 6 March 2010]

Healy, H., 'Adaptable by Nature', *New Internationalist,* 451 (2012), 23-30

Held, D., *Democracy and the Global Order* (Stanford: Stanford University Press, 1995)

Heyd, D., *Genetics: Moral Issues in the Creation of People* (Berkeley: University of California Press, 1992)

Holland, A., 'Substitutability: Why Strong Sustainability is Weak and Absurdly Strong Sustainability is Not Absurd', in *Valuing Nature? Economics, Ethics and the Environment*, ed. by Foster, J. (London: Routledge, 1997), pp. 119-134

Holland, A., 'Must We Give up Environmental Ethics?', in *Environmental Ethics and International Policy*. ed. by ten Have, H.A.M.J. and others (Paris: UNESCO Publishing, 2006), pp.191-216

Holland, A., 'Nature - Every Last Drop - is Good', in *The Ethics of the Environment* ed. by Attfield, R.(Aldershot: Ashgate, 2008), pp. 79-95

Homer-Dixon, T.F., and Blitt, J., (eds.), *Ecoviolence: Links among Environment, Population, and Security*, (Lanham: Rowman and Littlefield, 1998)

Hornaday, W. T., *Our Vanishing Wild Life: Its Extermination and Preservation* (New York: C. Scribner's Sons, 1913)

Hossain, I., and Tamim, M., '2005/2006: Energy and Sustainable Development in Bangladesh', *Sustainable Energy Watch 2005/2006* (Dhaka: Helio International, 2007) <http://www.helio-international.org/reports/pdfs/Bngldesh-EN.pdf> [accessed 18 February 2012]

Hough, P., *Understanding Global Security* (London and New York: Routledge, 2004)

Huby, M., *Social Policy and the Environment* (Buckingham: Open University Press, 1998)

Huddelson, B., *Sustainability*: *The Overtly Ambiguous Buzzword*, (Madrid: Mustang Daily, 2008) < http://www.uniondelosoceanos.com/ > [accessed 16 February, 2009]

Human Security Centre, *Human Security Report 2005: War and Peace in the 21st Century* (Oxford: Oxford University Press, 2006)

International Monetary Fund, *Bangladesh: Poverty Reduction Strategy Paper*, IMF Country Report No. 05/410, (Washington, D.C.: International Monetary Fund, 2005) <http://www.imf.org/external/pubs/ft/scr/2005/cr05410.pdf. > [accessed 19 February, 2012]

Jacobs, M., 'Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman', *Environmental Value,* 4.1 (1995), 57-68.

Jacobs, M., 'Sustainable Development: A Contested Concept', in *Fairness and Futurity: Essays on the Environmental Sustainability and Social Justice,* ed. by Dobson, A. (Oxford: Oxford University Press, 1999), pp. 21-45

Jackson, T., *Material Concerns: Pollution, Profit and Quality of Life* (London: Routledge, 1996)

Jacquemont F., and Caparrós, A., 'The Convention on Biological Diversity and the Climate Change Convention 10 Years After Rio: Towards a Synergy of the Two Regimes?', *Review of European Community & International Environmental Law* (*RECIEL*), 11.2 (2002), 169-180

Jain, P., 'Asian Values and Human Security: Some Definitional and Conceptual Concerns', Kobe, Japan, 27 December, 2005, in *Annual Report 2005-2006: Human Security* (Kobe: Asia Pacific Research Centre, 2006), pp. 338-346

Jones, R. W., *Security, Strategy, and Critical Theory* (Boulder, CO: Lynne Rienner, 1999)

Keller, D. R., ed., *Environmental Ethics: the Big Question,* (West Sussex: John Wiley and Sons, 2010)

Khalequzzaman, M., 'Impact of Tipai Dam on the *haor* Regions', *Daily Star*, 10 January, 2012, p.9

Khalequzzaman,M., *Environmental Philosophy in the Context of Bangladesh* <http://www.lhup.edu/mkhalequ/Earth%20Resources%20&%20Env/Env.Philosophy.pdf> [accessed 19 February 2012]

Khagram, S., Clark W. C., and Raad, D. F., 'From the Environment and Human Security to Sustainable Development', *Journal of Human Development*, 4.2 (2003), 289-313

Khan, M., 'Corruption and Governance in South Asia 2009', In: *Europa South Asia Yearbook 2009* **(**London: Europa, 2009) < http://eprints.soas.ac.uk/11683/> [accessed 21 February 2012]

Khan, M. A. M., 'Waging International Legal War against Tipaimukh Dam', *Blitz: Comprehensive Tabloid Weekly,* 12 January 2012, opinion and editorial section <http://www.weeklyblitz.net/2071/waging-international-legal-war-against-tipaimukh> [accessed 27February, 2012]

Khan. M. R., 'Environment', *Banglapedia*: *National Encyclopaedia of Bangladesh,* 2006 <http://www.banglapedia.org/> [accessed 3 August 2010]

Khor, M., 'Some Principles for an Alternative Lifestyle and Development', in *Environmental Crisis in Asia-Pacific : Declaration and Resolutions of the SAM Seminar on Problems of Development, Environment, and the Natural Resource Crisis in Asia-Pacific 1983*, ed. by Alam, S., (Penang, Malaysia: SAM, 1984)

Kim, T., and Harrison, R., eds, *Self and Future Generations: An Intercultural Conversation* (Cambridge: White Horse Press, 1999)

Kimmel, J.A., *Ethics and Values in Applied Social Research* (London: Sage Publications, 1988)

Kraft, H. J. S., 'Democratisation and Reform in South-East Asia', *Insight*, 79(2009), p.8

Küng, H., *A Global Ethics for Global Politics and Economics*, trans. Bowden, J. (London: SCM Press, 1997)

Lee, K., Holland, A. and McNeill, D. (eds), *Global Sustainable Development in the Twenty-First Century* (Edinburgh: Edinburgh University Press, 2000)

Lele, S.M., 'Sustainable Development: A Critical Review', *World Development* 19.6 (1991), 607-621

Leopold, A., (1887-1948), *A Sand County Almanac* (New York: Oxford University Press, 1949)

Levine, S., 'Human Security and 'Asian Values", Kobe, Japan, 27 December, 2005, in *Annual Report 2005-2006: Human Security* (Kobe: Asia Pacific Research Centre, 2006), pp. 347-374

Lizée, P. P., 'Human Security in Vietnam, Laos, and Cambodia', *Contemporary Southeast Asia*, 24. 3 (2002), 509-537

Loibl, G., et al., *International Law Association Berlin Conference 2004: Water Resource Law* (Berlin: ILA, 2004) <http://www.internationalwaterlaw.org/documents/intldocs/ILA_Berlin_Rules-2004.pdf>[accessed 28 February 2012]
<http://plato.stanford.edu/archives/fall2008/entries/value-pluralism/>[accessed November 2010]

Mannison, D. S., et al, eds, *Environmental Philosophy* (Australian National university: Research School of Social Science, 1980)

Markus J., Milne M.K., Kearins, K., & Walton, S., 'Creating Adventures in Wonderland: The Journey Metaphor and Environmental Sustainability', in *Organization*, 13.6 (2006), pp. 801-839

Marshall, J.D. and Toffel, M.W., 'Framing the Elusive Concept of Sustainability: A Sustainability Hierarchy', *Environmental* & *Scientific Technology*, 39.3 (2005), 673–682

Martinez-Alier, J., *The Environmentalism of the Poor: A Study of Ecological Concepts and Valuation* (Northampton: Edward Elgar Publishing Ltd., 2002)

Mason, E., 'Value Pluralism', *The Stanford Encyclopedia of Philosophy,* Fall edn (2008)

McKibben, B., *What is True Development? The Kerala Model*
< http://www.ashanet.org/library/articles/kerala.199803.html> [accessed 6 July, 2011]

Meadows, D. H., et al, *The Limits to Growth: Report For The Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972)

Meyer, A., *Contraction and Convergence*, *The Global Solution to Climate Change*, Schumacher Briefing no. 5, (Devon: Green Books, 2005)

Mill, J. S., *Utilitarianism,* reprinted in *The Basic Writings of John Stuart Mill: on Liberty, the Subjection of Women, and Utilitarianism*, ed. by Miller, D. E. (New York:Modern Library, 2002)

Miller, Jr. G. T., ed., *Environmental Science: Working with the Earth,* 9th edn. (Pacific Grove, California: Brooks/Cole, 2003)

Mirza, M.M.Q., ed. *The Ganges Water Diversion: Environmental Effect and Implication* (Dordrecht: Kluwer Academic Publications, 2004)

Monbiot, G, *Heat: How to Stop the Planet Burning* (London: Penguin Books, 2007)

Moneychimp, *Gross National Product (GNP)*
<*http://www.moneychimp.com/glossary/gnp.htm*>[accessed 21 June 2011]

Mulgan, T. P., 'Teaching Future Generations', *Teaching Philosophy*, 22.3 (1999), 259-273

Munda, G., 'Environmental Economics, Ecological Economics and the Concept of Sustainable Development', *Environmental Values*, 6 (1997), 213-233 (p.18).

Munshi, A.B.I., Water Scarcity and the Threat of Water Wars in South Asia – A Bangladesh Perspective (Untold Facts, 2008)

<http://www.untoldfacts.com/bangladesh/water-scarcity-and-the-threat-of-water-wars-in-south-asia-%E2%80%93-a-bangladesh-perspective [accessed 27 February 2012]

Myerson, G. and Rydin, Y., *The Language of Environment: A New Rhetoric* (London: UCL Press, 1996)

Nef, J. *Human Security and Mutual Vulnerability* (Ottawa: The International Development Research Centre, 1999)

Nussbaum, M.C., *Women and the Human Development: The Capabilities Approach* (Cambridge: Cambridge University Press, 2000)

Office of the Auditor General of Canada, *Appendix 1—Human Activities and their Potential Impact on the Environment* (Ontario: Office of the Auditor General of Canada, 2007) <http://www.oagbvg.gc.ca/internet/English/meth_gde_e_19283.html >[accessed 14 July 2010]

O'Neill, J., and C. Spash. 'Conceptions of Value in Environmental Decision-Making', *Environmental Values* 9.4 (2000), 521–35

O'Neill, J., Turner, K., R., and Bateman, I., J., (ed) *Environmental Ethics and Philosophy* (Cheltenham,UK: Edward Elgar Publishing Ltd, 2001)

Parayil, G., 'Sustainable Development: The Fallacy of a Normatively Neutral Development Paradigm', *Journal of Applied Philosophy*, 15.2 (1998), 179-194

Parfit, D., *Reasons and Persons* (Oxford: Oxford University Press, 1984)

Paris, R., 'Human Security: Paradigm Shift or Hot Air', *International Security*, 26.2 (Fall 2001), 87-102

Passmore, J., *Man's Responsibility for Nature* (London: Duckworth**,** 1974)

Pearce, D., Barbier, E. and Markandya, A., *Sustainable Development Economics and Environment in the Third World* (London: Earthscan, 2000)

Pepper, D., *Modern Environmentalism: An Introduction* (London: Routhledge, 1996)

Pogge, T., *World Poverty and Human Rights: Cosmopolitan Responsibilities and Reforms*, 2nd edn (Cambridge: Polity, 2008)

Pogge, T. and Moellendorf, D., *Global Ethics: Seminal Essays: Global Responsibilities* (St.Paul, MN: Paragon, 2008)

Pojman, P. L., *Global Environmental Ethics*, (London and Toronto: Mayfield Publishing Company, 2000)

Pirages, D. C., ed., *The Sustainable Society*, (New York: Praeger Publishers, 1977)

Raffensperger, C. and Tickner, J. (eds), *Protecting Public Health and the Environment: Implementing the Precautionary Principle* (Washington DC: Island Press, 1999)

Ratner, B.D., 'Sustainability as a Dialogue of Values: Challenges to the Sociology of Development', *Sociological Inquiry,* 74.1 (2004), pp. 50-69

Reap, S., 'Mekong Governments Delay Xayaburi Dam Pending Further Study' *International Rivers*, 8 December 2011 < http://www.internationalrivers.org/en/2011-12-8/mekong-governments-delay-xayaburi-dam-pending-further-study> [accessed 29 February, 2012]

Reed, L., and Tehranian, M., 'Evolving Security Regimes', in Worlds *Apart: Human Security and Global Governance*, ed. by Tehranian, M., (London: Taurus, 1999), pp. 54-78

Reed, A., *Inequality and Development* (London: Bell & Hyman Limited, 1985)

Reynolds, A., *A Brief History of Environmentalism* (London, Channel 4 Television, November 2010) <http://www.channel4.com/science/microsites/S/science/nature/environment.html> [accessed 2 December, 2010)

Rezwan, M., *Bangladesh, India: No to Tipimukh Dam*, (Aymara, Indonesia: Global Voice, 2009) <http://globalvoicesonline.org/2009/05/27/bangladesh-india-no-to-tipaimukh-dam/>[accessed 23 February, 2012]

Rolston, H. III, *Environmental Ethics: Duties to and Values in The Natural World* (Philadelphia: Temple University Press, 1988)

Routh, G., *The Origin of Economic Ideas*, 2nd edn (London: McMillan, 1975)

Routley, R. R. V., 'Nuclear Energy and Obligations to the Future', *Inquiry*, 21 (1978), pp.133-179

Roy, E. C., The Polluter Pays Principle: A Proper Guide for Environmental Policy (Washington: The Institute for Research on the Economics of Taxation (IRET), 2001) <http://iret.org/pub/SCRE-6.PDF> [accessed 28 July 2012]

Sachs, W., 'Sustainable Development and the Crisis of Nature: On the Political Anatomy of an Oxymoron', in *Living with Nature, Environmental Politics as Cultural Discourse*, ed., by Fiseher, F. and Hajer, M. (Oxford*:* Oxford University Press, 1999), pp.23-41

Sagoff, M., 'On Preserving the Natural Environment', *Yale Law Review,* 84(1974), pp. 205-238

Sagoff, M. *The Economy of the Earth: Philosophy, Law, and the Environment,* (Cambridge: Cambridge University Press, 1988)

Schirnding, Y. V., 'The World Summit on Sustainable Development: Reaffirming the Centrality of Health' *Globalization and Health,* 1(2005) <http://www.globalizationandhealth.com/content/1/1/8>[accessed 20 May 2012]

Schlosberg, D., *Defining Environmental Justice: Theories, Movements, and Nature* (Oxford: Oxford University Press, 2007)

Scott, B. R, *The Political Economy of Capitalism* (Harvard Business School Working Paper, No. 07-037, 2006) < http://www.hbs.edu/research/pdf/07-037.pdf > [accessed 20 June 2011]

Scott, W. and Gough, S., eds, *Key Issues in Sustainable Development and Learning: a Critical Review* (London: RoutledgeFalmer, 2004)

Secretariat of the World Health Organization*, Healthy Environments for Children Alliance* (Geneva: World Health Organisation, 2004) <http://www.who.int/heca/infomaterials/hecanet/en/index11.html> [accessed 21 May 2012]

Sen, A., 'The Concept of Development', in *Handbook of Development Economics*, ed. by Chenery, H. and Srinivasan, T. N., (Amsterdam: Elsevier, 1988), pp. 9-26

Sen, A.K., *The Ends and Means of Sustainability* (Tokyo: The International Conference on Transition to Sustainability, May 2000) <http://www.iisd.org/pdf/sen_paper.pdf> [accessed: 16 March 2012]

Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Oxford Scholarship Online, November 2003) <http://www.oxfordscholarship.com/view/10.1093/0198284632.001.0001/acprof-9780198284635> [accessed 22 April 2009]

Sen, A., *'Why We Should Preserve the Spotted Owl', London Review of Books*, 26.3(2004), pp.164-184

Shapiro, A. J., *The Global Peace Operations Initiative* (Washington, DC, The U.S. Institute of Peace, 2012) <http://www.state.gov/t/pm/rls/rm/184845.htm> [accessed 10 July 2012]

Shiva, V., *Staying Alive: Women, Ecology and Development* (London: Zed Book, 1989)

Siddique, H., *Farakka to Tipaimukh,* (Dhaka**:** Bangla Praxis, 2009) <http://banglapraxis.wordpress.com/category/trends-and-analysis/page/2/> [accessed 30 April 2010]

Singer, P., 'All Animals are Equal', in *Applied Ethics*, ed. by Singer, P., (Oxford: Oxford University Press, 1986)

Singer, P., ed., *Applied Ethics* (Oxford: Oxford University Press, 1986)

Singer, P., *Practical Ethics*, 2nd edn (New York: Cambridge University Press, 1993)

Singer, P., *One World*: *the Ethics of Globalization* (New Haven, CT, and London: Yale University Press, 2002)

Smith, E.K., *European Union Foreign Policy in a Changing World* (Cambridge: Polity Press, 2003)

Snyder, C. A., ed. *Contemporary, Security and Strategy* (London: Routledge, 1999)

Sober, E., 'Philosophical Problems for Environmentalism', in *The Preservation of Species*, ed. by Norton, B. (Princeton: Princeton University Press, 1986), pp. 173-194

Solow, R., 'Sustainability: An Economist's Perspective', in *Economics of the Environment*, ed. by Drofman, R. and Dorman, N., 3rd edn (New York: W.W. Norton and Co, 1991), pp. 179-187

SOS-arsenic.net, *India-Bangladesh: 21st Century Battle for Water Sharing* (Dhaka: SOS-arsenic.net, 2004)
<http://sos arsenic.net/english/groundwater/waterbattle.html#5> [accessed 27 February 2012]

Star Report, Kolkata to Agartala : Ashuganj Used for First Time for Transhipment, *Daily Star*, Dhaka, 29 February 2012 <http://www.thedailystar.net/newDesign/news-details.php?nid=204527> [accessed 29 February, 2012]

Streeten, P., 'The Distinctive Features of a Basic Needs Approach to Development', *International Development Review,* 19.3 (1997), pp. 8-16

Svensson, K., 'Human Security as Inclusive Security--Gender, Epistemology and Equality', *African Security Review,* 6.2 (2007), pp. 2-13

ten Have, H.A.M.J., 'Introduction: Environment, Ethics and Policy', in *Environmental Ethics and International Policy*, ed. by Henk A.M.J. ten Have (Paris: UNESCO Publishing, 2006), pp. 11-22

ten Have, H.A.M.J., 'Ethics, Nanotechnology and Health', in *Nanotechnologies, Ethics and Politics,* ed. by ten Have, H.A.M.J. (Paris: UNESCO Publishing, 2007), pp. 125-153

The Golden Fibre Trade Centre Limited (GFTCL), *Ganges Delta: Most Fertile Land for Growing Jute, Kenaf, & Roselle Hemp Fibers,* (Dhaka: GFTCL, 2009)
<http://www.jutexporterbangladesh.ne1.net/ > [accessed 6 August 2010]

The Borgen Project, *UN Millennium Development Goals* (Dutch Harbor, Alaska: The Borgen Project, 2003)<http://borgenproject.org/un-millennium-development-goals/>[accessed 3 February 2010]

The International Rivers, *The World Commission on Dams Framework - A Brief Introduction* (WCD, 2008) < http://www.internationalrivers.org/resources/the-world-commission-on-dams-framework-a-brief-introduction-2654> [accessed 27 February, 2012].

Thomas, C. 'Introduction', in *Globalization, Human Security, and The African Experience,* ed. by Thomas, C., and Wilkin, P., (Boulder: Lynne Reinner Publications, 1999), pp. 1-19

Thoreau, H. D., *Walden* (1848), reprinted in *Writings of Henry David Thoreau*, vol. 2, p.12 (Boston: Houghton Mifflin, 1906)

Trigg, R., *Morality Matters* (Oxford: Blackwell Publishing, 2005)

United Nations, *Declaration on the Right to Development*, (New York: United Nations, 1986) http://www.un.org/documents/ga/res/41/a41r128.htm [accessed 15 March, 2012]

United Nations Environmental Programme/World–Wide Fund for Nature/World Conservation Union, *Caring for the Earth*: *A Strategy for Sustainable Living* (London: Earthscan, 1991)

United Nations Conference on Environment and Development, *Agenda 21(*UNCED: NewYork, 1992)
<http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf> [accessed 15 March, 2012]

United Nations Conference on Environment and Development (UNCED), *Rio Declaration on Environment and Development*, (New York: United Nations, 1992)

United Nations, *United Nations Framework Convention on Climate Change*, (New York: United Nations, 1992) [accessed 2 March, 2012]

UNEP, *Rio Declaration on Environment and Development* (New York: United Nations, 1992) <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid =1163 > accessed 28 February, 2012]

United Nations Development Programme, *Human Development Report*, (New York: Oxford University Press, 1994)

United Nations, *Convention on the Law of the Non-navigational Uses of International Watercourses* (New York: the General Assembly of the United Nations, 1997) <http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf> [accessed 28 February 2012]

United Nations Environment Programme (UNEP), *Best Management Practices for Agricultural Non-Point Sources of Pollution*, CEP Technical Report No. 41 (Jamaica: Caribbean Environment Programme, 1998) <http://www.cep.unep.org/publications-and-resources/technical-reports/tr41en.pdf > [accessed 1 June 2012]

United Nations Environmental Programme (UNEP), Environmental Impacts of Trade Liberalization and Policies for the Sustainable Management of Natural Resources: A Case Study on Bangladesh's Shrimp Farming Industry (New York, Geneva: UNEP, 1999) <http://www.unep.ch/etu/etp/acts/capbld/rdone/bangladesh.pdf > [accessed 19 February 2012]

United Nations, *United Nations Millennium Declaration*, General Assembly Resolution A/RES/55/2-55/2 (New York: United Nations, 2000) <http://www.un.org/millennium/declaration/ares552e. Html > [accessed 21 April 2009]

United Nations Development Programme, *Human Development Report*, (New York: UNDP, 2005)

Unite Nations, *World Economic and Social Survey* 2009: *Promoting Development, Saving the Planet* (New York: United Nations, 2009) <http://www.un.org/en/development/desa/policy/wess/wess_archive/2009wess.pdf> [accessed 27 July 2012]

United Nations, *The Millennium Development Goals Report 2009* (New York: United Nations, 2009) < http://www.un.org/millenniumgoals/pdf/MDG_Report_2009_ENG.pdf > [accessed 2 February 2010]

United Nations, *Human Rights and the Millennium Development Goals in Practice: A Review of Country Strategies and Reporting* 2010 (New York, Geneva: United Nations, 2010) < http://www.ohchr.org/Documents/Publications/HRAndMDGsInPractice.pdf > [accessed 18 February, 2012]

United Nations, *Charter of the United Nations*, Chapter 2, Article 4 <http://www.mfa.gov.tr/data/Kutuphane/MultilateralConventions/CharteroftheUnitedNations.pdf> [accessed 5 May 2012]

United Nations Environmental Programme*, Taking Action*, Chapter 2, <www.rona.unep.org.action.02.htm>[accessed 28 July 2012]

Vanderheiden, S., 'Two Concept of Sustainability', *Political Studies*, 56(2008), pp. 435-455

Varner, G. E., *In Nature's Interests? Interests, Animal Rights, and Environmental Ethics* (Oxford: Oxford University Press, 1998)

van den Bosch, R., *The Pesticide Conspiracy* (Garden City, NY: Doubleday and Company, 1978)

Victor, P. A., Hanna J. E. and Kubursi A.. 'How Strong is Weak Sustainability?', *Sustainable Development: Concepts, Rationalities and Strategies* (Dordrecht: Kluwer, 1998), pp. 195-210

Ward, B., and Dubos, R., Only *One Earth*: *The Care and Maintenance of a Small Planet* (New York: W.W. Norton and Company, 1972)

Warnock, G.J. *The Object of Morality* (New York and London: Methuen, 1971)

Webber, J., 'Climate Change and Public Moral Reasoning', in *New Waves in Ethics*, ed. by Brooks, T. (Basingstoke: Palgrave Macmillan, 2011)

Werren, M. A. 'Moral Status', in *A Companion to Applied Ethics*, ed. by Frey R.G. and Christopher H. W. (Oxford : Blackwell, 2005), pp. 439-450

White, L., 'The Historical Roots of Our Ecological Crisis', *Science*, 155 (1967), pp. 1203-1207

World Commission on Environment and Development, *Our Common Future,* (Oxford: Oxford University Press, 1987)

World Summit on Sustainable Development (WSSD), *Johannesburg Declaration on Sustainable Development*, (Johannesburg: United Nations, 2002) <http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.> [accessed 21 April 2009]

World Summit on Sustainable Development (WSSD), *The Johannesburg Plan of Implementation*, (New York: United Nations, 2002) <http://www.un.org/esa/sustdev/documents/wssd_POI_PD/English/POIToc.htm> [accessed 21 April 2009]

Wilson, E. O., ed. *Biodiversity* (Washington, DC: National Academy of Sciences/ Smithsonian Institution, 1988)

XTimeline, *United Nations: Its History and Milestones* (XTimeline.com, 2008) < http://www.xtimeline.com/timeline/United-Nations--Its-History-and-Milestones > [accessed 11 February 2010]