Community Food Growing as Social Innovation for Food Sustainability

The case of community gardens and community supported agriculture in Wales

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SUMMARY

This thesis is based on research that utilises social innovation theory to examine the role and potential of community gardens and community supported agriculture (CSA) in transitioning toward more sustainable food systems, with a geographical focus on Wales. The research originates from the rationale that there is an urgent need for transforming the current food systems into more sustainable ones, and that community-based socially innovative initiatives may become drivers for such a transformation. The main objective is to demonstrate what is the socially innovative role of community gardens and community supported agriculture in Wales and what is their potential for making a societal change toward food sustainability, thus aiming to contribute to the wider debates on the role of the social economy and its potential for socio-economic transformation.

The empirical approach applied is qualitative case studies based on 38 semi-structured interviews and participant observation in four community gardens and four community supported agriculture initiatives. The data is analysed by using ALMOLIN (Alternative Model for Local Innovations) as an innovative analytical tool mapping the dynamics of social innovation and processes of social initiatives.

The research intends to contribute to the literature of community gardens and community supported agriculture by examining these initiatives from the social innovation perspective. In addition, it intends to contribute to the social innovation literature with the case of community food growing. A final contribution is addressing the geographical gap in the community food growing literature by focusing on Wales as an under-researched area and using large number of case studies to allow a comparison between its different regions and types of initiatives. The study further makes a range of theoretical and policy recommendations.

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LIST OF ABBREVIATIONS

AFNs …… Alternative food networks
ALMOLIN …… Alternative model for local innovation
BEPA …… Bureau of European Policy Advisors
CA …… Capabilities approach
CAP …… Common Agricultural Policy
CGs …… Community gardens
CLAS …… Community Land Advisory Service
CRB …… Criminal Records Bureau
CSA …… Community supported agriculture
CTLD …… Community Team for Learning Disabilities
DBS …… Disclosure and Barring Service
EU …… European Union
EUSIP …… European Union Social Innovation Policy
FCFCG …… Federation of City Farms and Community Gardens
GHG …… Greenhouse gas emissions
GM …… Genetically modified
GVA …… Gross value added
Ha …… Hectare
MLP …… Multi-level perspective
NEJAC …… National Environmental Justice Council
OECD …… Organisation for Economic Co-operation and Development
PSS …… Product-service-systems
SINGOCOM …… Social Innovation, Governance and Community Building
SIX …… Social Innovation Exchange
SNM …… Strategic niche management
STP …… Social practice theory
TM …… Transition management
TYCOF …… Tyddewi Community Organic Farm
UN …… United Nations
UNA …… United Nations Association
WCVA …… Wales Council for Voluntary Action
WRO …… Wales Rural Observatory
WWOOF ……. World Wide Opportunities on Organic Farms, or Willing Workers on Organic Farms

Chapter 1

INTRODUCTION

> *A political project of economic becoming will require an imaginary in which economic possibility is plural and diverse. By speaking a language of economic diversity, we may be able to provide a context in which fleeting energies can be organized and amplified within alternative enactments of economy.* (Gibson-Graham 2006, p. 51)

This thesis brings together social innovation and community food growing as two distinctive bodies of literature. It is based on research that utilises social innovation theory to examine the role of community gardens and community supported agriculture (CSA) in transitioning toward more sustainable food systems, with a geographical focus on Wales. The research originates from the rationale that the current food systems have reached their limits and there is an urgent need for transforming them into more sustainable ones, and that community-based socially innovative initiatives may become drivers for such a transformation. Therefore, it aims to answer two main research questions.

(1) What is the socially innovative role of community gardens and CSA in Wales?
(2) What is the potential of community gardens and CSA in Wales for making a societal change toward food sustainability?

I. Context and Aims

In a world of rapidly growing population, finite resources, and changing climate, the issue of feeding billions in a sustainable and equitable way, and without damaging the ecosystems, is of great importance. Considering the overall damage caused by human activity to the Earth's systems and its impact on the well-being of humanity, there is an urgent necessity to change society's relationship with the environment (Chapin et al. 2011). Food is an important part of this relationship and it is a complex one, with health and well-being, social justice, ecological stability, and governance dimensions. The global population is expected to rise to approximately 9 billion by 2050 (Liverman and Kapadia 2010) and is faced with food-related health problems. About 793 million people are undernourished, and 780 million of these are in the developing regions (FAO et al. 2015). At the same time, the numbers of obese people doubled between

1980 and 2014; 39% of people at the age of 18 and above were overweight in 2014, and 13% were obese (WHO 2016). Obesity is linked to inequality as probability of becoming overweight is higher in disadvantaged groups (Drewnowski 2009; OECD 2014).

On the ecological side, food production, processing, distribution and consumption contributes to the global environmental change while at the same time is affected by this change. Agriculture causes an estimated 30 % of the total global emissions as well as deforestation, loss of biodiversity, and 70-80 % of water withdrawals; these effects are higher in the case of livestock production (Garnett 2013). Three of the suggested nine 'planetary boundaries' for the safe operating of humanity, have surpassed their threshold, namely greenhouse gas emissions (GHG), biodiversity loss, and interference with the nitrogen cycle (Rockström et al, cited in Liverman and Kapadia 2010). From the governance point of view, by the end of the 20th century, the food systems became controlled by a network of corporations; a small number of companies dominated the global production, processing and distribution of food (Marsden and Morley 2014). This was followed by the food crises in 2007-2008 caused by the rising food prices due to scarce production, peak oil, biofuels and financial speculations.

Accordingly, 'food sustainability' is regarded as more encompassing term than 'food security', since the latter does not include social and psychological needs and does not offer clear direction for the future (Lang and Barling 2012). Therefore, in addition to the food availability and accessibility, sustainable food systems should address the health, environment, and governance dimensions, and include more diverse forms of food provision predominantly focusing on traditional production, collaboration, and the role of communities (Dahlberg 1994; King 2008). Making connection between food production and consumption results in more people involved with the movement toward community food security; various forms of community food growing play an important role in creating awareness about the food system (Corrigan 2011). The rise in the number and variety of community based initiatives in the world in the last few decades and the resulting scholarly interest have been prolific. Community-based initiatives are regarded as tools for change. Trainer (2012), for example, envisions economies that are small, local, and self-sufficient, working cooperatively, and involving vegetable gardens, market gardens, and common areas with strong communities.

In a similar way, Follett (2009) suggests that the environmental and social sustainability can be achieved at the same time through strong alternative food networks, since these are not based on profitability but on sharing within the community. Here community gardens and community farms have important roles to play. As Follett (2009) explains further, in the first place, these are commons, public spaces for interaction, and collectively owned places for questioning the conventional food systems. And second, community gardens and community farms are places with important educational purposes. Community gardens are plots of open public spaces, managed and operated by the public and for the benefit of the public (Holland 2004). And community supported agriculture is an innovative idea of direct marketing, bringing consumers and producers together usually based on a subscription system with upfront payment made by the customers to the producers and sharing the risks and benefits of production (Hinrichs 2000; Hayden and Buck 2012). The increasing scholarly attention to community gardening and urban agriculture includes a breadth of different perspectives ranging from 'the right to space' (Schmelzkopf 2002) to environmental justice (Emmett 2011; Milbourne 2011), from social capital (Flora and Bregendahl 2012) to food justice (Gottlieb and Joshi 2010, pp. 149, 167). Also, community gardens and CSA initiatives are regarded more than sources for food, and their benefits for mental and physical health, neighbourhood strengthening and education (Beilin and Hunter 2011), regeneration of derelict sites for tackling poverty and crime (Larson 2006), and restorative power after conflicts and disasters (Tidball and Krasny 2014) are widely researched and recognised.

However, there is little evidence in the literature about the socially innovative role of community food growing initiatives and their potential for wider societal impact. In addition, from a geographical point of view Wales remains under-researched both in terms of community food growing and social innovation. Therefore, this research aims to address these gaps by making a three-fold contribution: first, to the community gardening and CSA literatures by studying the initiatives' wider societal role through the lens of social innovation; second, to the social innovation literature by adding the specific case study of community food growing; and third, by studying the phenomena within the Welsh context. Wales has distinctive character as a small, predominantly rural and services-dominated economy, where food has a significant place. There was a rapid increase in the number of community food growing initiatives and various support programmes in the last decade, which particularly makes it a point of research interest.

From a theoretical perspective, there is a growing interest to social innovation as a scholarly concept, which resulted in a multitude of approaches and definitions. The definition suggested by Miquel et al. (2013, p. 155) is the most appropriate to the purposes of this research.

> Social innovation refers to processes that generate a) the provision, in response to social needs, or resources and services, b) the development of trust and empowerment within marginalized populations, and c) the transformation of those power relations that produce social exclusion though the transformation of governance mechanisms.

Therefore, this research aims to examine the following aspects of the community food growing initiatives.

(1) What were the needs that created exclusion dynamics and prompted the creation of community gardens and CSA initiatives;
(2) What resources were mobilized and how;
(3) How needs have been satisfied through community food growing initiatives;
(4) Whether communities have been empowered and how;
(5) Whether the initiatives contributed to the change of social and governance relations at micro and macro level.

II. Empirical Approach

The empirical approach applied to this research included case studies based on participant observation and semi-structured interviews with actors of community gardens and CSA initiatives. Case studies were particularly suitable for studying the community food growing initiatives as a method that helped scrutinizing their processes based on "explanation as causality" (Cloke et al. 2004, pp. 286-289). In addition, they are predominantly used as a strategy in the social innovation literature (Belz 2004; Moulaert et al. 2010; Witkamp et al. 2011; Seyfang and Haxeltine 2012). A third point is that understanding the socially innovative role of the initiatives through examining their systems, everyday practices, and relations between the actors required "qualitative, context-sensitive [and] interactive" (Hamdouch 2013, p. 260) type of research, which is possible through case studies. And lastly, they are a useful strategy in examining the socially embedded character of community food growing places and their cultural and institutional differences. Four Welsh community gardens and four CSA initiatives were

selected as case studies and examined about "how" and "why" they operate (Yin 2003, p. 6) as concrete and "real-life" phenomena that "unfold in practice" (Flyvbjerg 2006, p. 235), which happened by being involved in the processes and interacting with the other actors. Moreover, by using case studies, it is possible to make "generalizable conclusions" about community gardens and the CSA through "theoretical reasoning" (May and Perry 2011, p. 223). The four community gardens were selected from different geographical regions of Wales, from different sizes and different ages, with the exception that two of the gardens were from the same city to allow comparison between urban gardens. In a similar way, the four CSA initiatives were selected from different regions of Wales and as different ownership models.

Semi-structured interviews were one of the data collection techniques in this study as interviews in general are useful for a wide range of situations from processes to changing conditions, and reconstruction of meanings (Cloke et al. 2004). In addition, they 'give voice' to other actors by exploring their motives, expectations, perceived benefits, positions and values regarding the food systems, and are useful for investigating personal approaches and systems in detail (Ritchie 2003). Semi-structured type of interviews were a preference for this study to have control over the interview process by keeping it relatively structured while also having "more latitude to *probe* beyond the answers and thus enter into a dialogue with the interviewee" (May 2011, p. 134, emphasis original). Data collection was qualitatively triangulated by using participant observation as an additional technique (Ritchie 2003). Since interviews cannot be replicated due to their individual nature (Valentine 2005) and "rely on people's sometimes biased perceptions and recollections of events" (Hancock and Algozzine 2006, p. 46), it is important to combine them with other techniques such as participant observation, which is considered as more objective than interviews and allows the researcher to have additional insights due to personal experience about the phenomena (Ritchie 2003), and in this research, by being actively involved in the activities of the researched initiatives. The data was analysed by using the Alternative Model for Local Innovation (ALMOLIN) framework (Moulaert et al. 2005; González et al. 2010) developed for the purposes of analysing socially innovative initiatives at local level, and including the various dimensions of social innovation.

III. Structure of the Thesis

This thesis consists of six chapters including the Introduction and Conclusion. The general logic of the research, its aims and contribution to the literature, and a brief presentation of the context and the empirical approach take part in the introductory Chapter 1. It is followed by a detailed Literature Review in Chapter 2 on social innovation as a theoretical framework and the variety of its approaches in part I, alternative food networks and their transformative potential in part II, defining food sustainability as the ultimate target of the social innovation in the part III, and the different aspects of community gardens and community supported agriculture in part IV. Chapter 2 concludes with a discussion on the detailed research questions arising from the literature review. Chapter 3 covers the methodological issues. It starts with the justification of choosing case studies with semi-structured interviews and participant observation as appropriate strategy for studying community gardens and CSA initiatives in Wales through the lens of the social innovation theory, including the criteria for the selection of the case studies, the content of the interviews, and the observation issues. This is followed by a part on data collection, which explains the ethical matters and preparation for fieldwork, then introduces briefly the selected eight cases, and describes how interviews and observations were conducted. Additionally, it addresses the reflexivity issues and difficulties encountered during the fieldwork. The final part of the Methodology chapter explains the process of qualitative analysis and the themes according to the ALMOLIN model. The next two chapters present the results and findings from the empirical work. Chapter 4 starts with the explanation of the analytical themes of ALMOLIN model, and the overview of the community food growing within the Welsh context. Next, it covers the results from the four community garden cases completed with a short discussion. In a similar way, Chapter 5 covers the results from the four CSA cases. These are followed by the Discussion and Conclusion as Chapter 6, which evaluates comparatively the findings from the results in the first part. The second part addresses the two main research questions by linking the results to the related dimensions of social innovation, discusses the theory and policy implications, and explains the limitations of the study. The third part wraps up the research with an overview of the outcomes and its overall contribution to the theory and practice.

Chapter 2

LITERATURE REVIEW

The last decades witnessed both the popularity of social innovation as a concept and the spread of community-led initiatives. Social innovation has become a 'buzz word' (Pol and Ville 2009) in many areas within and beyond research, specifically at the policy level, thus demonstrating inter-disciplinary and trans-disciplinary character (Moulaert et al. 2010). In the same way, there was a huge increase in the number and variety of community initiatives emerging as a response to wide range of social and environmental problems with community food growing being part of this trend. In line with the purpose of this research to examine community food growing in Wales from the social innovation perspective, this chapter attempts to combine the review of social innovation as a concept on the one hand, and community food growing as a phenomenon on the other, with the aim to provide a detailed but systematic grasp of the related literature.

The chapter is organised in five parts. Part I examines social innovation as a continuously evolving concept, and attempts to present the multitude of approaches from analytical and normative point of view, with their advantages and disadvantages. These include the mainstream approach followed by the grassroots innovations, niche management and socio-technical transitions approach that also includes the strategic niche management (SNM) and multilevel perspective (MLP) frameworks, then the social practice theory (SPT) or strategic practice management approach, and finally, the societal-territorial approach with the ALMOLIN model as its analytical tool. Part II presents the debates on the role and transformative potential of the alternative food networks. Part III goes down to the source of the food-related problems as the starting point of the wider research problem, and searches for an all-encompassing framing of food sustainability as the ultimate desired result of the social innovation. Part IV covers the literature on community gardens and community supported agriculture (CSA) from various aspects, including their different meanings, representations, benefits, challenges and criticisms. The chapter concludes with a discussion as part V on the suitability of different social innovation approaches for this research, which also identifies the more detailed research questions. Accordingly, it suggests the societal-territorial approach combined with the related

aspects of the New Economics approach as the most appropriate normative framework for the purposes of this research, and ALMOLIN as an analytical tool.

I. Social Innovation as A Theoretical Concept

Social innovation is a concept that has become increasingly popular both on the academic and policy arenas. It has also been rapidly changing and developing (Scott-Cato and Hillier 2010). The origins of the concept can be traced back as far as the 18th century when, according to Mumford (2002), Benjamin Franklin experimented with social innovation in multiple cases in Philadelphia when he identified problems in social relations and organisations, developed strategies and implemented projects. The concept was further developed by Max Weber in 1900s, to whom is attributed the first use of the term 'social invention' and who suggested that social change may be influenced by individuals showing different behaviour; just before that, in 1890s, Emil Durkheim had argued that some degree of social regulation is needed in order to control the 'unregulated capitalism', and in 1930s Joseph Schumpeter defined innovation as "structural change in the organization of society" and a moment of 'creative destruction' (Moulaert 2009; Jessop et al. 2013; Moulaert et al. 2013). From an organisational perspective, Moulaert et al. (2013) suggest that social innovation goes back to trade unions and movements for independence while recent examples are 'Global Social Change Organisations' for addressing a range of social problems.

An important conceptual contribution was made in 1970s by the French intellectuals of the movement 'Temps des Cerises', who published series of debates on the importance of social transformation in the journal *Autrement*, and suggested that social innovation is about satisfaction of specific needs and is a result of a collective initiative that is not a 'state intervention', can happen in various types of communities and spatial scales, but should be about raising awareness, 'mobilization' and 'learning' (Moulaert 2009). In contemporary social innovation literature, the concept is used widely in many areas, e.g. managements sciences, business administration and economics, and arts but not in depth, according to Moulaert et al. (2005). On the other hand, Jessop et al. (2013, p. 113) draw attention to the discontinuity between the 'old school' of social change (late 19th century to 1960s-70s) and the 'new school' of social innovation. They argue that it is necessary to reconnect the two schools in order to

achieve “a coherent epistemological status and provide it with the necessary methodological tools”. Therefore, social innovation is closely related to the concepts of ‘social change’, ‘social invention’, and ‘social economy’.

Many researchers acknowledge the fragmented character of the concept with multitude of approaches and case studies, and emphasize the need for an overarching theory and methodology. Howaldt et al. (2014, p. 2), for example, attempt to review the existing approaches to social innovation and conclude that there is a “lack of a theoretically sound concept of social innovation” to bridge the related policy areas and research fields by examining the similarities and differences between those. In a similar way, Klein (2013) explains that the presence of such a great diversity of approaches is indication of lack of a unified theoretical and methodological framework. He notes further that this diversity combined with the ‘reductionist’ and ‘utilitarian view’ of social innovation, i.e. being considered as a quick fix for many problems, present the concept as serving to the purposes of neoliberalism.

Moreover, Moulaert et al. (2013) point out that the neoliberalism attempted to appropriate the term via ‘roll-out neoliberalisation’ strategies, like ‘new governance’ and ‘experimental reregulation’’, which needs to be approached critically. In addition, they argue that social innovation has been used with various conflicting meanings, e.g. as “a new dimension of management science” or “as suspect reformist ‘solutions’ for the scarcity of resources in the welfare state” (Moulaert et al. 2013, p. 14). Earlier, Pol and Ville (2009, pp. 883-884) highlighted that the term became popular in social sciences in a very short time but there is no agreement about how it is relevant or what it means. Therefore, they suggest that social innovation essentially needs a ‘satisfactory’ and ‘comprehensive’ definition to become “a respectable field of enquiry”, i.e. a definition that is “useful to guide research” and “of a scope large enough to accommodate a significant number of relevant empirical cases”. This part will attempt to review the different approaches on the concept of the social innovation.

1. Mainstream (‘official’) approach

Social innovation takes place in policy and strategy documents of many institutions and organisations, e.g. the OECD, Bureau of European Policy Advisors (BEPA), Social Innovation

Exchange (SIX) and Young Foundation. In this mainstream approach it is defined as "new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations" (Murray et al. 2010, p. 3; BEPA 2011). A similar definition is provided by Mulgan (2006, p. 146) with a focus on the organisational side instead of social relationships, i.e. "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organizations whose primary purposes are social". Murray et al. (2010) study a vast number of different types of initiatives in order to identify the best methods for creating new successful socially innovative initiatives. First, they distinguish six phases in the process of social innovation, namely "spark" or "trigger", idea generation, putting the ideas into practice, making it an everyday practice, scaling up and diffusion of the innovation, and systemic change. After examining these phases in detail, the authors provide a list of hundreds of different ways for supporting social innovation, classified for different sectors and including names of example projects. Mulgan (2006) elaborates further that the initial drive for social innovation is the existence of some needs that have not been met along with an idea how to meet them; the social need can be an evident social problem or even a personal problem, but innovative ideas require possibilities, i.e. relevant circumstances to evolve, change and adapt by learning and consequently, to be diffused by organisations such as federations. Mulgan emphasizes that throughout this dynamic process, the governmental support is crucial. Furthermore, it is specified that social needs have become more pressings due to globalisation, technological advances and climate change, and require some novel solutions (BEPA 2011). Needs take a central place in all the different approaches, as will be explained further.

On the other hand, it is suggested that social innovation happens when the "bees" or the small organisations and individuals "that are buzzing with ideas and imagination" collaborate with the "trees", which are the governmental institutions or big organisations and "have power and money but are usually not so good at thinking creatively" (Mulgan 2006, p. 153; Murray et al. 2010, p. 125). Also, the 'connectors' are attributed a vital role; these are the intermediary institutions that bring the small and big organisations, i.e. the ideas and the resources together (Mulgan et al. 2007). It is argued that defining social innovation is problematic "because *all* innovation, including technical innovation, involves social processes, and because every social change could be described as innovative in one way or another" (Bergman et al. 2010, p. 3,

emphasis original). Nevertheless, after examining various types of social innovation, Mulgan (2007, pp. 34-35) identifies three features that are common for all initiatives, which he names 'connected difference' theory. These common characteristics are as follows: 1) social innovations are not completely new but emerge by combining already existing elements, 2) social innovations work by going beyond "organisational, sectoral or disciplinary boundaries", and 3) social innovations result in building new social relationship between previously disconnected groups and individuals. Mulgan argues that this is an "overarching theory" that helps distinguish social innovation from technological innovation.

The mainstream approach to social innovation has been criticised from several points of view. First, one of the arguments made by Van Dyck and Van den Broeck (2013, p. 133) is that while there is an impressive number of social innovation examples in various economic spheres, the mainstream approach does not offer how these can "overcome causes of inequality and injustice". They further indicate that although networks are considered as 'driving factors of development', it is not specified how they can make social market economy more inclusive and sustainable. In addition, Jessop et al. (2013) criticise the mainstream approach for looking at social innovation from a narrow perspective based on technology, innovation economics and management science, and interpreting it from a micro-economic aspect, which does not make the connection between innovation and development, and is biased because it places social businesses at a higher position than social movements. Moreover, the authors imply that the recommendations of the 'official discourse' led to the privatisation of public services, which is regarded as profit-making social innovation. Jessop et al. (2013, p. 111, emphasis original) further argue that the mainstream approach focuses on economic agency and disregards the "*other types of socially innovative agency*". The importance of different agencies is examined by Hinchliffe et al. (2007) in a study about the financial aspects of setting up community gardens and the calculative agencies during a project formation, i.e. the measurable outputs required by the funding bodies who provide the financial support. However, Hinchliffe et al. suggest that besides the calculative agencies, the non-calculative agencies such as the abilities of people working on the project site, the commitment of the project coordinator, and the social relations that they build in the form of social capital play a vital role in the successful development of the project.

Another criticism to the official approach and particularly to the European Union Social Innovation Policy (EUSIP) is made by Fougère et al. (2017). They suggest that EUSIP is compatible with the 'neoliberal austerity politics' because it presents social problems like the budget deficit as given and rather than targeting their causes, aims at cutting the public expenditure as a solution. Another problem they discuss is that social innovations suggested in EUSIP are 'pragmatic', 'fast track' solutions that have no real transformative power but are shown as positive 'win-win-win situations' to prevent any bottom-up resistance. Fougere et al. call it 'ideological gloss'. And the final point of their criticism is that EUSIP puts the responsibility of social welfare provision to individuals and enterprises rather than the state. Nevertheless, they suggest that transformative social innovation can be delivered in the EU if these criticisms are addressed (Fougère et al. 2017).

2. Grassroots innovations, niche management and socio-technical transition approach

Another comprehensive body of literature on social innovation is related to the approach on grassroots innovations and socio-technical transitions. The term 'grassroots innovations' is suggested by Seyfang (2009, p. 64) to describe "networks of activists and organisations generating novel bottom-up solutions to sustainable development and sustainable consumption; solutions that respond to the local situation and the interests and values of the communities involved". This transformation of the term to 'grassroots innovation' entails an aspect of participation from bottom up, as well as experimentation with social innovations and green technologies, according to Seyfang. As such, grassroots innovations can be distinguished from green businesses where the involvement is at corporate level and driven by market forces. The conceptual framework builds upon the New Economics school of thought based on the idea that economics cannot be separated from its environmental and social contexts and principles of a broader understanding of wealth and work, with reintegration of ethics in economic life (Seyfang 2009, ch.3).

As suggested earlier, needs take central place in all the social innovation approaches. In a similar way, "meeting social and environmental needs" is one of the main drivers for grassroots innovation, according to Seyfang (2009, p. 72). She explains that the needs may not be some general, big problems that require worldwide change, but more immediate needs. However,

different from Mulgan (2006), Seyfang (2009, p. 74) suggests that ideology is the second driver, i.e. the "commitment to alternative ways of doing things". She explains that this is important, because the grassroots can be effective in solving problems where the governmental institution struggles to bring effective solutions; also, they can work on 'fringe' issues that mainstream actors are not interested in. Since grassroots innovations are closer to the roots of the problems, they might be in a position to understand better the local circumstances and thus, to influence local people's behaviour. Moreover, Seyfang evaluates grassroots innovations as the innovative means of the social economy juxtaposed to the market economy; this is the reason why the drive for the grassroots is not profit, since under social economy the surplus of what is produced or gained goes back to the grassroots. Therefore, the grassroots innovations should not be regarded as structural and big sustainability solutions, but as a different way of doing things that can lead to incremental changes (Seyfang 2009, p. 76). The grassroots innovation literature focuses particularly on three evolutionary approaches as analytical frameworks developed previously for the technological innovations: strategic niche management (SNM), transition management (TM), and multilevel perspective (MLP). These frameworks were successfully applied, separately or in combination, in studying grassroots social innovations such as community currencies and time banks (Seyfang 2004; Seyfang and Longhurst 2016), sustainable housing (Seyfang 2010), community energy (Hargreaves et al. 2013a; Seyfang et al. 2013), and Transition Towns (Seyfang and Haxeltine 2012; Feola and Butt 2017).

Strategic Niche Management (SNM)

SNM is proposed by Kemp et al. (1998) as a way for managing transitions; hereby the term 'transition' is specified as "system-wide change within society" (Seyfang and Haxeltine 2012, p. 381). SNM framework aims to describe the processes of niche formation and to identify the characteristics that make niches successful. It is based on the argument that the innovative ideas are created in spaces usefully called 'niches'. Therefore, grassroots innovation niche is described as a "protected space where suboptimally performing experiments can develop away from regime selection pressures [and] comprise[s] intermediary organisations and actors, which serve as 'global carriers' of best practice" (Seyfang and Haxeltine 2012, p. 383). Kemp et al. (1998) identify three main stages in niche formation. The first is about the *'coupling of expectations'*, when the niche is being set up and has to present itself to the wider groups to attract and involve

more actors. The next stage is the *'articulation processes'* when all the relevant conditions, needs, specifications and policies about the innovative product are determined, and the learning takes place. For the grassroots innovation niches the most relevant part is the learning. Seyfang and Haxeltine (2012) apply this stage to grassroots innovation literature as the '*learning'* stage. They differentiate between 'first-order learning' about what was learnt from previous initiatives and 'second-order learning', which relates to the ideological side of the movement or initiative. The final stage in the SNM framework as suggested by Kemp et al. (1998) is about *networking*. This is the stage that helps the grassroots niche to grow and attract resources by connecting to other actors.

SNM framework is used by Pesch et al. (2017) to examine how niches are created and what role do individuals take in this process. However, differently from the stages explained above, they apply SNM in combination with Kingdon's agenda-setting model, which is based on problem, solution and politics streams. Pesch et al. argue that in order to create a niche, all three of the streams should be aligned but also, "concrete and realizable solutions [should be] proposed" to complete the process (2017, p. 16). In terms of the role of individuals, for the leaders of the niches who are responsible for the overall control of the niche formation they suggest the term 'niche entrepreneur' in a similar way to Kingdon's 'policy entrepreneur'. Pesch et al. further suggest that niche entrepreneurs are people who possess the necessary knowledge and skills to guide others, and they are the ones who translate the proposed solutions into a concrete plan and create coalitions by mobilizing existing networks. The authors conclude that "niche formation depends on the mobilization of a resource base that is, by definition, controlled by regime actors" and these actors need to be persuaded "to give up their control" (Pesch et al. 2017, p. 18). They also emphasize that learning happens not only "*from* niches" but also "*for* niches", which means that it is an important element in niche formation.

The main critique to SNM framework is that it can only be used '*ex-post*', to evaluate retrospectively case studies; therefore, "it has not been applied prescriptively in ongoing processes" (Schot and Geels 2008, p. 548) and for this reason, its applicability in practice cannot be validated (Chang et al. 2017). In contrast, Lovell (2007, p. 37) criticises the niche model for being "normative, prescriptive approach" and argues that "in practice, such well-planned, long-term management is rare". However, Schot and Geels (2008) acknowledge that SNM is not a completed program.

Transition Management

Transition management (TM) is a model based on the niche concept and further extends the SNM approach. It describes the processes between niches and regimes, and how innovations can make a shift in the regimes (Kemp et al. 1998; Schot and Geels 2008). A socio-technical regime is a complex of institutions, policies and regulations, industrial and market relations, which are pervasive in a way that "entrenched cognitive, social, economic, institutional and technological processes lock us into trajectories and lock out sustainable alternatives" (Seyfang and Smith 2007, p. 588). This situation with 'locking' is also defined further as 'path dependence'. Therefore, making a change in the regime, e.g. setting a sustainability goal, requires the change to happen in all the components at the same time, or to "synchronise" changes among all these actors and institutions (Seyfang 2009, p. 68). In the case with food, for example, in order to translate a food innovation to the dominant food system, i.e. the regime, there is a need of simultaneous changes in food policy and regulations, agro-economy, related institutions, markets and society, to name some of these. Regimes evolve as the result of long processes of relationship between institutions and technologies, therefore they become 'embedded' and powerful while on the contrary, the niches are newer and unsettled. This power imbalance between regimes and niches challenges the translation of the new idea, which is why the regimes are also 'pervasive'.

Niches have the best circumstances to influence the regime when the regimes are less stable while on the other hand, they are regarded as 'marginal' when they challenge more stable regime (Smith 2007). The niches can influence the socio-technical regime, i.e. 'diffuse' in three ways: they can replicate and grow in number thus leading to 'aggregative changes', they can scale up or grow by engaging more actors, and they can translate the innovative idea into the regime or making the innovation 'mainstream' (Seyfang and Haxeltine 2012). While the first two ways do not directly lead to a shift in the regime, the third way is the one that describes the system's transformation. The grassroots innovations can be translated into the mainstream either when the "niche adapt[s] its practices to become more like the regime" or when the "niche takes on regime practices to enable more successful translation of ideas" and as a result, "only the most tangible aspects of the niche practice are diffused to the regime" (Seyfang 2009, pp. 176-178). In this case, they can be regarded as sources for learning sustainability (Seyfang

2009, p. 80). These ways of translation are also called “co-evolution patterns” (Schot and Geels 2008, p. 547).

However, the main contradiction for the niches is how to translate successfully the innovative idea to the mainstream and at the same time keep their alternative aspects. The niches emerge because of unsustainable practices or sustainability ‘cracks’ in the regime and are based on the idea of doing things in a different way; therefore, they are created “in opposition” to the regimes (Smith 2007). Another diffusion problem for the niches is to find the right circumstances, e.g. timing and the presence of tensions with the regime. Smith examines the case with organic food production as a green niche and its diffusion attempts (2007). The UK organic movement started in 1940 by setting up a farm for experimenting. Their first attempt to demonstrate how food can be grown sustainably and influence wider groups resulted in unexpected adverse reaction from the society that marginalised this innovation. According to Smith, regime tensions were absent because the intensive farming and massive use of fertilisers was yet to start and spread as a practice. However, the organic movement kept experimenting and made another attempt in 1960s – this time more successful - when the effects of the intensive farming were more palpable and the environmental movement was beginning to be more widespread. Smith (2007) further argues that the most important innovation they introduced, was the certification and labelling of organic products, which started in 1973 and resulted in ‘qualitative shift’ from organic movement to organic industry. He points out that the translation process is ongoing, but the regime “adapted elements” of the niche practice.

In addition to timing, the location may also be important. As Feola and Nunes (2014, p. 232) suggest in the case with the Transition Movement, “the geographical locations matter with regard to where transition initiatives take root and the extent of their success, and ‘place attachment’ may have a role in the diffusion of successful initiatives”. A final difficulty with social innovation relates to the quantification of its outputs of impact. For example, the carbon emissions saved thank to the Transition Towns movement, or social and environmental impact of community supported agriculture may be difficult to measure. Since this problem of quantification is important for the successful translation of social innovation niches into mainstream, some methods of measuring the estimated outputs, e.g. the estimated carbon emission savings can be developed (Bergman et al. 2010). This is again related to the calculative

and non-calculative agencies, examined by Hinchliffe et al. (2007), which affects the obtaining of both financial support and policy support.

Multilevel Perspective (MLP)

MLP is a non-linear and hierarchical model that further extends the niche-based transition approach. It is defined as "a middle-range theory that conceptualizes overall dynamic patterns in socio-technical transitions" (Geels 2011, p. 26). The relationship between regimes and niches is compared to the Giddens' concept of structure and agency in the way that regimes, where changes happen slowly, apply structural power upon the niches, which are the ones bringing radical changes (Smith et al. 2010). MLP places the niches and regimes within a broader, third macro-level called landscape, which is described as "an exogenous environment beyond the direct influence of niche and regime actors" and where changes happen slowly and take decades (Geels and Schot 2007, p. 400). Therefore, according to the MLP framework transitions happen when niche innovations develop and accumulate power in the micro-level, landscape changes put pressure on the regime, and when regime becomes unstable, the opportunity emerges for the innovations created in the niches to influence the regime (Schot and Geels 2008; Geels 2011).

However, Smith et al. (2010) argue that landscapes may work in both ways and sometimes strengthen the regimes instead of putting stress on them. On the positive side, MLP is seen as "useful for contextualising SNM" (Schot and Geels 2008, p. 550) and providing "a relatively straightforward way of ordering and simplifying the analysis of complex, large-scale structural transformations" (Smith et al. 2010, p. 441). However, there are also some points of criticism. One of these relate to the lack of guidance in clearly defining the three levels, which causes analytical difficulty (Chang et al. 2017). In addition, Geels (2011, p. 26) criticizes MLP for a number of issues, e.g. absence of certain agencies, regime not been clearly specified, and "bias towards bottom-up change models". In addition, landscape is regarded as a concept functioning as 'a garbage can' that accounts for different kinds of contextual influences (Jørgensen 2012). On the other and, Mehmood and Parra (2013, p. 58) criticize the multilevel perspective for representing social innovation merely as "technological improvements required for the sake of sustainability transitions" and disregarding the social side of innovation and sustainability.

Marsden (2013, p. 124) applies MLP to assess the period of global food crisis in 2007-08 based on qualitative data and scenario-building involving food supply network actors and stakeholders in Britain. Using the term '*bio-economic paradigm'* for the current regime or meso-level, he suggests that there is a "contestation of scientific, economic, technological and political paradigms, the bio-economic and the ecological economic paradigms". A similar argument about this contestation of paradigms was used by Lang and Heasman (2004, pp. 19-20) who referred to the dominant food regime as the 'productionist paradigm' and suggested that due to facing major limitations, it may result in a shift toward either 'life sciences integrated paradigm' promoting biotechnology, genetic engineering and nutrigenomics, or 'ecologically integrated paradigm' protecting ecological biodiversity and supporting communities and small farmers (Lang and Heasman 2004, pp. 25-27).

Further, Marsden (2013) examines the interplay between the niches, regimes and landscape in the proposed scenarios. He highlights the crucial role of the landscape pressures in this relationship, e.g. energy insecurity, population growth and changing diets, climate change, price volatility, resource depletion and pollution, food riots, export bans, food deserts, and farmer survival. In terms of the meso-level, he explains that the scenario evidence reveals "continued, and in some cases rejuvenated, commitment to the dominant paradigm", i.e. regime, due to the established 'first-order learning' frameworks. At the micro-level, Marsden (2013, p. 131) argues that food niches are "highly fractured and divided in their political opposition and articulation" and although regarded as 'marginal', they also face the danger of being 'appropriated' by the dominant regime. However, these places have the potential to connect producers and consumers by providing 'second-order learning'. Therefore, Marsden (2013, p. 124, emphasis original) concludes by emphasizing the need for "*reflexive governance* a*pproach* at different multi-level governance scales" for a transition toward more sustainable food systems.

In relation to the 'fractured and divided character of the food niches' as suggested above by Marsden, Blay-Palmer et al. (2016) research the possibilities of community food networks to connect via sharing good practices and knowledge. In their empirical study of an international online network and a transdisciplinary community-based food network, first they identify common challenges and opportunities in creating more sustainable food systems, and subsequently identify good practices as solutions. They conclude that by bringing different

community food initiatives together and sharing good practices, it is possible "to build a networked System of Sustainable Food Systems (SoSFS) as a counter-point to the corporate food regime" (Blay-Palmer et al. 2016, p. 39). Therefore, this presents one potential solution to the problem of scaling up the local food initiatives, discussed further in the section about the link between social innovation and social economy.

3. Social practice approach (strategic practice management)

Social practice theory (SPT) is another approach to study social innovation and social change in general. It is regarded as a competing approach to multilevel perspective and is also referred to as 'social practice management' (Cohen and Ilieva 2015). It explains how change happens on a micro-level, focusing on series of social practices. Some scholars (Howaldt et al. 2014; Howaldt and Schwarz 2017) consider as the base of the SPT and social innovation concept the nineteenth-century sociologist Gabriel Tarde's 'micro-sociological' and 'poststructuralist' approach of inventions as the drivers of social change and his laws of imitation. They argue that Tarde's theory views social innovation from a broader perspective, which overcomes the shortcomings of the "economically narrow view"; moreover, it enables us, by analysing imitations or repetitive actions establishing social practices and relations, not only to discover how social phenomena happens but also, how it can be transformed (Howaldt and Schwarz 2017, p. 8). However, others (Reckwitz 2002; Hargreaves 2011) recognise the works of social theorists like Pierre Bourdieu, Anthony Giddens and Theodore Schatzki as main contributors to the theory of social practices or 'praxeology'. According to Reckwitz (2002, p. 244), their "interest in the 'everyday' and 'life-world'" was related to the 'interpretative turn' in social theory after 1970.

Karvonen (2013, p. 568) views social practices as a "combination of materials […], competences […], and images […] that shape resource consumption". Therefore, they have the potential to make societal transitions as social change can be achieved by replacing old, unsustainable practices with 'accumulating' and 'stabilizing' new, more sustainable practices, e.g. more sustainable patterns of consumption" (Hargreaves 2011; Cohen and Ilieva 2015). Thus, according to Hargreaves (2011), there is a focus shift from how to change behaviours and choices toward how to cultivate new practices. In addition, Cohen and Ilieva (2015) suggest that the cumulative effect of everyday practices can make a shift in multiple socio-technical regime

at once, because even the basic social practices combine elements of various socio-technical systems. Also, they argue that tracing social practices can reveal any spatial injustices and 'uneven development'. Therefore, social practices are regarded by Howaldt and Schwarz "as a core element of social innovation and social change", and social innovation is defined as

> new combination and/or new configuration of social practices in certain areas of action or social contexts […] prompted by certain actors or constellations of actors in an intentional targeted manner with the goal of better satisfying or answering needs and problems than it would be possible on the basis of established practices (2017, p. 5).

The major advantage of the social practices approach is that by using as analytical unit everyday practices, it goes beyond 'dichotomies' like structure-agency or society-individual (Howaldt et al. 2014). Moreover, "it bridges individual lifestyles and broader socio---technical systems of provision" (Karvonen 2013, p. 568).

Some studies attempt to further extend the SPT approach by linking it with other theoretical frameworks on innovation or social change. Howaldt and Schwarz (2017, p. 12), for example, suggest that capabilities as human agency are an element of social practices, and therefore, the SPT approach can benefit from the capabilities approach (CA), which adds an ethical dimension to social innovation by focusing on 'human capabilities' and promoting "social change as human development". On the other hand, Hargreaves et al. (2013b) demonstrate how SPT and MLP, regarded as competing and even oppositional approaches, can be applied in a complementary way and overcome each other's' disadvantages. Firstly, they acknowledge the main differences of the two models; while MLP focuses on 'novelty', SPT is about 'normality'. Then they examine the similarities and the "points of intersection" between the hierarchical, vertical levels of MLP and the horizontal plane of practices by applying it to community-led social innovations, and conclude that those points of intersection between the two approaches are the constraining points that can be transformed into possibilities (Hargreaves et al. 2013b). A third approach applied in combination with the social practices approach is the product-service-systems (PSS) approach. It is rather a strategy that aims to change social practices by targeting existing routines of unsustainable consumption and offering sustainable products combined with service "integrat[ing] technology changes in behavioural change", e.g. "home-automation combined with consulting along value chains" (Liedtke et al. 2015, pp. 106-107). Real-life experiments

using this combined approach of PSS and social practices demonstrate, according to Liedtke et al., that practices in consumption of heating energy can change.

SPT (strategic practice management) has been successfully applied to a range of social innovation studies. In one of the studies about changes in domestic retrofit for energy efficiency purposes, Karvonen (2013) argues that there is a need for more efficient retrofit approaches and that community programmes are better suited to make systemic changes in energy consumption because rather than offering technological solution, they provide less straightforward policy responses and act to change the unsustainable households energy practices. In another study Cohen and Ilieva (2015) demonstrate a successful change in practices in the case of reintroducing the use of food stamps at farmers' markets in New York City, and suggest that cities have the potential to make sustainability transitions in other areas as well by applying strategic practice management. And finally, Hargreaves (2011) applies the social practices approach to examine an initiative called Environmental Champions that works on planning and introducing sustainable practices at organisational level, thus showing how introducing more sustainable practices can lead to a behaviour change.

4. Societal-territorial approach

Departing from the argument that social innovation research and literature has been long dominated by the "technology-based and business-oriented discourses", Moulaert et al. (2013, p. 19) offer an alternative approach by mobilizing the existing theories on empowerment, political participation, designing scenarios for a better future, and building relationship between agency, structure and culture. They criticise the 'innovation systems research' as interpreted in most of the projects under the EU Framework programmes, discussed earlier as the mainstream (official) approach, for being only about efficient organisations and societal structures, and being reductionist. Social innovation as a territorial approach has been developed in the late 1980s by the research network of SINGOCOM project (Social Innovation, Governance and Community Building) under the EU Framework 5 programme (Moulaert et al. 2005). The approach will be named 'societal-territorial approach' for the purposes of this research, based on Klein's (2013, p. 9) argument that social innovation should be approached "from a societal rather than just a utilitarian perspective".

According to Jessop et al. (2013) the mainstream approach and the societal-territorial approach are connected to completely different ontologies. They argue that the ontology of social innovation – hereby named societal approach - is based on fostering human development and therefore, it needs a relevant methodological framework. They suggest a methodological framework that relates to "the 'classic' tradition of understanding social innovation in the light of social change" (2013, p. 123). Moreover, they emphasise the strong connection between agency and society. Therefore, the difference of the societal-territorial approach from the other social innovation approaches is that it is about fostering social inclusion including transformative social practices and aiming at social change and human development.

MaCallum et al. (2009, pp. 1-2) explain that this "concept rejects the traditional, technology-focused application of the term 'innovation', which has been central to recent European development policy, in favour of a more nuanced reading which valorizes the knowledge and cultural assets of communities and which foregrounds the creative reconfiguration of social relations". However, they add that two characteristics of social innovation remain common in all different approaches, namely, meeting human needs and changing social relations. Moulaert et al (2013) draw attention to the two sides of social innovation; on the one side, it can be a key to social change and human development, but on the other, it is used as a remedy for the problems of the welfare state by privatising some services, which resonates with the argument about the neoliberal appropriation of the term mentioned earlier. From epistemological point of view, social innovation in the societal-territorial approach is regarded as part of a paradigm shift; and from an ethical perspective, it is a way of collective learning and improving the lives of the most vulnerable people by empowering them; as from a strategic perspective, it is considered as a project where different actors work together to produce and share the results of their work (Klein 2013).

Social innovation is identified by Moulaert et al. (2013, p. 13) as "significant changes in the way society evolves, […] its structures are modified, its ethical norms revisited." In its practical aspect, it emerges through collective action, social movements, or public policy; and in research aspect, it takes place in theoretical and methodological debates. It is suggested that social innovation does not necessarily mean introducing something new, but returning to 'old' mechanisms, tools or institutions can be 'novelty' if these work better toward inclusion

(Moulaert et al. 2005). Moulaert et al. (2013) describe social innovation as a way of addressing social problems like exclusion, deprivation and lack of wellbeing, improving human conditions through satisfaction of needs, empowerment and improvement of social relations not only between individuals (micro relations) but also groups of people (macro relations). For them, social innovation is about social inclusion and about countering or overcoming conservative forces that are eager to strengthen or preserve social exclusion situations. Social innovation therefore, explicitly refers to "an ethical position of social justice" (2013, p. 17). Miquel et al. (2013, p. 155) offer a similar definition:

> Social innovation refers to processes that generate a) the provision, in response to social needs, or resources and services, b) the development of trust and empowerment within marginalized populations, and c) the transformation of those power relations that produce social exclusion though the transformation of governance mechanisms.

The three bullet-points in the definition refer to the dimensions of the social innovation, also included in the analytical model ALMOLIN (alternative model(s) for local innovation), a model that enables mapping the relationship between causes of deprivation of human needs and social exclusion, and the way resources are mobilised to create social economy initiatives and a bigger movement for change by addressing these three dimensions (Moulaert et al. 2005). ALMOLIN is explained in more detail in the following sections. Moulaert et al. (2005) point out that in the first dimension, also referred to as 'product' dimension, the focus is on 'alienated basic needs that have not 'yet' been satisfied or are 'no longer' considered as important by the private or public sector. Parra (2013) also clarifies that needs in social innovation approach can be both material and existential and may be collectively defined by communities, or there might be needs that have not been satisfied through other channels. However, the product dimension also means that the focus should be on the outcomes of the social innovation and its impact on a social change (Baker and Mehmood 2013). The other two dimensions are changes in social and governance relations, and increasing the socio-political capabilities and access to resources, respectively referred to as process and empowerment dimensions (Moulaert et al. 2005). In a different way, Gilles Deleuze regards social innovation as a way of "building workable 'utopias'" as well as "opportunity spaces at micro scales [that] may make creative strategies possible at macro scales" (Moulaert et al. 2013, p. 17), i.e. community initiatives that can make change in institutions and policies at macro level.

Links between social innovation and social economy

Social economy is a source of innovation (Howaldt et al. 2014). It was rediscovered with the 'neoliberal turn' and the economic and environmental externalities caused by the 1970s' and 80s' crises as an alternative movement looking for new ways of economic organisation (Jessop et al. 2013). It is about an alternative vision for the economy that is different from the narrow, neoliberal representation of the economy as 'a monolithic entity' detached from social life. This alternative vision is based on social institutions and practices, and different kind of social relations that bring empowerment of people and communities at each level (MacCallum et al. 2009, p. 1). Jessop et al. (2013) underline the growing importance of the social economy due to the urgent threat of energy, food, water and environmental insecurity. Defourny and Nyssens (2013, p. 42) explain that in the European tradition, cooperatives, associations, foundations and all non-profit organisations within the third sector that pursue "a long historical quest for economic democracy" by providing goods and services to the public rather than making profit and being governed democratically, are framed as social economy. They identify two significant links between social economy and social innovation. Firstly, the aim of social economy is to satisfy human needs, since it is not driven by profit but by the aim to benefit the community, which relates to the first dimension of social economy as suggested in the earlier definitions (Moulaert et al. 2005; Miquel et al. 2013). The second link is the way the social economy shapes legal frameworks through participatory governance and thus, it relates to the empowerment dimension of social innovation (Defourny and Nyssens 2013). Meanwhile, Jessop et al. (2013) add that the recent developments in the social economy relate to other dimensions of social innovation as well, such as developing social relations beyond the relations of production and empowerment.

Defourny and Nyssens (2013) also examine the relations between social entrepreneurship, social economy and social innovation, and while on the one hand distinguish between different types of social enterprises, on the other hand draw attention to the 'blurred frontiers' between public and private socially innovative entrepreneurship. They also highlight the recent trend of diversification on the actors in social enterprises working on the same project, where even users and suppliers work and manage together. However, Jessop et al. (2013) indicate that social entrepreneurship is only one type of socially innovative actors, and it is essential that all types

promote new forms of collective, problem-oriented learning. They see the involvement of various stakeholders as a key to developing relations and trust, and obtaining variety of resources. However, they also argue that to be able to address the problems of deprivation and social exclusion, social economy needs 'recalibration', which means securing the conditions for a viable, local, solidary economy, becoming economically more self-sufficient and 're-inserting' itself into the wider economy. Recalibration of the social economy, according to Jessop et al. (2013) relies upon a wide range of bottom-up initiatives and an organisation to guide and support these in networking and spreading good practice. On the other hand, Sonnino and Griggs-Trevarten (2013, p. 286) argue that the social economy has limited scaling potential because of its 'local embeddedness'; and when there is low demand, "reaching out to customers in other regions is not really an option" as it means diverting from its localness as a core value. Therefore, they suggest that the only option is the replication of the social economy initiatives.

Links with sustainable development and social sustainability

Mehmood and Parra (2013) examine the relations between sustainable development and social innovation. They argue that sustainable development and social innovation taken together can provide 'clear directions' to a more sustainable world. They draw attention to the tendencies to reductionist interpretations of sustainable development, i.e. weak sustainability approach, where the pillars are taken separately and there are trade-offs between economic and environmental pair of pillars at the cost of the social, and a lack of integrative interpretation. Mehmood and Parra (2013, p. 54) define social innovation as a "collective action that seek to address the unsatisfied needs for sustainable development" and argue that the disconnectedness in social development due to separating its economic, social and environmental dimensions can be overcome by social innovation but it needs more explicit focus on environmental sustainability, social relations, heritage and culture. In addition, Parra (2013) also examines the links between social innovation and social sustainability, and regards these two concepts as 'complementary' and 'mutually reinforcing' since they both are concerned with needs and lead to sustainable societal transformations.

Territoriality and governance

The relation between social innovation and territoriality, according to Van Dyck and Van den Broeck (2013, pp. 137-138), increases the local autonomy. They see the territorial development as a complex mesh of internal and external networks where resources are mobilised and there is "interplay between local and external forces". Moreover, the territory is not only a material place but embedded in its historical and social context, which is the reason why in order to solve the fundamental problems embedded in the territory, social innovation should not be considered as a way of creating new markets but in a broader context (Van Dyck and Van den Broeck 2013). This is also referred to as 'socially innovative sense of place' (Miquel et al. 2013). An important point here that needs to be clarified is what 'localism' means and what kind of local governance is desired. Moulaert et al. (2005, p. 1978) caution about three dangers in terms of localism. One is the danger of 'socio-political localism', which he describes as "an exaggerated belief in the power of the local level agency and institutions 'to improve the world', disregarding the interscalar [sic] spatiality of development mechanisms and strategies"; another danger is the 'existential localism', which is "the idea that all needs should be satisfied within the local heimat, by local institutions"; and the third danger is 'misunderstood subsidiarity', which happens when the state 'shed' their responsibilities to the local level. Furthermore, Moulaert et al. (2005, p. 1979) argue that a type of governance where the local-level institutions "completely conform" to the higher-level institutions, i.e. "a Russian-dolls local development model" where the smaller doll in the middle is trapped by the bigger ones, should be avoided.

It was explained earlier that change in governance relations is one of the dimensions of social innovation. Therefore, dynamics between social innovation and governance play an important role in social change and transformation of governance. Miquel et al. (2013) explain that multi-level governance was, to some degree, a result of the inability of governments to efficiently address urban and regional social diversity and "new social risks" but despite decentralising welfare provisions, the government kept its control over fiscal resources. The new approaches to sustainability included governance as a fourth pillar of sustainable development; however, for Parra (2013, p. 142, emphasis original) governance is *"the* fundamental engine of the sustainability system*"* and therefore, it should be plural and interactive by involving groups of people, community organisations, socio-environmental movements, individuals, and

leaderships. The need for a more reflexive governance in social innovation was discussed earlier related to the MLP (Marsden 2013).

Similarly, Miquel et al. (2013, p. 155) describe multi-level governance as a new form of organisation where the power is more equally distributed and different types of actors participate to policy-making along with the state actors, which brings a "higher degree of decentralization and the openness of decision-making processes to non-state actors" and results in blurring of the boundaries of responsibilities between state, market and civil society. Thus, civil society and market actors have better opportunities to influence policy-making processes. Parra (2013, p. 149) emphasizes the importance of learning, which should not be limited to "technical rationality and scientific protocols", but knowledge and learning from different actors should be incorporated in governance of territories. Miquel et al. (2013, p. 156) see social innovation as a result of "a creative collaboration between public actors or market agents and civil society organizations pursuing the empowerment of citizens and the change of social exclusion dynamics". If citizens' political capacity is strong, they can influence institutions in their policy decisions; however, if they are not mobilized enough, their objectives remain modest, and their influence remain within the boundaries of their community (Miquel et al. 2013).

ALMOLIN

ALMOLIN stands for 'alternative models for local innovation' and was developed by Moulaert et al. (2005, p. 1971) to organise the case studies of their work on SINGOCOM project, but then it became "a framework for the discussion of the meaning of social innovation". They combined three lines within the model, which are the 'movement and social philosophy line' about the various ideologies and social movements in Europe, the line of 'living experiences', and the theoretical debate on the meaning of social innovation. The different dimensions of social innovation that are included in ALMOLIN, are presented in the Figure 2.1.

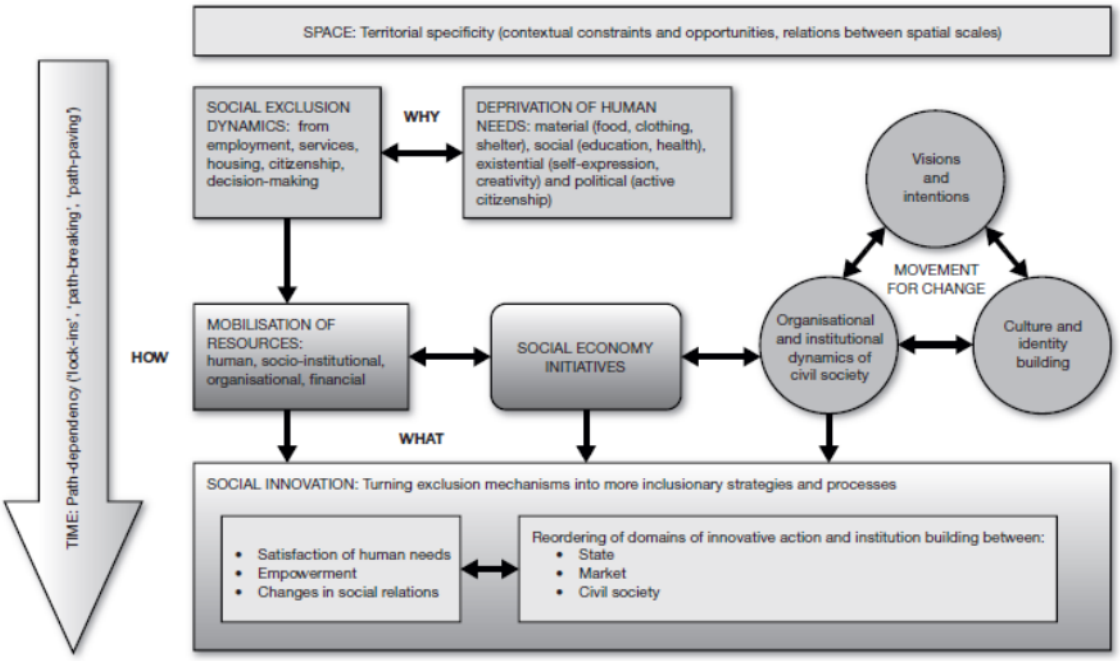


Figure 2.1. Dynamics of Social Innovation (González et al. 2010, p. 52)

The figure shows how deprivation of human needs and social exclusion lead to countering these by mobilising resources to create a social economy initiative around a shared vision for change. Gonzalez et al. (2010, emphasis original) explain some connections within the model. (1) The first is the '*time and space'* dimension and shows the path-dependency [sic] either as creating 'lock-in' situation that blocks the change, or 'path-paving' when it supports the social innovation, or 'path-breaking' when it leads to a sudden transformation. (2) '*Social exclusion dynamics'* is the second dimension and relates to the needs that caused a reaction. Gonzalez et al. describe these as material, social and existential deprivation. (3) Another dimension is the '*mobilisation of resources and social innovation'* and reveals the link between mobilising resources and creating the socially innovative initiative. (4) '*Satisfaction of human needs'* relates to the satisfaction of 'alienated' needs as the result of mobilising social and institutional resources. Here the authors draw attention to the relations between the civil society and the state in mobilising the resources, and the different roles that social economy can play. (5) *'Empowerment: visions, culture and identity building'* is about creating common visions for change and empowering people by including them in decision-making and service provision. Decision-making can be at different levels of governance.

(6) *'Changes in social relations'* is about changing power relations between the state, civil society and the market and results in changing the governance relations between market economy and social economy. However, this dimension also relates to changing relations within the initiative as well. (7) '*Territorial specificity*' is the final dimension that shows the way the social initiatives are spatially embedded within specific territories and their ability to have a broader institutional and socio-economic influence. Gonzalez et al. (2010) further suggest that the main question to be answered is about the impact of the initiatives in terms of social innovation, in other words, whether they satisfy alienated needs, whether they empower, and whether they change social relations. And finally, they suggest some 'pointers' in the form of detailed questions that can better identify the impact of the initiatives, namely "a) *why* did a socially innovative initiative emerge, in reaction to what and/or inspired by which visions or philosophical legacies; b) *how* did it unfold, mobilising which resources, with what organisational structure and in what relation with other institutions and agents (governance aspects); c) *how wide* in spatial terms; d) *what* was the socially innovative content; and e) *how long* and lasting was the 'new'" (González et al. 2010, p. 57).

II. Alternative Food Networks: Innovative and Transformative Potential

This section focuses on the debates about the role of alternative food initiatives and movements, and their potential to make change in the agri-food systems. The proliferation of the alternative food movement with its various forms is regarded as part of a "new wave of social activism" (Goodman et al. 2011, p. 3) and a response to the growing problems of the conventional food system (Mount et al. 2013) and "multiple political and economic crisis that is also affecting agri-food system development" (Renting et al. 2012, p. 294). Wiskerke (2009) suggests that upscaling the supply chains for cost effectiveness coupled with growing number of quality control systems and production regulations resulted in disconnection, disembeddedness and disentwining processes in the food systems, which led to ecological degradation, pressure on farmers, health problems, loss of organoleptic diversity, and distrust in food. In a similar way, Renting et al. (2012) points out that the liberalisation of the markets, rising concerns over food safety and quality, and the resulting CAP reforms in public policy led to corporate domination over the markets and reduced the role of civil society to passive buyers of food products.

Therefore, the emergence and spread of different forms of alternative food initiatives and networks is described as 'quality turn' (Goodman 2004) where consumers turn away from standardised industrial food toward quality food that is traceable, transparent, and low-input. Named also as 'economies of quality', alternative food networks (AFNs) have three common characteristics: they "redistribute value through the network against the logic of bulk commodity production; […] reconvene `trust' between food producers and consumers; and […] articulate new forms of political association and market governance" (Whatmore et al. 2003, p. 389). These are also characterised by developing new relationships between consumers and producers, and re-localisatisation of food (Sonnino and Marsden 2006; Wiskerke 2009). Morgan et al. (2006, pp. 166-167) refer to the emerging alternative movements as "the new moral economy", which places importance on values such as health, well-being, and education, juxtaposed to the neo-liberal economy, which is profit oriented.

From a conceptual point of view, Renting et al. (2012) suggest that the concept of 'alternative food networks' is unclear and unsatisfactory as it is only defined by its distinctiveness from the conventional food networks. They point out that the dichotomy of alternative-conventional is also problematic since the differences may change over time. In a similar way, according to Goodman et al. (2011, p. 5), the interface between the two is "highly permeable and confusing as actors compete to control these new income streams". Accordingly, Renting et al. (2012, p. 293) propose the concept 'civic food networks' instead, which is characterised by new relationships between producers and consumers, "cooperation between different local actors", increasing role of civil society, creating "new knowledges", and "linkages with other new social movements". More importantly, 'civic food networks' are related to food democracy, food sovereignty, and food citizenship, and are seen as a mean of "reclaiming influence on the organization and operation of food production" by civil society (Renting et al. 2012, p. 298).

Transformative potential of alternative food initiatives

Reflecting on the diversity of alternative food initiatives, Mount et al. (2013) argue that even though in principle these initiatives have similar objectives, they show differences according to the way they prioritise these objectives, which has an impact on their operation and the challenges they face. Sonnino and Marsden (2006) draw attention to the different meanings and

definitions of quality related to different cultural traditions, production processes, consumer perceptions, or climate. They argue that in 'southern' European countries like France or Italy, for example, meaning of quality is shaped by the quality of the food product, e.g. preference of traditional and regional foods, while in 'northern' countries like Germany, the Netherlands, or the UK, quality is defined by the commitment to environmental sustainability or animal welfare. However, Watts et al. (2005, p. 34) interpret these differences as 'weak' or 'strong alternatives' "on the basis of their engagement with, and potential for subordination by, conventional [food supply chains]" rather than regional-cultural differences. While they see 'defensive localism' and putting emphasis on the product rather than the network as a weak alternative, they suggest that 'revalorised' short food supply chains are strong alternatives that provide spatial, social and economic alternatives to conventional networks and can offer wider range of products. But they also caution that this classification might be problematic due to the struggle of these initiatives for economic viability and their potential for creating social exclusion.

In a similar way, Follett (2009, p. 32) differentiates between weak and strong AFNs based on the conventions they use, where the first type "incorporates conventions of both neo-liberal and moral economies" as opposed to the strong AFNs that "fit within the moral economy" because they use moral economy's conventions of "equality, fairness, value and welfare". He explains that the strong AFNs have better potential for creating social change because of their conventions such as human and animal welfare, community-building, supporting small scale farmers, ecological sustainability, trust and transparency. In another classification, Duncan and Pascucci (2017) differentiate between isomorphic and polymorphic AFNs based on their organisational form. The isomorphic networks adopt organisational forms present in the dominant food regime, e.g. they are bureaucratic in terms of standards, rules, branding and quality labels; also, they use market mechanisms. On the contrary, the polymorphic AFNs are organised around community, based on democratic relations and shared values. The authors examine and compare the international CSA network Urgenci and Slow Food International, and come to the conclusion that the polymorphic organisations have better potential to "advance alternative pathways for transition […] as their practices are less likely […] to be co-opted or conventionalised" while "isomorphically organised networks […] have the potential to facilitate practices that serve to reinforce the neoliberal logic of the current food system", therefore, they fail in creating alternatives (Duncan and Pascucci 2017, pp. 332-334).

The literature on the alternative food movements presents polarised views about their transformative potential. While some authors focus on transition pathways and the capacity of these movements to make change, others are more sceptical and bring forward the barriers and challenges. Mount et al. (2013), for example, argue that concerns about becoming economically viable that leads the AFNs to adopt hybrid marketing strategies, is a potential factor that prevents these networks from making a larger-scale impact in the food systems. Similarly, Blay-Palmer et al. (2013, p. 526) emphasize the importance of long-term economic viability for the survival of the initiatives, and draw attention to challenges such as insufficient funding and "over-reliance on volunteers". Matacena (2016) emphasizes the difficulty of attracting more people into the social learning in these initiatives and thus incorporating the new knowledge and values into their daily lives. He argues that producers and consumers need new and revived knowledge and skills to diffuse the AFNs. Other barriers reported by Calvário and Kallis (2017) for alternative economies in the Basque Country and Greece are access to land, economic viability, repression from the authorities, co-optation and fatigue of activists.

Contrary to the 'sceptics', many authors express positive views about the transformative power of alternative food initiatives, and suggest different ways for transition. For example, Brunori (2007, p. 9) suggests that local food has the potential "to detach consumers from conventional food networks and attach them to alternative food networks"; however, to be able to reconcile different interests of the actors, they need to find shared meanings in order to act together. In addition, Marsden and Smith (2005) point out that alternatives are emerging and diffusing in spite of the regulatory barriers that pressurise the producers for standardised and cheap food. Calvário and Kallis (2017, p. 598) evaluate the alternative food initiatives through the theories of anti-power, counter-power and anarchism and indicate that social change will come by "expanding de-commodified spaces", resisting the attempts for co-optation by the conventional system, and connecting the "cracks" within the capitalist system. They add that the success of the transformation depends on shifting the balance of power within society.

Furthermore, Brunori et al. (2010, p. 29) suggest that even though AFNs cannot make great impact in short term, "they can have a tremendous impact on minds and hearts, as they suggest different way of looking at things, different innovation pathways, and different rules and norms". An important question related to the transformative power of AFNs is whether these

are oppositional to the regime or 'primarily alternative' (Morgan et al. 2006, p. 188). Sonnino and Marsden (2006, p. 191) argue that depending on their location and social context, local food networks can be either alternative or oppositional to varying degrees. They compare the food networks in Spain and Italy, which they describe as oppositional due to historical context, to those in the UK, the Netherlands and Ireland, which they regard "as an alternative economic and social assemblage which creates new producer–consumer linkages".

Pathways of transition

Various pathways suggested in the literature show how AFNs can be developed and how their transformative capacity can be increased. Morgan et al. (2006, p. 87), for example, indicate that the emerging networks need support from external institutions besides creating their internal quality assurance systems in order to escape from the 'lock-in' effects originating from landscape pressures. In addition, Follet (2009) suggests two ways of promoting the strong AFNs: government policies that benefits these, and physical spaces for participants to interact about social change. Another contribution to the debate is made by Brunori et al. (2010, p. 31) who examine AFNs from the socio-technical transition theory perspective in the case of solidarity based purchasing groups, and differentiate between 'novelties' and 'niches'. They define novelties as "unstable actor-networks striving for stability through translation processes" and "outcome of learning processes", which consequently turn into niches when stabilise. They maintain that innovation is co-produced by all the actors in the network via social learning and aligning their norms, patterns, and routines.

Wiskerke (2009) brings a different viewpoint by interpreting AFNs as part of a larger concept of alternative food geographies where public procurement and urban food strategies are added as the other two dimensions. Therefore, he examines the potential of alternative food geographies for reversing the processes of disconnection, disembeddedness, and disentwining in the agri-food system as discussed earlier. Matacena (2016, p. 53) advances this argument by establishing the links between AFNs and urban food strategies. He regards AFNs as "naturally comprised within [the] promotion and regulation efforts" of food policy councils and urban food strategies. The author further interprets urban food policies and AFNs as originating from the same drive to address the problems of the food system. Finally, he explains that urban food policies can be

instrumental for the transformative role of AFNs by providing infrastructure, spatial planning and public procurement, which can accordingly provide outlets and growing spaces for these networks.

Social exclusion and AFNs

AFNs are widely criticised for being socially exclusive and producing only for middle-class consumers (Renting et al. 2012) and predominantly 'white' people (Guthman 2008). For example, Goodman (2004, p. 13) identifies these as "a narrow 'class diet' of privileged income groups" and "socially exclusive niches rather than the future of European rural economy and society". Likewise, Matacena (2016) maintains that instead of including the disadvantaged population, AFNs perpetrate the social inequalities. Therefore, Sonnino and Marsden (2006, p. 193) ask the question whether "alternative food networks [are] a 'bourgeois' phenomenon […] restricted to high-income groups", or they can "eventually penetrate the problems of low-income urban 'food deserts'".

Hinrichs and Kremer (2002, p. 68) define social inclusion "as an ongoing and reflexive process of full and engaged participation by all interested or affected social actors, regardless of their socio-economic or cultural resources" and argue that it can be improved by broad participation. However, they maintain that "to achieve substantive, rather than merely nominal social inclusion, projects generally need to work explicitly on developing the resources and capacities of specific disadvantaged groups and individuals". Shortall (2008, p. 451), on the contrary, defines social exclusion as "the lack of access to, or denial of, a range of citizen rights, such as adequate health care or educational success, and also a lack of societal integration, through limited power, or the ability to participate in political decision-making". She adds that both 'social inclusion' and 'social exclusion' are contested terms, and that not participating does not always mean exclusion but it can mean a choice.

Caraher and Dowler (2014) argue that alternative food initiatives like farmers' markets and CSA do not directly exclude people because they are open to anybody to participate. In some cases, there are people with income below the national average, who prefer to buy from these initiatives because of the better value (Cox et al. 2008). However, Caraher and Dowler (2014)

also emphasize that the alternative food interventions must include people who do not have access or the economic and social means.

Since deprivation and exclusionary dynamics are central for the social innovation theory and the ALMOLIN model, it is worth examining to what extent the community food growing initiatives in Wales address this issue. But also, clarity is needed regarding the specific exclusionary conditions that led to the emergence of these initiatives and about the meaning of social exclusion.

Concluding remarks

Marsden and Franklin (2013, p. 637) argue that rather than marginalising the alternative food movements, we need to regard these as "the beginnings of an antidote to neoliberal orthodoxies". In addition, Renting et al. (2012, p. 303) point out that civic food networks are gaining momentum "as a breeding ground for alternative ways to organize food provisioning and potentially as a countervailing power to the dominant agro-industrial food system" although it is early to understand whether they can make long-lasting transition. It is evident that more research is needed to further study this phenomenon.

For example, according to Sonnino and Marsden (2006, p. 194), investigating "how actors involved in alternative food networks see their role in challenging and reshaping the agri-food system is an essential step for understanding the nature of these networks and their potential for new forms of rural development". Finally, Marsden and Franklin suggest that theories need to be developed at different levels: micro-level theories by studying "the internal logics and external interfaces" (2013, p. 637) of the alternative food initiatives, meso-level theories concerning the scaling these initatives up and out, and macro-level theories by conceptualising local food "within this wider advanced capitalist conundrum" (2013, p. 639).

III. Sustainable Food Systems

This part scrutinizes what is meant by sustainable food systems and why is it important, and attempts to define the food sustainability as the aim of the social innovation and the final state

of the desired social change. First, it discusses the problems of the dominant food system, or the food regime. Then it examines food sustainability as part of the wider sustainability debate, before finally viewing different framings of food sustainability and suggesting a definition.

Humanity is confronted with big and complex sustainability challenges related to "potentially irreversible social, economic and ecological 'externalities'" (Marsden and Morley 2014, p. 10). Food is a crucial part of this picture with concerns about the ability to feed the growing world population in the immediate future coupled with health issues. From the standardisation of food production and industrialisation of food supply (Murdoch and Miele 1999) to intensive farming, bio-engineering, long food supply chains, and retail centres (Lang and Heasman 2004), the food system reached completely different levels only in a few decades.

On the one hand there are agri-food problems such as depletion of the natural resources, land degradation and destruction of croplands (Lang and Heasman 2004, p. 43), "soil salinity, soil and water contamination and loss of biodiversity" (King 2008, p. 113). On the other hand, the rapid urbanization led to a growing distance between food producers and consumers (Martin and Marsden 1999) causing territorial disembeddedness of food (Wiskerke 2009; Turner 2011), small farmers being "squeezed out of the sector" (King 2008, p. 113), alienation of food and its producers, "loss of people's abilities to grow and prepare food" (Power 1999, p. 32) coupled with malnutrition, hunger and food-related health problems (Lang and Heasman 2004, pp. 60-61; Lawrence et al. 2010). When adding to this picture the recent food crises caused by the declining production, growing consumption, insufficient stock reserves, rising oil prices, biofuels and financial speculations (Liverman and Kapadia 2010) and the food riots and land conflicts (Morgan and Sonnino 2010) , it becomes clear that there is an urgent need for transformation of the food system and transitioning towards more sustainable way of food provision and consumption. Marsden and Morley (2014, p. 24) advise that such a transition will need the support of all sectors, new science-public-consumer alliances and "effective spatial and sustainable management that harnesses the innovative potentials of a new equation between our growing cities and much needed but vulnerable countrysides".

Therefore, food sustainability is regarded as part of a wider 'sustainable development' paradigm. The concept was first defined in the Brundtland Report of 1987 *Our Common Future* as "meeting the needs of the present without compromising the ability of future generations to

meet their needs", and is presented as the well-known model with three dimensions: economic, environmental, and social (Giddings et al. 2002, p. 188; Parra 2013, p. 147). It has since been interpreted in many different ways due to its ambiguity (Hopwood et al. 2005) and also included in the Local Agenda 21 in 1992, calling for partnership between corporations and the environmental groups (Redclift 2005). However, both Local Agenda 21 and the ways of interpreting the 'sustainable development' concept have been criticised for disguising social problems and conflicts under 'environmental' policies influenced by various political actors (Redclift 2005).

Another criticism was made for substituting one dimension with another, which led to the priority of the economic over the environmental and social dimensions with the impact of the corporate dominance in the decision-making (Giddings et al. 2002). However, the recent sustainability literature distinguishes between 'weaker sustainability' approach, in which the pillars are taken separately in a way that there are trade-offs between economic and environmental pair of pillars at the cost of the social, and 'stronger sustainability' that puts emphasis on the ecological preservation and suggests new dimensions to be added to the model, e.g. indigenous and local culture and heritage (Mehmood and Parra 2013) and governance (Parra 2013). Moreover, Martínez-Alier et al. (2010) argue that sustainable development still does not provide viable solution to the developmental problems and is becoming weaker as a paradigm; therefore, there is a need for a different interpretation of 'development', one that has been decoupled from economic growth and measured with well-being instead.

Marsden and Morley (2014, p. 25) argue that it is important to "critically address different framings of food sustainability" in order to advance the research and process of transformation. For this purpose, it is necessary to examine the various interpretations of the concept of food sustainability and determine the one that will provide best guidance for the research. Aiking and de Boer (2004) focus on three main aspects, namely, food security as a priority of the developing countries, food safety as a key issue in the developed countries, and democratic multi-level governance with an emphasis on transparency. A much broader definition that comprises some additional aspects is formulated by Kloppenburg et al. (2000, p. 177) as a result of discussion groups with people from the alternative food community, who suggest that sustainable food

systems should be “relational, proximate, diverse, ecologically sustainable, economically sustaining, just/ethical, sacred, knowledgeable/communicative, seasonal/temporal, healthful, participatory, culturally nourishing, and sustainably regulated”.

Yet in another definition of the University of California Sustainable Agriculture Research and Education Program’s (SAREP) cited by Feenstra (2002, p. 100), sustainable food systems are regarded as community food systems that “build more locally based, self-reliant food economies – one in which sustainable food production, processing, distribution and consumption is integrated to enhance the economic, environmental and social health of a particular place”. And finally, Lang and Barling (2012, p. 323) suggest that food security can only be achieved via sustainability and the term ‘food security’ might “be replaced by a more all-encompassing term such as sustainable food systems”. Accordingly, they refer to the definition of the UK Sustainable Development Commission, which is more overarching and includes additionally the aspects of social justice, health, food security, ecology, diversity, resilience and skill-building. It identifies sustainable food systems as the ones “where the core goal is to feed everyone sustainably, equitably and healthily; which addresses needs for availability, affordability and accessibility; which is diverse, ecologically-sound and resilient; and which builds the capabilities and skills necessary for future generations” (SDC 2009; Lang and Barling 2012, p. 321). The definition will be used for the purposes of this research by adding democratic multi-level governance and transparency to it, since it is encompassing and includes the different aspects of the food systems.

IV. Community Food Growing

There has been an increasing interest in community food growing in the last decades, which is also reflected in the growing body of academic literature that focuses on its different aspects (Guitart et al. 2012). The rise in the number of community food initiatives can be attributed to a desire to address the pressing problems of the food system, articulated in the previous part of this chapter, and triggered by macro-scale changes, such as global warming, rapid urbanisation, peak oil, food insecurity, ecological and health problems, and more recently, food crises. Franklin and Morgan (2014, p. 171) describe this phenomenon as a shift in agricultural and food policy characterized with the inclusion of new values driven by non-traditional actors and the

rising importance of entrepreneurship. They name it 'neo-productivism' and define it as "the growing desire shown by members of civil society to become more meaningfully and seriously engaged with greenspace and the natural environment, in either a rural or an urban setting". On the practical side, the term 'community food growing' is applicable to a wide range of activities and different forms of food production. Community gardening, which generally refers to practices where communities come together to grow food on vacant lands and socialise, is the most widespread form, judging from the impressive number of the initiatives (FCFCG no date-a).

Community supported agriculture (CSA) is also emerging as a form with a promising institutional and networking potential (CSA_UK no date-b), and is about bringing food producers and consumers together, also regarded as an alternative sustainable consumption tool. Some other forms of community food growing include community orchards, forest gardens, school gardens and city farms. From another point of view, community food growing initiatives are regarded by King (2008) as alternative food practices and agri-ecological systems that can be pathways to resilience and sustainability, including organic farming, permaculture, farmers' markets, and biodynamics. She suggests that all these practices, which are not mutually exclusive and are rooted in the traditional agriculture, can be considered as a "bridge between the traditional agriculture [...] and natural resource management" (2008, p. 111) aiming to address the social and environmental injustices, and emerged as a response to the damaging impacts of the Green Revolution and intensive agriculture on the natural systems. In addition, King (2008) strongly emphasizes the crucial role of both community gardens and CSA for learning and developing skills in the community. This study will focus specifically on community gardens and CSA as two main types of community food growing.

1. Community Gardens

a. Definition and history

Community gardens show a great diversity in terms of their size, purpose, management, location, and communities involved. Hence, there are different definitions of what community garden is. For example, Holland (2004) identifies community gardens as plots of open public

spaces that are managed and operated by the public, and for the benefit of the public. Slightly differently, Okvat and Zautra (2011) interpret community gardening in an urban context and define it as a phenomenon for people who live in urbanized areas and generally do not have their own land or have limited access to the land they have. In a similar way, Martin and Marsden (1999, citing Hynes 1996, p.viii) define community gardens as "an innovative kind of urban renewal, one undertaken with the cheapest of resources: seeds, soil, and the sweat equity of inner-city people". Yet another definition implies an organizational structure, in which individuals are responsible for their own plots, but have equal responsibilities in the garden's overall management (Lawson 2005, p. 3). However, despite their diversity and different framings, community gardens are mainly associated with the neighbourhood concept. Community gardening therefore, is not a new phenomenon.

Its history goes back to the late 1800s in the US where large scale urbanization and migration to big metropolis coupled with the economic depression impoverished many families. Under such dire circumstances, the poverty-stricken individuals who were severed from means of production necessary for their survival, were offered places to grow their own food (Saldivar-Tanaka and Krasny 2004) in order to ease their conditions. In the UK, it is known that middle-class families were also involved in growing flowers and vegetables during the 18th century in places known as 'guinea-gardens' (Martin and Marsden 1999). Furthermore, community gardening activities played a significant role during the Great Depression and the two World Wars, albeit under various names, e.g. 'liberty gardens' or 'victory gardens'. It can, therefore, be argued that growing food becomes more important during periods of economic or political crises (Schmelzkopf 2002). For example, in 1944 war-time conditions, allotments and gardens in the UK produced "10% of all the food produced in Britain, or around half the nation's fruit and vegetable needs"(Garnett 1996, p. 19).

Despite the crucial role urban gardens and related agricultural practices played during the Great Depression and during the world wars, their popularity was in decline after the World War II, mainly due to the increase in mechanization of agricultural production and intensive farming methods. In 1970s however, city dwellers rediscovered the gardens and similar open spaces as sources of cheap and fresh produce that can be operated through cooperation with others in the local community (Pothukuchi and Kaufman 1999). This renewed interest was also partly due

to the increasing levels of environmental awareness, and partly due to rising food prices (Garnett 1996). More recently, and in addition to these global changes community gardens and related practices have also been increasingly considered as a way of tackling some problems in cities, e.g. drug dealing and other crimes. Whatever the causal motivation behind this renewed interest, it has been argued that the "contemporary community gardening movement" that started in 1960s – 70s (Saldivar-Tanaka and Krasny 2004, p. 399) has been growing since and becoming particularly important after the food crises in 2007-2009, an observation that Saldivar-Tanaka and Krasny attribute to the food insecurity problems which have grown in size and effect. In a similar way, Lawson (2005, p. 288) accentuates that "as an action with a satisfyingly tangible outcome, gardening has been an almost knee-jerk response to crisis.

b. Different meanings and representations of community gardens

Community gardens are socially constructed spaces of human-nature and human-human interactions, which have various meanings and representations. As Lefebvre (1991, p. 26) points out, the socially produced space is tool of both thought and action, and "in addition to being a means of production it is also a means of control, and hence of domination, of power". Moreover, Van Dyck and Van der Broeck (2013, p. 133), citing Moulaert and Sekia (2003) emphasize that from social innovation point of view "it is crucial to understand how initiatives are embedded in specific socio-political and socio-economic contexts". Community gardening is a multi-faceted phenomenon; therefore, it is imperative to explain its various meanings and representations. The following part is an attempt to draw a more detailed picture of community gardens from various research perspectives, e.g. as spaces for resistance and 'right to the city', as spaces for environmental justice, food justice and resilience, as 'actually existing commons', and as the means of 'roll-out neoliberalism' created from top down with specific purpose.

Spaces of resistance, 'right to the city' and 'actually existing commons'

Community gardens can be 'contested' spaces, established with a mobilisation from bottom-up, where groups of people or communities overcome bureaucratic obstacles in order to obtain the right to use temporarily – sometimes only for a year - the land to set up a garden; but often they started as 'guerrilla gardens' by throwing seed balls (seed-bombs) on vacant public sites

(Schmelzkopf 1995). Then people put considerable effort to turn it into a plot, suitable for growing vegetables or herbs. Although many times they have the support of not-for-profit organisations, it requires real commitment and struggle to change derelict sites into growing places and to organise the community. Working together and putting so much work in these spaces creates a bond both between members of community and between people and the gardens. Particularly in poor neighbourhoods they are loaded with special meaning, e.g. they are associated with safety and crime prevention, and for many residents, especially females, they are the only place to overcome social isolation and going outside (Schmelzkopf 1995); (Hinchliffe et al. 2007).

However, in many cases, the struggle is not for starting a community garden but for the right to keep it, as it was the case with many gardens in the US in the last two decades (Schmelzkopf 1995). In other words, the gardens become contested from the institutions of the economic and political system due to the different ways of interpreting their value. Schmelzkopf (2002, p. 331) explains that "the fact that goods are incommensurable with the commodified valuation of the market becomes a problem in a society where social relations are embedded in the economic system". The problem about the 'right to space' originates from putting different meanings to community gardens. While for the communities these places are loaded with public value and social benefits, for the economic and political administration they are "abstract" spaces with commercial value. When it comes to decide who has the right to those spaces, the gardeners are seen by the political power as "marginalized residents" and the gardens, as "spaces for resistance"(Schmelzkopf 2002). Therefore, the struggle for the 'right to space' can be regarded as the "right to the city", which according to Harvey, is a human right to collectively remake cities, but where those who are "poor" and "underprivileged" are the most affected from restructuring of the cities, which he refers to as "creative destruction" (2012, p. 15). It is worth clarifying here that the way Harvey uses this term is different from how Schumpeter interprets it in a positive way and as a social innovation, as mentioned earlier in the theoretical section.

At the same time, the question of contested public spaces - in this case community gardens - is a question of 'commons', which is contradictory, Harvey suggests, because when there are incompatible political interests, the challenge is to decide "whose common interests" will be protected. But while he identifies the 'common' as an "unstable social relation" between the

vital qualities of a space that already exists, or needs to be produced, and the group of people that will produce it, he also emphasises that this social relation must be collective but out of "the logic of market exchange" (Harvey 2012, pp. 71, 73). Similar arguments are also made by Eizenberg (2012, p. 766) who identifies the 'urban commons' as socially produced spaces with "livelihood qualities over which rights are negotiated" and which meet social needs in a way that does not make a profit but by collaborating, while at the same time these spaces can become a means for social wealth. Thus, community gardens are regarded as common spaces that are not utopic but "actually exist", and while on one side their practices do not challenge the structures causing inequality but only share and redistribute goods to 'unprivileged residents' through collective action, on the other side, these practices challenge the dominant social regime through alternative mechanisms for justice. As such, they can be the mean for "production of new spatiality, initiating the transformation of some fundamental aspects of everyday life, social practices [...] and thinking" (Eizenberg 2012, p. 780).

Spaces of environmental justice

At the same time, the struggles for the 'right to the nature' or the right to open spaces are regarded as struggles for environmental justice. In the contestation over community gardens, environmental justice was one of the important arguments in the debate. It was stated that "access to land and water in cities are civil rights, rights critical to environmental and social justice in the contemporary world" (Emmett 2011, p. 68), and the debates sparked by this claim were also extended to the policy arena. Emmet (2011) describes how environmental justice emerged as a movement in the United States at the Summit of People of Color in Washington DC in 1991 where they demanded that people participate in urban planning and consequently, the National Environmental Justice Council (NEJAC) was established. Environmental justice was officially accepted as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (Emmett 2011, p. 73). The legal struggle for community gardens, therefore, can be considered as a quest for environmental justice.

In a similar way, Jermé and Wakefield (2013) suggest that environmental justice can be a useful framework in formulating inclusive community gardening policy in urban planning. They observe the process of creating a community gardening policy in the case of the city of Hamilton, Canada, and they demonstrate that disregarding environmental justice concerns results in a policy that does not make gardening accessible to all citizens. In addition, the relationship between community gardens and environmental justice is examined by Milbourne (2011), who focuses on the ordinary, micro-scale and everyday forms of environmental justice provided through the means of community gardening. His findings from community gardening cases suggest that people do not necessarily intentionally address some existing environmental injustices, but see community gardening as a means to work with the environment, thus "striving to deliver social justice through the medium of environmentalism and not always addressing the social consequences of environmental bads" (Milbourne (2011, p. 12). Moreover, he adds that some of the places use permaculture, which is based on ecological sustainability and social justice principles. Thus, he argues that the relations between environment, sustainability and justice must be considered in a broader scope, concluding that community gardening projects create "new sets of relations between space, nature, politics, society and culture within the city" (2011, p. 12).

Spaces of food justice and resilience

Food justice is another aspect related to community food growing, defined by Gottlieb and Joshi (2010, p. ix) as "a transformation of the current food system, including but not limited to eliminating disparities and inequities". Kneafsey et al. (2016) consider community resilience, awareness raising, reskilling and improved community food security as elements of food justice. They see the increase in the number of food banks, unequal possibilities for a healthy diet and the more expensive 'healthy' food compared to 'unhealthy' one as evidence for food injustice that potentially drives people to seek alternatives like community food growing. By studying the motivations and work of people in two local food growing charities, Kneafsey et al. (2016) reveal that these initiatives can be regarded as spaces of food justice with their potential for transformation via "reskilling", knowledge/resource share and awareness raising, however, they do it in a "quiet" way, unintentionally and without having a political or critical stance against the food regimes.

On the other hand, Barron (2016, p. 13) suggests that community gardens promote food justice as spatially just places oriented toward commons, and most importantly, by de-commodifying food and providing it on the principles of "rights, equity and citizenship" rather than market rules. However, she argues that community gardens have limited potential for systemic change due to their fragmented character, unless they are connected in food justice networks that will enable them to replicate, have access to more funding and "ability to manoeuvre in structures of government" (Barron 2016, p. 12). Differently from her argument, Sonnino and Griggs-Trevarthen (2013) think that social economy, in the case of community food growing initiatives, is not capable of challenging or replacing the dominant system because its local embeddedness limits its ability for scaling up; therefore, these initiatives remain alternative places committed to the values of the local, turned into everyday practice and looking for qualitative rather than quantitative outcomes. Nevertheless, based on their exploratory study of community food enterprises, Sonnino and Griggs-Trevarthen (2013, p. 288) demonstrate the ability of these initiatives to foster resilience and respond to "potentially disruptive" external changes by collectively mobilizing local resources and empowering people, thus creating 'self-reliant communities'.

Spaces of 'rolling out neoliberalism'

However, community gardens are not always spaces of resistance, contestation or quest for justice and change. They can be created with careful planning from top-down and by engaging 'third sector' organisations that are neither governmental nor for profit. These can have specific underlying purpose, which is not always implicit. According to Pudup (2008), unlike the community gardens that are part of urban social movements and resist against the urban restructuring, the carefully planned gardens initiated by the state under the form of 'organised garden projects' target individuals that are considered from "at risk population", and aim at their personal transformations, in other words creating "citizen-subjects". Thus, she makes a clear distinction between the community gardens as grassroots movements and the 'made up' garden projects that aim to reverse to certain extent the "sad consequences of neoliberalism" (Pudup 2008, p. 1228).

c. Benefits of community gardens

Community gardens are organised around growing food as a main activity, but the benefits of community gardening go far beyond fresh food provision. According to Lawson (2005, p. 288), garden programs emerge with various agendas, from dispersing urban populations to countering social problems. Nevertheless, food is an important benefit provided by the community gardens. It is particularly important for people affected by poverty or inadequate means of transport. For this reason, community gardens are considered as a source for 'low-cost' nutritious food (Hynes and Howe 2004). There is evidence that vegetable intake of people involved in gardening is higher than those who do not do gardening (Alaimo et al. 2010; Castro et al. 2013), and specifically in the South, there are cases when supplementary feeding programs have been ended thank to the gardening (Raja 2000). The impact of community gardening on food security of the communities is both direct - by providing food and space for growing food - and indirect - by educating people how to produce their food and making them more engaged with food (Evers and Hodgson 2011). Educational value of the gardens goes beyond learning horticultural skills or farming. Community gardens can be sources for social and cultural education. In the case with the Latino community gardens in New York City (Saldivar-Tanaka and Krasny 2004), for example, people use the garden sites to do celebrations, social events and after-school programs, thus preserving the cultural traditions. They also grow vegetables and herbs that are specific to their own culture. Another case where community gardens contribute to cultural connection is the initiatives created for immigrants or refugees with the aim to help with their social integration. Hinton (2016) demonstrates how a community garden initiated by Lhotsampa refugees from Bhutan in collaboration with the immigrant services group in Halifax had a positive effect on their diets and integration to the Canadian society, and also helped the older population with physical and social activities and maintenance of their traditions.

Building social capital and tackling neighbourhood problems is another benefit reported for community gardens. Existing research includes a good deal of studies demonstrating how community gardens can play an important role in strengthening neighbourhoods and relationships between the community members by providing a medium for social interaction and serving a bonding, bridging and linking function that creates a social capital (Saldivar-Tanaka and Krasny 2004; Glover et al. 2005; Alaimo et al. 2010; Firth et al. 2011). Moreover,

communities are empowered through gardening since they are the ones who are involved in the decision-making processes related to gardens and controlling the necessary resources. Taken together, these eventually lead to communities that become more self-reliant by growing their own food (Okvat and Zautra 2011). In addition, community gardens are often established on derelict places that were associated with criminal activities, such as drug abuse, and fear. Growing food on such places has multiple benefits. On one side, greening the public spaces helps the neighbourhood to overcome the fear and use it as a gathering place, from the other side, regeneration of derelict sites becomes a way of tackling poverty and reversing the crime by engaging particularly the young people in a useful activity (Raja 2000; Hynes and Howe 2004; Larson 2006).

The positive impact of community gardens is not limited to macro or community level outcomes. At the individual level, health is usually one of the most articulated benefits in relation to gardens. Evidence shows that community gardens have a positive impact on people's emotions, social skills, safety and self-esteem (Hynes and Howe 2004; Wakefield et al. 2007). In addition to providing opportunity for physical activity that improves both the physical and mental health of the growers, the vegetables and fruits from the garden add to a healthier diet (Castro et al. 2013), and the sense of achievement of growing their own food leads to a "holistic sense of health and well-being" (Hale et al. 2011, p. 1857). The gardens also have therapeutic function, and there are a number of cases where they are especially established for healing purposes, e.g. AIDS Memorial Grove and Comfort Garden in San Francisco, or Rubicon Centre in Richmond, California (Ferris et al. 2001). The health benefits of community gardens are becoming more important amidst growing evidence about food-related health problems in form of either hunger, over-consumption or micronutrient deficiency, which can cause obesity, diabetes, cardiovascular diseases, and other illnesses, also worsen by the reduced physical activity (Lang and Heasman 2004, pp. 50, 60-61). Therefore, food growing practice can address both dimensions by being a mean for more nutritious diet and physical exercise.

A little less acknowledged aspect of community gardens that has come forth recently, is their restorative role after disasters and conflict, also named 'greening in the red zone' by Tidball and Krasny (2014) who present case studies of this phenomenon from a wide range of settings, e.g. New Orleans after Katrina, Monrovia after the Liberian civil war, Afghanistan, Cyprus, Sarajevo,

New York City after 9/11 and even Hiroshima after the atomic bomb. They define the term 'red zone' as "*multiple settings (spatial and temporal) that may be characterized as intense, potentially or recently hostile or dangerous, including those in post-disaster situations caused by natural disasters such as hurricanes and earthquakes as well as those associated with terrorist attacks and war* (Tidball and Krasny 2014, p. 8, emphasis original). Evidence from the case studies shows, according to Tidball et al. (2014), that 'greening' in post-disaster and post-conflict areas play an important role for people, communities and ecosystems by restoring their balance and healthier socio-ecological system. Therefore, authors suggest that policy-makers should consider greening practices as a response to conflicts and disasters. In a similar way, Montgomery et al. (2016) examine the role of community gardens in post-earthquake New Zealand for social recovery by studying the activities of the facilitating organisation Greening the Rubble. These restorative places are also considered as therapeutic spots (Red_Cross_NZ no date) and in the case of gardens in post-war refugee camps, as mediums for meaningful daily engagement and passing on agricultural knowledge to the next generations, thus helping with normalisation of lives after dramatic change (Elgot 2014; UNHCR no date)

Community gardens have multiple contributions to a better environment and ecological sustainability. For this reason, they were considered as an important tool for implementing Local Agenda 21, accepted as an action plan for sustainability at the UN Conference on Environment and Development in 1992 (Ferris et al. 2001). In addition to their qualities of carbon sequestration and keeping the surface temperature at certain level, therefore contributing to climate change mitigation (Gill et al. 2007), community gardens are places where production meets consumption, which means they are a way to reduce both 'food miles', which increase greenhouse gas emissions from food transportation (Martin and Marsden 1999). Moreover, environmental practices used at community gardens, such as organic methods of growing, on-site composting, permaculture, water management and recycling, add to their various sustainability benefits (Ghosh 2010; WRO 2012). Community gardens can also play essential role in cities' self-reliance for food (Grewal and Grewal 2012). As Lawson (2005, p. 289, emphasis original) concludes, "garden programs serve to further a vision of what *should be* in times when society is unclear about where the future is heading".

d. Difficulties and problems of community gardens

Literature on community gardens examine wide range of difficulties and problems. The most common difficulty in many cases is securing land for growing, the temporary nature of the land tenure, or the uncertainty about how long the community will be allowed to use a plot in the cases when they do not own it or grow on a public land (Armstrong 2000; Henderson and Hartsfield 2009). In addition, "limited resources" (Wakefield et al. 2007, p. 100), difficulties with obtaining financial support, bureaucratic challenges and excessive amount of paperwork can be a barrier for setting up a garden and can hinder the creativity of the community (Jamison 1985). On the other hand, although social capital is generally recognised as beneficial for community gardens, in certain cases a "differential access to social capital", when non-core group members are not allowed to take part in planning and decision-making, and are discriminated against the core group members, can cause a problem (Glover 2004, p. 146). In other cases, the reluctance of some gardeners to socialise and become a part of the gardening community (Kurtz 2001) or feeling that "being part of the garden community was stressful because of the expectations for participation" (Teig et al. 2009, p. 1117), may become a problem for the social cohesion and collective efficacy of the group.

Problems related to social cohesion can go beyond a mere reluctance to socialise and grow to a level of conflict as discussed by Aptekar (2015) in the case of a culturally diverse community garden in New York City. She examines how the different ways the members imagine the place led to conflicts between the gardeners and "gentrification struggles over culture and resources" (2015, p. 209) when the less privileged gardeners in terms of race and ethnicity resisted to defend their visions against social hierarchy and the aesthetic preferences of the privileged residents, supported by institutions. Another inequality problem, this time related to the process of granting access to community gardens, is identified by Ghose and Pettygrove (2014) who demonstrate how groups that do not behave in accordance with the terms imposed by the local authority and also have insufficient resources and organisational capacity, face barriers in getting access to gardens thus compromising the "citizen control of these spaces" (2014, p. 1108).

Besides the difficulty of finding and sustaining human capital, particularly volunteers, that affects the economic sustainability of the gardens, Guitart et al. (2012) also notes problems related to insufficient knowledge and skills, cultural barriers, neighbourhood complaints, soil contamination, and lack of water. Also, many studies report the problem of the theft of tools or produce from the gardens, vandalism and even personal safety, resulting in the fencing and locking up of the garden, which is sometimes insufficient as a solution (Armstrong 2000; Kurtz 2001; Wakefield et al. 2007; Teig et al. 2009). And one final challenge for the community gardens is the difficulty of measuring or quantifying all their benefits and their impacts at individual, local and more global level. As a result, this 'incommensurability' causes a real problem in securing land for gardening or defending already established gardens (Schmelzkopf 2002). Related to this, Lawson (2005, p. 292) argues that "the belief that urban gardens ameliorate a range of problems has produced righteous justifications of gardening without attention to actual results". She suggests that in the gardens where the focus is on food production, the monetary value of the yields can be used as a measurement; however, the proof of the "less tangible benefits" "relies on anecdotal accounts". On the other hand, Raja (2000, p. 7) points out that even if it is difficult to measure their non-economic benefits, it is especially those benefits with public value such as community empowerment, youth development, service to diverse groups and the like, that are "the essential reasons why community gardening makes for better, more liveable cities".

2. Community Supported Agriculture

Community supported agriculture (CSA) is the other community food growing form within the focus of this research. It is an innovative idea enabling consumers to know where their food comes from and how it was produced (Hayden and Buck 2012) by bringing producers and consumers together. CSA has been attracting growing interest from community, practitioners and researchers. It emerged in 1960s in Japan and Switzerland (King 2008). The initial impetus came when a group of Japanese women decided to go into partnership with a local farm in order to avoid the conventionally produced and processed food (Schnell 2007). Consequently it spread to other countries such as Germany, and was imported to the USA in 1980s where it initially started in Massachusetts (Cooley and Lass 1998). CSA is defined in broad terms by the UK organic food organisation Soil Association as "any food, fuel or fibre producing initiative where the community shares the risks and rewards of production, whether through ownership,

investment, sharing the costs of production, or provision of labour" (Saltmarsh et al. 2011, p. 4). In practice, it works based on a subscription system, through which consumers pay in advance and take a share of the fresh and mostly organic produce in return. In other words, it can be considered as a direct marketing technique (Hinrichs 2000) and a form of sustainable consumption, where intermediaries and monetary transactions that push prices up are by-passed.

a. Types of CSA

CSA is generally categorised in four different types depending on the ownership, although this typology varies in different sources, thus reflecting its flexibility because the way it is categorised is determined by the local needs and circumstances. According to the typology suggested by the Soil Association, CSAs can be (1) 'producer-led', where the consumers pay a fixed amount on a weekly or monthly basis and buy locally grown organic produce direct from the producer, (2) 'community-led', where like-minded individuals get together to form an entity similar to a co-operative that owns/leases and cultivates the land sharing the produce; in cases where a surplus exists, the enterprise may engage in commercial activities to sell this surplus and invest in the enterprise, (3) 'producer-community partnerships', where members of the community engages in food production in close cooperation with a producer, and (4) community-owned farm enterprise, which is owned by the community but is engaged in the commercial food market (Saltmarsh et al. 2011). In the different types or models of CSA, the level of direct contribution by the members of the community differs, ranging from no direct labour contribution in case of producer-led enterprise to production entirely based on member contribution in the type of community-led enterprises. However, although the idea of CSA is that members/subscribers pay up front for the produce, the difficulties with finding and retaining members prompted some CSA initiatives to use a 'pay-as-you-go' type of service or allow customers to choose box contents (Freedman and King 2016).

b. Motives for participation and benefits

Considerable part of the CSA literature investigates why people prefer to join these projects and what do they expect. The most articulated motives of members/ subscribers are food and ethical

concerns. Some studies report that people are looking for "highest quality", "superior", "fresh", "flavourful", and "top [quality]" food but they accept that vegetables might be covered in dirt or have insect bites, thus not having the appearance of supermarket vegetables (Goland 2002, p. 19). Others describe their expectations as provision of safe and healthier food, contribution to the environmental sustainability, and support for the local farmers (MacMillan Uribe et al. 2012). In addition to these motives about quality food and supporting the local farms and the environment, some people also express food safety concerns (Cooley and Lass 1998). In some cases, the motives for membership are related to both priorities and benefits they get, e.g. “a sense that it is grown with love and respect”, “it’s putting the farmer’s face on the food” and “it’s community building”; also, they are closely related to participants’ ethical, philosophical and political stances (Cox et al. 2008, p. 211). In a different way, Farmer et al. (2014) surveyed both individuals who were members and non-members to the CSA about a range of values they attach to food, in order to determine what and how strong their motives were. They found out that motives were different between the members and non-members, and that while nutritious food and environmental concerns were the top motives for the members, these were lower priority for the non-members, suggesting that some people may not have the same value and level of motivation to join CSA schemes (Farmer et al. 2014). In some cases, people may become motivated by economic gains, which happens when “type and amount of produce received equals or exceeds membership fees” (Farnsworth et al. 1996).

Benefits from joining CSA initiatives are closely related to the motives. For example, economic gains that were reported as a motive for participation, are also one of the benefits that members get. Some figures presented by the Soil Association about the economic benefits of the CSA projects in the UK amount to very ambitious levels, e.g. 62% of CSA members get all or nearly all of their food from these farms/gardens, while 27 % meet about half of their needs (Saltmarsh et al. 2011). In addition, some US-based studies comparing the prices of food sold in CSA and in supermarkets revealed that the CSA share prices are relatively less expensive compared to their retail price, and economic benefits from CSA can range between 60% and 150% off the retail price of organic produce, which makes CSA a cheaper way to secure organically grown food (Cooley and Lass 1998).

Perhaps linked to their lower price, increase in the intake of fruits and vegetables and the number of home-cooked meals is reported as another benefit. For example, according to Cohen et al. (2012), CSA members consume 2.2 servings more fruits and vegetables than non-members, and cook 5 more meals per month compared to the non-members. Moreover, results from a study based on the Theory of Planned Behaviour and data collected from focus groups reveal that CSA can be used as an intervention strategy to promote healthy diets and behaviours (Wharton et al. 2015). The health benefits of joining CSA initiatives have been also studied by Allen IV et al. (2017) by surveying the food behaviour and health outcomes of participants both before and after their joining the CSA. The results revealed that joining CSA has a positive impact on members' health, and that the best improvement was achieved by those who previously reported 'poor health'. Meanwhile, Hayden and Buck (2012) suggest that CSA can have an impact on the participants' environmental ethics. They have examined the processes of participation to the CSA activities and participants' individual perceptions. They found out that in spite of the mixed experiences, either positive or negative, involvement with CSA has overall positive ethical effects on the members, since active participation in the initiatives raises individuals' "attunement to environmental issues, instils a greater appreciation for food and its cultivation and encourages a greater commitment to sourcing food that is raised locally and sustainably" (Hayden and Buck 2012, p. 339).

Lastly, CSA is regarded as an important tool for addressing food justice problems because it can empower the vulnerable communities, such as small-scale farmers, low-income neighbourhoods, and immigrants to grow and sell their own food. Contrary to the Schnell's (2007) arguments that CSA is more common among the residents of middle or upper income areas, as discussed further, Gottlieb and Joshi (2010, p. 141) suggest that the practices of CSA and farmers' markets with special arrangements for people with low income and at various ages provide an efficient way for food justice advocacy. Thus, they view initiatives like CSA, Farm to School, and local farmers' markets as powerful approaches to food justice, requiring shift in school and farm policies. They suggest that

> together, they constitute one part of the food justice story. But the story will remain incomplete until such an alternative pathway for growing and producing food becomes

> available to all, especially those who lack access to healthy, fresh, local, and just food (Gottlieb and Joshi 2010, p. 149)

The idea of these practices to become available to all, can be interpreted as translation of these alternative practices into the mainstream and the transformation of the food regime. Also, this fits to the idea that interaction and cooperation between different alternative practices may lead to a more powerful influence over the food system, an idea that will be discussed further. Related to food justice, Galt et al. (2016, p. 435) studies the effect of the difference in members' socio-economic and demographic background, based on their "employment, race/ethnicity, household composition and education, [and] use of food support" . Their results reveal that lower-income members report "improved diets (81%), increased vegetable consumption (86%), a reduction in time spent shopping (64%), and less money spent on food (47%)"; also, lower-income members are more committed to CSA compared to the higher-income members, and place "higher monetary value on their share" despite facing higher risk due to their low income (2016, p. 448). However, their results also show that CSA initiatives are 'racially disproportionate'. Therefore, Galt et al. suggest that sensitivity to the issues shaping various race/ethnicity and class positions can create more inclusive environment in CSA.

c. Building and retaining social capital

Member recruitment and retention is one of the most important factors that may potentially influence the success of a CSA project. Related to this, 'community capitals' is a distinct approach in studying how people participate to CSA initiatives. Flora and Bregendahl (2012) suggest that there is a positive correlation between community capital and the retention of members in CSA, which means that people prefer to remain members when they perceive a possibility to build strong capitals. The authors describe community capital as a complex of different capitals, e.g. 'social', 'cultural', 'human', and 'political' that affect the expectations of those who participate; in addition, the balance between these has an impact on the decisions of the members (Flora and Bregendahl 2012). The importance of building a strong community is also emphasised in Schnell's (2007, p. 559) thorough study of the CSA in the United States, where he points out that "devotion to community is a major selling point for some farms" and for this reason, they organise various events to create "sense of connection and commitment between their

members". Meanwhile, Cox et al. (2008, p. 203) draw attention to the importance of communication in the CSA initiatives. They argue that better communication between producers and consumers can have a two-fold impact, and lead both to "long-term commitment and tolerance among consumers" and more 'radical changes' in production-consumption relations.

In another study, Cox et al. (2014) examine the differences in the actions and priorities of the CSA members, and explain that these alternative initiatives are not perfect, as usually tend to be presented, but the existing differences are rather complementary than competitive, and CSA provides an environment where "people can address their cares and influence others" (2014, p. 80), thus shaping their own behaviour. Related to the above, several studies focus on different possibilities and ways of attracting and retaining members to the CSA projects. Goland (2002) argues that commitment to social and environmental issues also results in people's commitment to the CSA; accordingly, in order to find long-term members, CSA initiatives should not only target people who have social and environmental concerns but also should demonstrate how CSA addresses these concerns. Another suggested way is the 'pay-as-you-go' model, mentioned earlier. After examining members' motivations and dietary behaviours in a 'pay-as-you-go' CSA initiative, Freedman and King (2016) demonstrate that this type of flexible arrangement can increase the number of subscribers and the frequency of orders. Nevertheless, finding and retaining members can happen at the expense of the producers' 'self-exploitation', as suggested by Galt (2013), who investigates the relationship between farmer earnings, profit, economic rents, and farmers' motivations, and reveals that "the moral economy of CSA cuts both ways, allowing for capture of economic rents but more often resulting in self-exploitation because of farmers' strong sense of obligation to their members" (2013, p. 341).

d. Challenges and criticism of CSA

In addition to the difficulties with recruiting and keeping members, which was discussed regarding the community capital, CSA initiatives face several customer satisfaction problems, partly due to their scale and limited resources and partly due to their commitment to local food. One of these problems is disappointment of the type and amount of produce (Hayden and Buck 2012) and lack of variety in food produced in the enterprise that have a negative impact on people's behaviour within the enterprise (MacMillan Uribe et al. 2012). Timing and management

problems leading to late planting and low yields (Hayden and Buck 2012), “inconvenient pick-up times”, and waste of bumper crops due to lack of storage facilities are additional challenges (MacMillan Uribe et al. 2012, p. 432). Inconvenient times for picking up and visiting the farm coupled with ‘seasonality of production’, meaning that consumers can only have what is in season, are also reported by Cooley and Lass (1998) as disadvantages of CSA membership. In a similar way, Hinrichs (2000, p. 300) points out that in most cases, “members […] chafe at receiving bags of produce they may not be familiar with in quantities they didn't request”, thus turning the demands for “predictable quantities” and better variety of produce into a major challenge for many farms, which is “at odds with CSA ideals about communities cooperatively supporting local agriculture”.

From the farmers’ point of view, the biggest barrier is the “cost of labour and infrastructure”, although recruiting and keeping members is a big concern (Janssen 2010, p. 13). For these reasons, Hinrichs (2000) draws attention on how crucial it is to determine the price of the shares in a balanced way; on the one hand, the shares need to cover the costs, pay a living wage to the farmer, and enable the improvements needed for the farm to survive, and on the other hand, they need to be a good value for the customers. This is a delicate balance because, as Hinrichs explains, when the price of the share is too high, compared to the market, there is a risk of losing members but too low means they are ‘subsidized’ by the self-exploited farmer. Apart from putting farmers in the position of self-exploitation, CSA schemes have been also criticised for leaving “the burden” of maintaining the community side to “already overworked CSA farmers” as members show little or no interest in participation (Hinrichs 2000, p. 300).

Another often articulated criticism is that even though CSA projects are regarded as places of food justice, in many cases they marginalise and exclude certain groups of people. For example, Selfa and Qazi (2005, p. 452) argue that these places often serve affluent consumers while putting “a heavy burden on producers and lower income groups to build community”. In a similar way, Schnell (2007, p. 562) points out that CSA is predominantly “in more progressive, urban, middle- and upper-income areas, although it is beginning to expand beyond this base”. Related to this, Farmer et al. (2014) study the profile of CSA and farmers’ markets customers based on multiple variables, e.g. financial status, education, geographical location, and ethnicity. They find that due to some barriers, certain groups of people are excluded and cannot

participate in these initiatives, which they describes as "*marginalization and powerlessness* conditions faced by disregarded peoples and their associated social and cultural histories" (2014, p. 323, emphasis original). Therefore, as a solution for those who do not have the means to pay big subscription sums up-front, they suggest that there should be alternative payment options. Farnsworth et al. (1996, p. 90) conclude that due to its characteristics such as being socially-oriented, and difficulties like not being able to supply food all year, CSA will probably not become "a major market channel in the next century".

In sum, both community gardens and the CSA have different representations and wide range of benefits, while also facing challenges and criticisms. However, land remains one of the vital elements for their creation and success. Franklin and Morgan (2014) examine the land ownership arrangements in community food growing. They draw attention to the importance of the landowners' confidence when they allow their land being used by communities, and suggest that a "trusted intermediary" organisation can address the concerns of landowners, such as failure of the community project and "bad publicity", loss of the control over their land, or planning delays (2014, p. 176); the authors also emphasize that there must be "some degree of mutual benefit" or "a shared interest", or even the involvement of the landowner in the activities of the community (Franklin and Morgan 2014, p. 176). This is an example of only one of the many factors that need to be considered by community food growing initiatives and that might have an impact on their success and failure.

V. Discussion and Conclusion

The review of the literature on community gardens demonstrates that specifically their benefits have been well documented. In addition, they have been studied from various justice-related perspectives, namely environmental justice, food justice, commons, and the right to the city. The other form of community food growing, the CSA, also takes place predominantly in the food justice literature. Similarly, people's motives for participation and challenges that the CSA initiatives face have been well researched. However, there is not much evidence in the literature about the socially innovative role of both community gardens and community supported agriculture as part of a wider social economy, and their potential for a societal change toward more sustainable food systems. Moreover, from a geographical point of view, much of the

studies reviewed earlier are based on cases in North America and Australia, and to a lesser extent, in the UK. Particularly Welsh community gardens and CSA initiatives are under-researched. Considering that Wales has a distinctive character with its small and devolved economy that is predominantly rural, where food plays an important role not only as an industry but also in a symbolic and traditional way, it is worth examining what is the role of community food growing in this economy, and what is the position of various actors against these alternative initiatives. From theoretical perspective, different types of community initiatives have been studied through the lens of the grassroots innovations and socio-technical transitions approach, as discussed earlier. However, community food growing has not attracted much interest from social innovation scholars. Consequently, the main aim of the research is to address these gaps in the literature on community gardens and community supported agriculture, on the one hand, and social innovation, on the other hand.

Considering the multitude of different social innovation approaches explained in the first part, the major problem is to decide how to examine community food growing initiatives in Wales and which approach would be most appropriate to answer the main research question: 'what is the role of community food growing in Wales as a social innovation and its potential for making a societal change to more sustainable food systems?'. Therefore, the purpose of this research is to examine the community initiatives from a broad perspective, elaborating on their current position as social economy initiatives juxtaposed to the dominant food economy, and scrutinising their capacity to make an impact for a wider transformation in the society. The mainstream approach, as discussed earlier, provides a very narrow perspective of the social innovation (Jessop et al. 2013) and examines the social initiatives only at the management or organisational level, hence the criticism that they present reductionist view of social innovation. Moreover, they do not show how social injustices can be overcome (Van Dyck and Van den Broeck 2013). The social practices approach would be a useful strategy if the aim of this research was to focus on the everyday practices of the community food growing initiatives as a way of making change. However, it does not provide a useful framework for examining their role and potential for wider societal impact.

In the case of the grassroots innovation and socio-technical transitions approach, distinction need to be made between the normative framework and the analytical frameworks. From

analytical point of view, Strategic Niche Management (SNM) and Multilevel Perspective (MLP) proved useful for examining many community-based initiatives as grassroots innovation niches (Seyfang 2009; Brunori et al. 2010; Seyfang and Haxeltine 2012; Hargreaves et al. 2013a). The SNM can be a useful tool for examining the way the community food growing initiatives have been created and managed, how the learning happens, and how they network with each other. However, it cannot help examining the wider role of these initiatives as part of the social economy. In a similar way, the MLP framework is useful in demonstrating the interplay between the niche, regime, and landscape. Applied as an analytical framework to the community gardens and the CSA initiatives, it can help addressing the question about the potential of these initiatives in making a societal change by examining their position against the mainstream economy and the landscape pressures. However, it cannot show how the processes within and between these levels happen, and how these can be practically examined. Moreover, drawing on the criticisms to the MLP approach, it is difficult to clearly define the three layers (Chang et al. 2017) and there is absence of agencies in the model (Geels 2011). Adding to these evaluations and criticisms the fact that the two models are technology-oriented and do not address the human dimension, leads to the conclusion that the SNM and MLP are not suited for the purposes of this research.

The main research question requires a more overarching analytical framework to grasp the complexity of the phenomena. ALMOLIN, which was explained earlier in the theoretical part of the literature review, can provide a more robust and detailed tool for analysing community food growing projects by addressing their various dimensions that feed into the better understanding of the role of these initiatives in terms of social innovation. Using ALMOLIN enables examining why and as a reaction to what these initiatives emerge, how do they mobilize resources and common visions to institutionalise, which 'alienated' needs do they satisfy, and how do they empower people. Moreover, by examining whether they lead to change in social relations not only at the community level but also at a higher level, including the wider society and the state, this framework can enable addressing the second part of the research question: 'what is the impact of the community food growing in Wales in making transition to more sustainable food systems?'. Also, ALMOLIN includes some processes, e.g. learning and networking, that take place in the SNM framework.

Accordingly, from a normative perspective, the societal-territorial approach with its broader understanding of social innovation provides a better theoretical framework in studying these initiatives. However, it has much in common with the grassroots innovation and New Economics approach, since grassroots innovations are placed within a broader perspective of the New Economics concept, which gives a better understanding about their place within the social economy. Therefore, studying community gardens and the CSA in Wales from the societal-territorial approach and drawing parallels with the grassroots innovations and the New Economics approach, would give a more integrated view of this phenomena. The central point in this normative approach are the dimensions of the social innovation, namely satisfaction of 'alienated' needs, change in social and governance relations, and empowerment. Related to these dimensions, this research aims to answer the following additional questions:

1) What were the needs that triggered the creation of the community gardens and CSA initiatives in Wales? How have the needs been satisfied?
2) What resources were mobilized and how?
3) What are the relations between the actors and is there a sense of community? Are there common visions?
4) What do people in the initiatives learn and how?
5) How do people take part in decision-making?
6) How do people see the position of the initiatives against the main economy?
7) What are the challenges and barriers for the initiatives?
8) What are the ways for the initiatives to make a greater societal impact?

In sum, this research aims to address the following gaps in the literature, explained above:

(1) Examining the broader role of community gardens and community supported agriculture from the social innovation theory perspective and by using ALMOLIN as an analytical tool that has not been applied to community food growing initiatives;
(2) Focusing on Wales as an under-researched area regarding community food growing; using large number of case studies to allow a comparison between its different regions and the types of initiatives;
(3) Contributing with case studies of community food growing to the social innovation literature and the debates about the transformative potential of alternative food networks.

Chapter 3

METHODOLOGY

The purpose of this chapter is to discuss the rationale behind the research process, from the design phase to its implementation and analysis, in the case of community food growing initiatives in Wales studied though the lens of the social innovation theory. Due to the interdisciplinary character of the sustainability research, it is noted that researchers often face "complex choices" about the methodological approach and methods to be applied, and the main reason is that there are no specific methods for researching sustainability as these depend on the research context (Franklin and Blyton 2011, p. 7). Similar is the problem about researching social innovation. According to Moulaert et al. (2010, p. 10), the social innovation research works toward a "joint methodology" due to its interdisciplinary and trans-disciplinary character; in other words, while on one hand there are overlapping disciplines in the social innovation research, such as social sciences, economics and humanities, on the other hand it requires the involvement of practitioners either by being "a core theme" or "real partners in the research", thus emphasizing its societal impact. At the same time, it is argued that there is no "recipe book" that prescribes exactly which methods are linked to different theories and therefore, "it is the framing of the research problem that links epistemology and social theory to method" (Flowerdew and Martin 2005, p. 31).

This chapter explains how case studies based on participant observation and semi-structured interviews with actors of community gardens and community supported agriculture (CSA) projects are a suitable strategy for understanding the role of these initiatives as examples of social innovation research and sustainability in general. Thus, the aim is to establish the link between the methodology and the theoretical-philosophical underpinnings of this research (Hoggart et al. 2002; Gomez and Jones 2010). The chapter is organised in four parts. The first part establishes the links between the social innovation theory and qualitative research, then discusses the selection of the research methods. In other words, it explains why case studies based on participant observation and semi-structured interviews are appropriate for studying socially innovative food growing initiatives. The second part focuses on the fieldwork and the way the data has been collected, including the preparatory stage, e.g. how the cases were selected, the way of gaining access to those, and other organisational and logistical matters

followed by the discussion of ethical issues, researcher's positionality and reflexivity, and challenges encountered. And the third part is about the process of analysis.

I. The methods

There were two methodological aspects that I took into consideration when deciding on using case studies with participant observation and interviews. The first was about the way of explanation. The theory and research are in "constant relationship" and "both are modified through combinations of reflection, experience and systematic interrogation" (Flowerdew and Martin 2005, p. 27). This relationship between data and theory also has an impact on the type of explanation that is generated. Cloke et al. (2004, pp. 286-289) differentiate between 'explanation through laws' and 'explanation as causality'. The first type is associated with the positivist methodology based on "highly general statements" looking for regularity in testing hypotheses via deduction. For Cloke et al. this statistical way of 'explaining the events' is a "description" rather than "explanation" and it is the second type that actually provides a causal explanation by scrutinizing "the underlying structures and mechanisms [...] and [...] the manner in which they generate or produce the phenomena we are trying to explain" (2004, p. 288). Another point for consideration when choosing the case studies as a method was whether the problem required intensive or extensive research design. Extensive research is explained as related to "regularity" and looking for "patterns" by using large data sets analysed numerically (Gomez and Jones 2010, p. 67) while in contrast, intensive research is more about understanding how processes and systems work and operate, therefore using "single or small number of case studies with the maximum amount of detail" (Clifford et al. 2010, p. 11).

Additional arguments that helped me decide about the method were specific to the social innovation research. One of these was Hamdouch's (2013) suggestion that social innovation methodology is guided by 'reality', therefore the researchers should think of how to build the knowledge about the "'real social world" (2013, p. 259) and contribute to its transformation. He draws attention to "the irreplaceable importance of qualitative, context-sensitive, interactive and 'open-minded' methodological approaches to/within socially innovative initiatives and processes" (2013, p. 260). And the second argument was that case studies are predominantly used as a strategy in the social innovation literature (Belz 2004; Moulaert et al. 2010; Witkamp

et al. 2011; Seyfang and Haxeltine 2012). In terms of these considerations, I decided that qualitative case studies will suit best the purposes of this research, because studying community food growing initiatives required methods that would help scrutinizing the mechanisms that created these initiatives and their processes based on 'explanation as causality'. Also, rather than looking for regularity, understanding the socially innovative role of these initiatives through examining their systems, everyday practices, and relations between the actors required more 'context-sensitive', intensive type of research. And lastly, case studies would suit best the purposes of researching the socially embedded character of community food growing places, while also providing the opportunity to grasp their cultural and institutional differences. I attempt to justify in more detail in the next sections the rationale of using case studies, participant observation and interviews, including the criteria for selecting the cases.

1. Case studies

Case studies are defined by Eisenhardt'(1989, p. 534) as "a research strategy which focuses on understanding the dynamics present within single settings". Yin suggests that "case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin 2003, p. 1). He further clarifies that 'how' and 'why' questions explain how things operate rather than providing "mere frequencies and incidence" and this is why case studies are a more suitable strategy in researching those types of questions (Yin 2003, p. 6). In a similar way, it is explained that "... case studies are used to determine issues of causality and process, and are not intended to be representative of broader patterns" (Gomez and Jones 2010, p. 67). Yin's definition further suggests that researchers prefer to use case studies when they need to focus on a phenomenon "within some real-life context" (Yin 2003, p. 1). The same criterion is also expressed by Flyvbjerg (2006, p. 221) in his attempt to address some criticism about case studies. His argument originates from the idea that there are no universal and "context-independent" theories in social sciences but only "context-dependent knowledge", which is based on "concrete experience". Since case studies are close to "real-life situations [...] as they unfold in practice" (2006, p. 235), they can provide this type of knowledge and "nuanced view of reality" that can be achieved by being close to the researched object (2006, p. 223). Similarly, Hancock & Algozzine (2006, p. 16) use the term "natural context,

bounded by space and time". An additional point about the use of case studies by social scientists is that these provide "a vantage point from which to draw broader conclusions about societal trends and developments" since it is impossible to study "society as a whole" (May and Perry 2011, p. 221).

Drawing from these arguments, choosing case studies for researching the Welsh community gardens and CSA initiatives was appropriate for a couple of reasons. First, my purpose was to examine 'how' and 'why' they operate, and the questions in the semi-structured interviews reflect this aspect, which is explained further in the part about the preparatory phase. Second, they are concrete and "real-life" phenomena, which is better studied in-depth. Third, I needed to be close to the researched 'object' as the situations "unfold in practice", which happened by being involved in the processes and interacting with the other actors. And the final point is that though case studies, community gardens and CSA farms can be thought as "vantage points" for making more generalised conclusions about the innovative potential of community food growing. These are not aiming at 'statistical generalisation' but as May & Perry (2011, p. 223) clarify, through "theoretical reasoning [...] in producing generalizable conclusions".

a. Case study types

Various classifications of the types of case studies have been suggested in the literature. I am briefly presenting some of these and explaining which types I am planning to use in my research and why. Hancock & Algozzine (2006, p. 32) differentiate between 'intrinsic', 'instrumental' and 'collective' case studies, where 'intrinsic' cases are the ones that do not aim at generalisation but are more interested in "a particular individual, group, event, or organisation" while 'instrumental' cases are based on a theoretical problem and the aim is to explain that theoretical problem. The third type, 'collective' cases include multiple instrumental cases in order "to theorise about some larger collection of cases" (2006, p. 33). A different classification is suggested by Flyvbjerg (2006, p. 231), who differentiate between 'extreme', 'critical' and 'paradigmatic' case studies. 'Extreme' cases are well suited for particularisation and obtaining as much information as possible on the studied phenomenon. The second type, 'critical' cases are useful for examining a "general problem" and aim to either "clearly confirm or irrefutably falsify propositions and hypotheses". In a different classification, depending on whether case

studies seek to provide a preliminary information about a further research, explain the causal relationships of a phenomenon, or describe in detail the phenomenon, case studies can also be 'exploratory', 'explanatory' and 'descriptive' respectively. (Hancock and Algozzine 2006, p. 33).

Applying the above classification to the research about the socially innovative initiatives helped me identify what types of cases would be more suitable for studying the community gardens and CSA farms. Firstly, considering that the aim is to draw general conclusions about their socially innovative role and potential for transformation based on the selection of multiple cases, I have concluded that neither 'intrinsic' (Hancock and Algozzine 2006, pp. 32-33) nor 'extreme' cases (Flyvbjerg 2006) would be the correct type for this research since both types aim at studying a single and particular case in detail. Therefore, the most suitable type for studying the community food growing initiatives was the 'collective' type of cases that include a few 'instrumental' cases, since my aim was explaining an extant theoretical problem. Furthermore, these cases are 'critical' cases that attempt to confirm existing propositions and add to the existing knowledge. In addition, this research is 'explanatory' according to the final classification (Hancock and Algozzine 2006, p. 33), because the empirical evidence does not precede the research question as it is in the 'exploratory' design, nor does it aim to provide a detailed description.

b. Criteria for selecting the case studies

More challenging was the task of choosing typical case studies among the community gardens and CSA initiatives in Wales that could help drawing broad conclusions about the community food growing in general. The main difficulty, specifically with the community gardens, was to determine what was typical because they each have their unique stories and circumstances and hardly share much in common.

Community gardens

For the community gardens, I found it practical to go back to their definition, i.e. plots of open public spaces that are managed and operated by the public, and for the benefit of the public (Holland 2004). Then a typical community garden should have an established and active place

for growing food and a 'community' or a group of people involved in managing and cultivating the garden. Since this was rather general criteria, I turned to the social innovation literature for some additional features. Social innovation is regarded as a phenomenon with both strong temporal and spatial dimensions (Baker and Mehmood 2013), and I found it useful to add time and space as additional criteria. I addressed the spatial dimension by choosing cases from different geographical regions of Wales and in different sizes. The Federation of City Farms and Community Gardens (FCFCG), which is the umbrella organisation for community gardens, had representatives in four working regions back at the time when this research had begun (Tyfu_Pobl no date), namely South East, South West, Mid and North Wales (now they only have South Wales and North Wales offices). Therefore, using the distribution applied by the Federation and having cases from different regions could give a sense about the regional differences and similarities of the community gardens throughout Wales. As for the size, the Report of the Wales Rural Observatory on community food growing in Wales (WRO 2012, p. 31), presents a fairly equal distribution for each size: 38% of the community gardens are smaller than 0.5 ha, 32% are between 0.5 and 1 ha, and 30% are bigger than 1 ha. Therefore, the additional criterion was to have one case from each size.

I addressed the temporal side of the criteria for community gardens by selecting cases that were established at different times, i.e. existing for different lengths of period. Although community food growing re-emerged in the UK in 1960s (FCFCG no date-a), the number of the initiatives increased dramatically after 2005 (WRO 2012, p. 40), which might be partly due to the funding provided under the Rural Development Plan for 2007-2013 (WG 2016a). For this reason, I decided to divide community gardens into three groups according to their age, namely long-established (for more than 10 years), mid-term established (between 5 and 10 years) and recently established (less than 5 years). As for the total number of community garden cases, initially I had decided to have 3 cases. However, due to the predominantly rural character of Wales, I would not be able to compare different urban gardens. That is why I decided to have a fourth case study, which would be from the same big city with another of the cases to allow the comparison. In sum, the selection criteria for the community gardens can be presented briefly in three bullet points.

i. Each case to be from a different region of Wales, i.e. one community garden from South-east Wales, one from South-west Wales, one from North or Mid Wales. At

least one of these should be from an urban location. The fourth garden should be from an urban location and possibly different in other parameters to the first urban case.

ii. Each community garden to be of different size, i.e. one small (less than 0.5 Ha or 1.24 acres), one medium sized (0.5 Ha – 1 Ha or 1.24 acres to 2.5 acres), and one big (more than 1 Ha or 2.5 acres)

iii. Each community garden to be of different age, i.e. one new (existing for less than 5 years), one mid-term (existing for 5 to 10 years), and one old (existing for more than 10 years)

Community supported agriculture

The selection parameters for the CSA farms were slightly different. The exact number of CSA farms in Wales was not known, with conflicting numbers in different sources. The CSA UK network was launched only a few months before this preparation for fieldwork, and their website did not exist yet. Some sources reported that there were "a dozen or so CSA type projects running in Wales at present" (Hitchings 2013, p. 8). On the other side, there was a list of 5 CSA initiatives on the Soil Association's old website. Soil Association was the supporting organisation of CSA in the UK, and it played a vital role in establishing the CSA UK Network. Therefore, including size and age parameters would not make much sense. However, CSA is generally classified according to the ownership of the farm (King 2008; Saltmarsh et al. 2011, p. 7). Thus, in addition to the regional parameter, I added the type of ownership as another important criterion in selecting the CSA cases. Deciding on four CSA cases had two reasons; one reason was to have equal numbers to the community garden cases, and the other was to have one case for each of four ownership models. This would give me opportunity to compare specifically the potentials of different ownership types for addressing the social innovation dimensions, i.e. satisfaction of needs, change in social relations, and empowerment. Also, it was important for understanding which type had a better potential for economic sustainability. In sum, the selection of CSA cases was based on two criteria.

i. Each case to be from different regions of Wales wherever possible, or one from South-east, one from South-west, one from Mid Wales, and one from North Wales.

ii. Each case to be a different ownership model wherever possible, i.e. one producer-led, one community-led, one producer-community partnership, and one community enterprise.

2. Data collection methods: interviews and participant observation

In the previous section I discussed why intensive research based on qualitative techniques would suit better the purposes of studying the social innovation initiatives. This section explains why using interviews and participant observation suit best the purpose of this research. Cloke et al. (2004, p. 290) argue that "less formal and more interactive" qualitative methods are preferred better while doing intensive research. In addition, Ritchie (2003, p. 34) emphasises that qualitative methods are useful for studying a phenomenon in its own "natural" or "social setting" and particularly about researching a "community [...] and 'rules' that govern it". Interactivity and studying community in its own social setting were the two main characteristics of the interviews and participant observation, that I found specifically suitable for studying the community food initiatives.

a. Interviews

Interviews are a useful tool for "understanding how individuals make sense of their social world and act within it" (May 2011, p. 157). According to Valentine (2005, p. 111), interviews are advantageous when we want to learn about people's views, explanations, interpretations and stories "in their own words". Cloke et al. (2004) provide in more detail some reasons why researchers prefer to use interviews. One of the reasons is its usefulness in a wide range of situations, e.g. "explaining processes, changing conditions, organisation, circumstances and the construction, negotiation and reconstruction of meaning and identities" (2004, p. 150); another reason is that researchers in human geography want to "'give voice to others as an integral part of the research process" (2004, p. 151). Similar arguments are suggested by Ritchie (2003) in her explanation about individual interviews being useful for investigating both personal approaches and complexity of processes and systems in detail and depth. All these aspects correspond to the research of community food growing initiatives as social innovation in many ways. Firstly,

the research is about various processes, such as mobilisation of resources, learning, and decision-making. And secondly, it is about "giving voice to others" specifically in exploring their motives, expectations, perceived benefits, and positions about values and the food systems. In addition, I wanted to include the accounts of different actors from the initiatives. For all these reasons, I considered interviews as one of the most appropriate techniques for collecting data.

I decided to use semi-structured interviews. This type of interviews "utilizes techniques from both" structured and focused (in-depth) interviews; while questions are specified, the interviewer has "more latitude to *probe* beyond the answers and thus enter into a dialogue with the interviewee (May 2011, p. 134, emphasis original). When preparing the content of the interview and a list of questions, I was guided by the main research question and the social innovation theory, and more specifically, the processes in the ALMOLIN model (Moulaert et al. 2005), as explained in the literature review chapter. The list contained 35-37 questions depending on the role of the participants, i.e. whether they are volunteers/members/paid workers or managers/founders. I grouped the questions into several sections relating to the processes of the community food growing initiative and aiming to find answers about how the different dimensions of the social innovation have been addressed. These can be summarised as follows.

i. Motives for and expectations from joining/setting up the initiative
ii. Relations between the actors and sense of community
iii. Learning, e.g. which skills and knowledge, how learning happens
iv. Decision-making, e.g. how they take part in the decision-making at each level, and what are the mechanisms for taking decisions
v. Perceived benefits from joining and responsibilities, including the personal impact of their involvement.
vi. Visions for the future of the initiative and the future of community food growing
vii. Perceptions about the current food system and the position of community food growing compared to the main food economy
viii. Networking and collaboration with other community food growing initiatives and other non-food types of community initiatives.

In addition, the interviewees who were managers/coordinators or founders were asked about the short history of the project, the purposes and social needs for setting it up, the mobilisation of resources, including land, funding and people, and the role of intermediary organisations.

b. Participant observation

Participant observation "greatly assists in understanding human actions and brings with it new ways of viewing the social world" (May 2011, p. 189). By undertaking to do participant observation in addition to the interviews, I wanted to combine other people's accounts with my own experience, which would bring rigor in my argumentation. Using complementary technique with the interviews is important because "the individual nature of conversational-style interviews means they can never be replicated, only corroborated" (Valentine 2005, p. 111). In a similar vein, Hancock and Algozzine (2006, p. 46) argue that participant observation is more objective than interviews, which "rely on people's sometimes biased perceptions and recollections of events". On the other hand, participant observation is described as a method where "the researcher joins the constituent study population or its organisational or community setting to record actions, interactions or events that occur (Ritchie 2003, p. 35).

These points correspond to the way I tried to incorporate participant observation in my research. I spend some time in the gardens and farms by offering my voluntary work, which was useful in several ways. Initially, it helped me understand better the practices, processes and relationships. Also, it increased my awareness for important issues while doing observation. And finally, it helped me approach more easily the initiatives and be accepted by the group, which is in line with Laurier's (2010, p. 119) argument that it "may take considerable time and effort" to be accepted as a member of the group and it is important that the researcher 'actually is doing' the things he/she is observing. It also resonates with the advantages of providing the researcher "direct access to phenomena" (Laurier 2010, p. 127) and gaining "additional insights" due to the personal experience about it (Ritchie 2003, p. 35). A final point about participant observation is that it should be "complemented by other research methods" (Cook 2005, p. 181), which is regarded as triangulation with qualitative methods, since 'mixed method' is not only about combining quantitative and qualitative techniques but can be about combining "more than one

qualitative method" (Ritchie 2003, p. 37). This is what I attempted to achieve with the design of this research.

	RESEARCH QUESTION	INTERVIEW QUESTIONS	PARTICIPANT OBSERVATION
1	What were the needs that triggered the creation of the community gardens and CSA initiatives in Wales?	What were the motives for joining or setting up the initiative?	n/a
2	**What resources were mobilized and how?**	**How was the land obtained?**	**Observing the leader's role the initiative**
		Did you receive any funding or help from intermediary organisations?	
		Tell me about the creation of the initiative and its history.	
3	How have the needs been satisfied?	What benefits do you get from your involvement?	Observing some of the benefits by active participation
		What benefis do you think others get?	
4	**What are the relations between the actors and is there a sense of community?**	**How do you find the relations between people?**	**Observing the relations between people**
		What do they think of the sense of community in the initative?	
		Do they feel as part of the garden/farm?	
5	Are there common visions?	What are their visions for the garden?	Informal conversation about visions
		What are their visions for the garden?	
6	**What do people in the initiatives learn and how?**	**What have you learned by being involved on a practical level and apart from practical skills?**	**Experiencing the learning process by participation**
		How does learning happen? Who teaches you?	**Observing how learning happens**
7	How do people take part in decision-making?	Who takes decisions about daily issues?	Observing how decisions are taken on daily basis and how people take part in it
		Who takes decisions on a managerial level and about the initiative?	
		Do you take part in decision-making? How - formally or informally?	
8	**How do people see the position of the initiatives against the main economy?**	**What do you think about the food economy?**	**Informal conversations about the main food economy**
		How do you see community food growing compared to the main food economy? Does it have similar or different values? What are these?	
9	Are there any challenges and barriers for the initiatives?	What difficulties and challenges does the garden/farm enounter?	Observing potential difficulties/challenges
10	**What are the ways for the initiatives to make a greater societal impact?**	**What role do community gardens/farms play in society?**	**n/a**
		Can they have a greater impact and make big change? How?	
		Does the garden/farm do networking or collaborate with other farms/gardens? How?	**Observing potential collaborations**
		Does the garden/farm do networking or collaborate with other types of community projects? How?	

Table 3.1. Matching the research questions to the methods

Table 3.1. demonstrates in detail how methods relate to the research questions. The first column presents the research questions developed in the literature review. The second column shows the interview questions that can provide answer to the related research questions. And the third column describes the way the participant observation can provide date for answering the specific research question.

II. Fieldwork and data collection

This part explains the issues about fieldwork preparation, data collection, ethics and reflexivity. These include in more detail how the cases were selected by applying the selection criteria, how these have been approached and accessed, the way data was collected from interviews and participant observation, including the encountered challenges, and the reflexion on my position as a researcher.

a. Selecting and accessing the cases

Community gardens

My first point of reference for identifying the community garden cases was the website of the Federation of City Farms and Community Gardens (FCFCG), which has been the umbrella organisation of all forms of community food growing initiatives throughout the UK since 1980. I used the map of the community food growing places on their website (FCFCG no date-c) to familiarise with the community gardens in different areas. Then I visited the websites of the community gardens to prepare a detailed list, including their size (acreage), year of establishment, volunteering days, contact person, and address whenever this information was included. To obtain additional information and communicate, I also visited their social media sites. Based on the case study selection criteria, which was explained earlier, I prepared a shortlist of potential community garden cases. Then I started contacting them via email, one at a time because I had to combine three different parameters, which was tricky. I received positive replies from two gardens from North and South-east Wales. One was medium-sized and 8 years old rural garden, and other was small-sized and 10 years old urban garden. Therefore, I needed to find a large-sized garden from South-west that was less than 5 years old, which proved an

impossible task. I managed to find as a third case a large-sized garden in this region that was more than 30 years old. Therefore, I was left with the only choice to find an urban garden that was less than 5-years old as a fourth case, which I did.

Community supported agriculture (CSA)

Finding the potential CSA cases was easier due to their small number in Wales, only 6 at the time. As a first point of reference I used both the Federation's and the Soil Association's websites, which at that time contained the list of the Welsh CSA projects, later transferred to the website of the newly-launched CSA UK network. But one of the best ways that facilitated the process of finding the cases was my participation to the CSA UK Network launch conference in December 2013 in Stroud. There I took part in a workshop with the Welsh network, and made connection with one of the cases, a producer-community partnership CSA in South-east Wales. Then I identified three more potential initiatives and sent them email invitations. One of them, a community enterprise in South-east Wales rejected at first but after being introduced by one of the community gardens to the founding director of the enterprise, they accepted to take part in the research. A third CSA, producer-led and situated in Mid-Wales, did not reply at first but after speaking on the phone with the producer and explaining the purposes of the research and the fact that I would volunteer for them, he accepted as well. The fourth case, a community-led CSA in North Wales whose founder I had met at the CSA Network launch conference, replied much later to explain they had some difficulties but would like to take part in the study.

Introducing the cases

The selected eight case studies - four community gardens and four CSA initiatives - represent a good spatial and temporal variety as well as diversity in growing models, in accordance with the selection criteria.

i. Dinas Community Garden – situated in South-east Wales; urban garden; smaller than 0.5 Ha; 10 years old (in 2014); gardening is made on a collective growing area; all participants are volunteers; uses organic growing principles.
ii. Afon Community Allotments – situated in South-east Wales; urban garden; smaller than 0.5 Ha; 4 years old (in 2014); gardening is made on individual plots with a small

collective gardening area; majority of participants are tenants in a housing association that founded the garden.

iii. Coldwell Gardens – situated in South-west Wales; larger than 1 Ha; more than 30 years old; includes individual plots for people with learning disabilities, who are also provided horticultural training, and a collective kitchen garden; belongs to a charity and apart from the manager it employs a main gardener and a part-time horticulturalist.

iv. Glyndwr Organic Garden – situated in North Wales; between 0.5 and 1 Ha; 7 years old (in 2014); collective growing area managed by the founder/project manager; volunteers are also members (pay £5 membership fee per year); growing is made based on permaculture principles.

v. Bont Market Garden – a community enterprise model CSA, owned by approximately 100 shareholders/members; situated in South-east Wales; organic growing made on 5 acres (2 Ha) land.

vi. Tyddewi Organic Farm – a producer-community partnership model CSA with 40 members; situated om South-west Wales; organic growing made on 2 acres (0.8 Ha) of total 70 acres' land.

vii. Clwyd Community Enterprise – a community-led model CSA with 20 members; situated in North Wales; organic growing made on three sites with an approximate total area of 4 acres (1.6 Ha).

viii. Offa Market Garden – a producer-led model CSA with about 20 members; situated in Mid-Wales; organic growing made on 6 acres (2.4 Ha) land (2 acres of which are rented).

Ethical issues

Before the fieldwork, I applied for and was granted the ethical approval of the Cardiff University (then) School of Planning and Geography Research Ethics Committee on 2 June 2014. The first contact with the managers and coordinators of the initiatives was informal but later I sent them all a formal letter with the School's letterhead, explaining the aims of the research and how I was planning to do the fieldwork. Longhurst (2010, p. 111) suggests that reassuring participants about issues like keeping the collected data safe, its confidentiality, and participants' anonymity,

also informing them about their "right to withdraw from the research at any time without explanation" are important in terms of ethics. In addition, May (2011, p. 141, emphasis original) emphasizes that "*cognition*" is an important condition, which requires a clarification as a practical and ethical issue to ensure that "interviewees not only know the information that is required, but also understand what is expected of them" because it may affect the data. For this reason, I prepared an information sheet to be given to each participant before the interview, explaining the purposes of the research, the anonymity and confidentiality matters, and their possibility to withdraw from participating at any time. I additionally asked them if they have any questions about the research. Consent form was also given to them before the interviews to ask them about any objections for the interviews or observations to be recorded or any pictures taken. If they were not comfortable with the recording or disagreed, then data would be based only on taking notes, although this is not as efficient as recording. Valentine (2005, pp. 123-124) points out that audio recording is advantageous because "it allows the interviewee to engage in a proper conversation with the researcher" and it gives "a more accurate and detailed record of the conversation" including the nuances that can be listened to "again and again". For me, the biggest advantage of recording was that it allowed me to keep an eye contact with the interviewee and listen to them carefully.

Another important document that I obtained and sent a copy to Coldwell Garden before the fieldwork was my Disclosure and Barring Service (DBS) certificate, which was required to be able to work with and interview people with learning disabilities. The certificate, previously known as CRB (Criminal Record Bureau) check, serves to "prevent unsuitable people from working with vulnerable groups, including children" (DBS no date). The garden required every person who would volunteer there to present their DBS certificate first. An additional ethical issue is related to 'giving back'. Apart from volunteering for the initiatives to give back something to the community as a researcher, I also decided that I should give a small monetary remuneration to the interview participants as an appreciation for their time. People at leading positions preferred not to take it. Some participants decided to leave it to the garden or farm. One of the gardens accepted the total amount as a donation to their charity. I noticed that many of the participants were surprised by the offer of remuneration as they did not expect anything in return. A final step was to arrange mutually convenient dates with each project. In terms of 'giving back', it is advised that the researcher should send a summary of the results and a thank-you letter to the

participants (Valentine 2005; Longhurst 2010). I sent thank-you cards to the leaders of the initiative after the fieldwork, and I am planning to send a summary of the results to all participants.

b. Data collection

The data collection happened between 12 June 2014 and 10 February 2015. I spent between 3 and 5 days in each garden or farm, where I joined their everyday routine. Only one of the places arranged a 5-day program by organising its members for the time of the fieldwork because it was winter and members did not normally meet often at that time of the year. Two of the places provided accommodation, and many of them helped with the transport because the access was one of the difficulties. This issue is discussed further both related to fieldwork challenges and in the results.

The interviews

I interviewed 38 people in total, i.e. 5 from each case, except in two of the cases I only managed 4 people either due to the small number of participants or time constraint. The list of the interviewees is presented as Appendix 1. The decision to keep the number of interviews in each project at 5 reflects partly the small number of people involved in the projects, and partly, the limited time I spent in each place and the fact that I had to combine work with interviews. Additional factor was the high number of cases. An important practical issue addressed in the literature is the selection and recruitment of interviewees. It is stated that usually the selection is based on "purposive sampling" or by choosing people whose background relates to the research questions (Longhurst 2010, p. 108). In addition, the role of the 'gatekeepers', who are the key people in the position to help with the access to potential interviewees, is important in recruiting people; therefore, researchers are advised to be precise about the information they need and the people they want to interview (Valentine 2005).

Recruiting the interviewees happened in different ways in each place. In some of them, the 'gatekeepers' helped me choose the interviewees and arranged the interview times. Especially in one of the cases, a volunteer who normally organises the work of the other volunteers went

to extra lengths to phone everybody beforehand and prepared a timetable with the interviews. In others, they left it to me to decide who to interview and arrange it myself. Valentine (2005, p. 112) argues that the aim in recruiting interview participants "is not to choose a representative sample, rather to select an illustrative one". For this reason, I tried to find participants involved in different roles in the community food growing initiatives, and alongside the volunteers, I managed to interview the leaders of the projects and paid workers, wherever there was one. The interviews with the key people were usually left for after the work. With regard to the interview venue, Longhurst (2010, p. 110) suggests that interviews should be made at "neutral, informal (but not noisy) and easily accessible" places. In addition, according to Valentine (2005, p. 118), making the interview on the participant's "own 'territory'" can make it more relaxed and give the researcher "the possibility to learn more about the person from seeing them in their own environment". Interviews happened in various places on the territory of the projects. For example, polytunnels were quite useful for this purpose, and in one occasion the interviewee even kept working while answering my questions. Other suitable places were sheds, areas for socialising, and training rooms. Some of the interviews with project leaders happened in their homes, which helped me learn more about their lives.

There are some practical issues about conducting semi-structured interviews that I was attentive about, which also take place in the literature. One of these was the thorough preparation of a list of questions, also called "interview guide" or "interview protocol" (Hancock and Algozzine 2006, p. 39), and familiarising beforehand with the topic (Valentine 2005; Longhurst 2010). It was important to start with easier-to-answer questions while leaving the "sensitive or thought-provoking" questions for a later stage of the interview to predispose the interviewers so that they feel comfortable, as suggested by Longhurst (2010, p. 107). Starting with "general descriptive of factual questions" also shows the participants that they can talk 'freely' rather than giving 'yes' or 'no' answers (Valentine 2005, p. 119). I started with the question *"What is your involvement with the garden and how did you decide to become involved?"* A few interviewees were not very talkative and preferred to wait for my questions, to which they gave concise answers. A couple of them needed prompting with additional questions due to very short answers. On the contrary, several of the participants had plenty of extra useful information to provide and the interviews took more than an hour.

The list of questions proved to be a very important tool that facilitated the interviews. I practiced these before going to fieldwork, however, during the first couple of interviews, I needed to look at my notes as a reminder. With time, it became much easier as I had memorized these. Valentine (2005) warns that we cannot rely strictly on the prepared questions and for achieving a successful interview, we should be open to the interviewees' narrative; it is the same with the flow of the interview, which may not proceed in the order of the prepared questions and requires a good memory of the issues that need to be covered. Valentine (2005, p. 120) also suggests that there is a need of "balance [...] between keeping the interview focused and letting it flow and take its own course"; additionally, the success of the interview depends on the ability of the researcher to listen carefully and be vigilant about unanticipated new ideas that can contribute to the study. The interviewees generally kept to the flow of the interview with very few occasions where I needed to remind the question. None of them objected to the audio recording, which was a big advantage for the analysis. An important point is that the interviews with the people with learning disabilities at Coldwell Gardens happened with the help of the garden manager, who at the same time is their teacher. This was necessary for several reasons, e.g. the safety of the interviewees, to make them feel more comfortable in the presence of a familiar person, and to facilitate the interviews by re-asking the questions in a way they can understand better.

The participant observation

Cook (2005) describes participant observation as a three-stage process starting with the access to the place/phenomenon and is followed by being a part of it and reflecting back. The access to the community food growing initiatives was described earlier in the section about selection and approaching the cases. 'Being there' happened by visiting the initiatives and participating in their activities. For me, it started with going to the gardens/farms on the mutually agreed date and introducing myself to the leader of the project. In two of the cases I was picked at the station by a member of the initiative. After that, I was introduced to the other people. Several gardens did not have volunteers on every day of my visit because they only had a specific volunteering day of the week. Nevertheless, when it was not a volunteering day, I worked only with the grower(s). This helped me see how the initiative worked outside the volunteering times, and to make comparisons. It also gave me the opportunity to engage in conversations with the

grower(s) and to learn more aspects about the initiative's background and management. For example, I observed that on non-volunteering days the garden looks lonely, and it is only one person alone or two people at the most doing all the jobs. At one of the cases, Offa Market Garden, I was first invited to their annual open day, which was a good opportunity to meet the larger community and observe the relations between people. I include here some observation notes of the day.

> *13 July 2014, Sunday*
>
> *[Offa] MG*
>
> *I arrived at 12.55 at the K. train station and was picked up by a volunteer. When we arrived, the preparations for the annual open day were ongoing… People started gathering, greeting each other with hugs. A long queue for drinks and cakes was formed just after 2 pm. Outside an artist was explaining the children how to make the picture of a worm. A story-teller lady was preparing her tent by covering the ground with some blankets. In the next tent a lady from a nursery was explaining about seedlings, and next to her was the demonstration of compost preparation, carefully watched by 5-6 people. Just in an hour all the grounds indoor and outdoor were crowded with people of all ages, chatting and laughing, and eating and drinking. On one of the plots there was an exciting activity going on: worm charming. People with pots of water were trying to 'charm' the worms out of the soil, competing for the highest number of worms charmed. They were exchanging ideas about different ways of making the worms come out, such us thumping their feet on the ground or making rhythmic vibrations at the same time pouring water on the ground… Another group of people with young children was examining the growing grounds of the market garden just a bit further of the house. A local MP who was responsible for food matters also visited the garden and was talking to the other visitors. The flow of coming and leaving people went for hours. In the evening, people who took part in the organisation were leaving by warmly telling 'goodbye' to each other, some of them promising to come on the next evening for the 'weeding group'.*

'Being there' stage for me included coordinating three jobs at the same time, namely working at the farm/garden, doing interviews, and observing by watching, listening and keeping mental notes. Laurier (2010, p. 119, emphasis original) argues that the length of time necessary for becoming a competent and accepted member of the observed group depends on the studied activity, and while some take considerable time and effort, others are much easier; however, he

maintains that the researcher does not have to be "*excellent* in the activity" for a successful participant observation, and by the end of the observation, the researcher "should possess a degree of the particular know-how, appropriate conduct and common knowledge of the place and/or people". For me, this knowledge increased gradually with every new initiative and built upon the previous case. I did all sorts of jobs, including plenty of weeding, planting, watering, harvesting and weighing the produce, carrying compost or manure or wood chippings, and very little digging. But I also learned a great deal about the norms and culture within the initiatives and about their structure. As another point, May (2011, pp. 178-179) refers to Bruyn's (1966, *The human perspective in sociology: The methodology of participant observation*) indices of 'subjective adequacy' that "enhance the understanding of the researcher and thereby the validity of the research". In sum, these suggest that the adequacy of the observation increases with longer time spent with the group, the consideration of the physical environment, greater variety in the observed social relations in terms of roles and status, better familiarity with the social language of the setting, greater personal involvement, and finally, the ability to "communicate to other persons the rules operating within the setting in such a way that they could enter that setting and feel part of it". Although the time I spent in each garden/farm was limited, I tried to make the most of it in terms of these indices, at least to a degree that my observations were adequate for the purposes of this research.

Cook (2005, p. 174) draws attention to the importance of the flexibility of the researcher due to little control over the events and no "pre-planned schedule". This is an important practical advice. Even though I had prepared a list of observation issues before going to the field and kept these into consideration, I had to go with the flow of events, and rather keep an open mind and take mental notes of important matters. It is strongly advised that the researcher keeps notes or makes audio-visual records wherever possible in the form of a field diary, which will later facilitate the recall of the details, reflection on the fieldwork and analysis of the data (Cook 2005; Laurier 2010). For example, Laurier (2010, p. 120) advises to "record as much as you possibly can" and "write straightforward and detailed descriptions of the phenomena" by also including our own feelings as a researcher. Cook (2005, p. 181) adds that the "constructed account" of the observation must give "detailed and vivid impression of your 'being there'" in a way that "people reading it can imagine themselves in your place". I could not take the notes immediately on the field as I was working with everybody, usually my hands covered in dirt. And during the break-

times and lunchtimes I was either doing an interview, depending on the arrangements, or having conversation with the participants to gain some additional insights. But also, I wanted to fulfil my duty as a volunteer in the best way I could. However, I kept the diary in the evenings, immediately after the fieldwork and when the events and dialogues were still fresh in my memory.

The observations had two main benefits. First, they helped me collect additional information and better understand how things work by listening to people and talking to people. This is valuable information for the research, which would not normally come up in the interviews; it is like a day-long interview with all the group without being audio recorded. And the other benefit is that by putting myself 'in the shoes' of the participants, doing what they do, experiencing the benefits they do, and learning as they do, I could gain deeper knowledge about the processes that were questioned in the interviews, and 'see things through their eyes'. As an example, I include an excerpt from my observation diary about some of the difficulties that the initiatives encounter. The events happened on a non-volunteering day, and I spent the day only with the two growers.

> *"3 July 2014, Thursday*
>
> *Bont MG*
>
> *The day was full of pressure. We had to harvest enough food at least to fill the boxes to be distributed that evening. [The head grower – H.G.] and [the assistant grower – A.G.] started thinking of how they can fill the boxes. They needed at least 7 varieties for the boxes without the potatoes. We went in the polytunnel with [A.G.] to harvest some cucumbers, sweet peppers and chilli peppers. These were going to be 3 of the varieties. There was no problem with the cucumbers, there was plenty. It was trickier with the chillies. Some of them were not ready to be picked yet and we had to pick enough for all the boxes. It took us a long time to find enough. [H.G.] picked some broad beans but these were not enough. They had to supply from other organic growers. We put all the harvested crop in the shed to be weighed and put into the boxes. Bags full of potatoes and carrots, and some boxes with broad beans were ready there. [A.G.] weighed the produce, then we started filling the boxes. We did a lot of counting and arrangements, and prepared labels for each box. Toward the end of the day and before the delivery man came for the boxes, we went to pick some strawberries with [A.G.] Then we weighed strawberries for each box and gave the ready boxes to the delivery man. I felt part of the pressure*

has lifted. But there were many boxes to be prepared for the next day as well. And [A.G.] was going to come at 7 am on the next day to pick some vegetables and strawberries, and prepare the boxes on time."

c. Reflexivity, positionality, and difficulties

"Being *reflexive*" and "recognising your *positionality*" (Valentine 2005, p. 113, emphasis original) as a researcher means reflecting on your own identity and role during the research, and questioning how it may affect the interactions and the whole research process (Hoggart et al. 2002, p. 24; Longhurst 2010; May 2011, p. 140). It is described by Berger (2015, p. 220) as a "process of a continual internal dialogue" and "turning of the researcher lens back onto oneself to recognize and take responsibility for one's own situatedness within the research". Hancock and Algozzine (2006) explain that recognising the biases inherent in case study research and trying to 'mitigate' their effects on the research, is important for the 'impartiality' of the results. Positioning is related to personal characteristics, e.g. gender, age, race, sexual orientation, personal experiences, beliefs, and ideological stance (May 2011, p. 140; Berger 2015). The research of community food growing initiatives did not involve any issues that might be sensitive to many of these characteristics. Especially the gender, race, sex, and age did not have much effect because the research content was neutral to these characteristics, and these were merely used as demographic data. The situation was similar in terms of power relations since there was relatively equal distribution of power within the communities, including my own position. Perhaps the only situation of different power relations were the interviews with two participants with learning disability at Coldwell Gardens. I tried to mitigate the effects this might have on this research by involving their teacher (and the manager of the garden) in the interview process. In addition, doing together with them garden jobs and socialising during the tea time helped with eliminating the barriers between us.

Meanwhile, Cook (2005) points out that the way the researcher present himself/herself to the group and clarifying their potential role in the community has a great importance. He suggests that the researcher must decide on two things. The first is whether to have an 'overt' role, "providing a full explanation", or 'covert', where the purpose and identity are disguised (Cook 2005, p. 175). And the second is about the degree of participation, i.e. 'participatory' role by

being fully involved in the community activities or 'observational' by only watching it. The second point was explained in the previous section. As for the first point, my role was 'overt' and in all my communications and face-to-face contacts before and during the fieldwork I was completely open about my role as a researcher and observant. Before the fieldwork, I assumed that my researcher role would affect participants' attitudes and their relations with me in a way that they would be more reserved. However, this did not happen because I took my volunteering job seriously and tried not to be obtrusive and be respectful to the group etiquette. Since we had discussed my role beforehand, they made sure that I fulfil my research tasks but also, they made me feel one of their group by involving me in all their works. Even though I spent very short time in each place, I felt that I was warmly accepted in each community. People opened their homes to me: in some places, I was offered accommodation; in others, I was invited to a meal. I was also helped with the transport. This mutual consideration facilitated greatly the research process.

The final point relates to the researcher's worldview and background, and its impact on the research process and outcomes. Valentine (2005, p. 113) suggests that "sharing the same background or a similar identity to your informant can have a positive effect" and produce "a detailed conversation based on empathy and mutual respect and understanding". Similarly, Cook (2005) adds that interaction with people can help the researcher understand how to find common ground with them. Berger (2015) points out that researcher's worldview affects also the way of interpreting the data gathered from participants, and can have an impact on the findings and conclusions. My interactions with the participants in community food growing initiatives revealed that many of them, particularly the leaders, were passionate about the environment, sustainable living, and strong communities. They were aware of it and regarded themselves as 'converted', which meant proponents of the ideas of environmentally-friendly living. These became our 'common ground' since they were my personal and research priorities too. We had long conversations about the ways of incorporating the principles of sustainable living in our lives, and about the role community food growing initiatives can play in it.

However, Berger (2015) draws attention to reflecting not only on commonalities but also differences between the researcher and informants. The main differences from my position that came up during the data collection were my different ethnic background and being non-native

English speaker. Although community gardens and CSA projects are open to people of any ethnic background, in all case studies apart from the urban gardens, participants were predominantly white British. Therefore, they usually wanted to learn about the countries I was coming from, and about gardening in these countries. However, my rural background and basic horticultural knowledge, my fluency in English, some years of living the in the UK, and my knowledge about community food growing phenomenon and Wales were aspects that bridged the differences.

Difficulties during the fieldwork

The main difficulty I experienced during the fieldwork was getting to the places where the initiatives were located. Many of these places were remote; I had to change a few means of transport to reach them, and some of the buses ran only 3 times a day. More than that, buses did not go as far as the gardens and farms, and I usually had to walk about a mile or so, often with a heavy backpack and sometimes in the rain. At times, I felt concerned about my safety because the roads were out of the inhabited areas and I was not familiar with the area. But people reassured me that it is safe. In some places, though, members organised means of transport for me because there was no other way of getting to the gardens. This is one of the main barriers for some of the initiatives, which is further explained in the results chapter. Other challenges were note-taking of observations, which I could only do after the workday as explained earlier, and the transcription of the audio recorded interviews, which I left for after the fieldwork. It is suggested that transcribing the audio recordings "as soon as possible after conducting them" makes the transcription easier due to the conversation being "still fresh in your mind" (Crang 2005, p. 110). In addition, Valentine (2005, p. 126) warns that if interviews are not transcribed as soon as being done, the researcher can be "confronted with a huge backlog of tapes that will take weeks to transcribe before you can start your analysis". This was exactly the mistake that I made. I did not transcribe immediately because I used my time for writing observation notes, and I spent months afterwards to transcribe. But it was a valuable lesson for the future research.

III. The analysis

May (2011, p. 153) explains that "transcribing tapes and simply listening to the conversations assists the important analytic stage of becoming familiar with the data". This stage took a considerable time, as previously explained. I decided to personally transcribe the data rather than seeking for transcription services. The main reason was to better familiarise with the data. I used Express Scribe software for the purpose, which allowed me to slow down the recording to a suitable speed. The audio-recorded interviews generated transcription text of approximately 140.000 words. The next stage was the 'sorting'. While there is some degree of consensus in the literature on the use of different qualitative techniques, there is a huge variation when it comes to the different types and ways of doing qualitative analysis. Perhaps one of the most detailed classifications is suggested by Tesch (1990, pp. 77-102), who identifies over twenty different types of analysis, from content analysis to phenomenology and hermeneutics, which she places on a spectrum ranging from very rigid and strictly defined to very flexible and lacking any rules. After examining thoroughly each type, she then summarises these in two main categories: "structural analysis" and "interpretational analysis", which she further divides into theory-building and interpretive/descriptive (Tesch 1990, p. 99). However, she is criticised for providing such "clear cut" distinction since in practice in qualitative studies researchers "often cross boundaries" (Spencer et al. 2003, p. 201).

A different approach to qualitative analysis is presented by Cloke et al. (2004, Chapters 7 and 10), who rather examine the process and different ways of doing the analysis. Acknowledging that specifically the "sifting and sorting" stage is not given the necessary attention in the literature and is regarded rather as a "clerical" task (2004, p. 217), they argue that it "is really one of the most problematic" and provide some practical advice on how it can be done in a "critical self-reflexive" way (2004, p. 241). "Explanation" and "understanding" are other ways of interpretation they suggest; but after examining various modes of explanation and understanding, they also emphasise that despite the differences between these ways, there are no definite boundaries between explanation and meaning and they cannot be separated in the process of interpretation (Cloke et al. 2004, p. 335). Differently, Crang (2005, p. 224) argues that coding is only a way of "conceptually organising [...] materials" and that a further process is "building ideas" and making sense. However, he draws attention to the necessity of clarifying

the position of the researcher regarding the interpretation, more specifically whether it is the researcher's own interpretation, structures of the investigated phenomenon or informants' accounts.

However, rather than suggesting various ways of analysing qualitative data, Kitchin & Tate (2000, p. 229) adopt a more holistic approach that can be applied to analyse "all types of qualitative data", which they call "universal approach" based on the reasoning that despite differences between the many ways of qualitative analysis, trying to make sense of the data by coding and then connecting the relating pieces are common operations for all types. This is the approach that applied when analysing the interviews and observation notes from the case studies because it is suitable for different types of qualitative data. As described in a detailed way by Kitchin & Tate (2000, p. 237), I started by making initial "annotation" and "jot down ideas and memos" in the form of comments or by highlighting the text with different colours; I then continued with identifying emerging categories that relate to this study, breaking these into sub-categories or "disaggregate" (2000, p. 242) the data by giving each piece of information a code, and finally splitting the sub-categories into smaller pieces. The sorting and coding was made in accordance with the processes in the Alternative Model for Local Innovation (ALMOLIN) framework (Moulaert et al. 2005; González et al. 2010), described earlier in the theoretical part of the literature review. These were the processes that became the main categories and sub-categories in the analysis.

i. Human needs and exclusion dynamics
   - Community needs
   - Personal needs

ii. Mobilization of resources
   - Financial capital
   - Leadership and intermediary organisations
   - Human capital

iii. Processes of the community food initiative
   - Articulating the difficulties (landscape/regime pressure)
   - Articulating the expectations
   - Visions and aims
   - Sense of community

- Learning
- Decision-making
- Personal benefits
- Networking
- Perceptions on diffusion potential

Next, the data was comparatively sorted and classified according to the above categories. I preferred not to use an analysis software mainly because the data size was not as big as to make it unmanageable. Instead, I used Excel sheet to put the small pieces of information into boxes and make it comparable. As a final stage, I tried to find links between different categories and make conclusions. The links were initially made separately for each case, then comparatively only for community gardens and only for CSA cases. And finally, comparison was made between community gardening and CSA as two different forms of food growing.

IV. Conclusion

The purpose of this chapter was to explain the research process. I discussed the case studies with interviews and participant observation as a methodological strategy suitable for studying community gardens and the CSA in Wales as social innovations. First I explained that case studies are particularly useful when the aim is to make a context-sensitive, intensive research close to the researched object as the situations unfold in practice, and which is about understanding how processes and systems in 'real-life', concrete phenomena work and where causal explanation is needed. Further, I justified the rationale for using interviews to learn about people's perceptions by 'giving them voice', combined with participant observation to add my own experience to people's accounts, gain "additional insights", and triangulate with qualitative methods. Next, I described how I applied the selection criteria to identify the eight cases, and how I gained access to these. When discussing the ethical issues, I argued that paperwork including a formal letter to approach the groups, information sheet and consent forms for the interviewees, and some additional documents like DBS certificate is an essential part of the preparation for the fieldwork. Reflexivity and positionality was another important issue that I discussed further by reflecting on my own identity and role during the research, the way I presented myself to the group, and the way my worldview and position might have affected the whole research process

and outcomes. While describing the data collection process, I demonstrated that doing participant observation by being actively involved in the practices of the studied community provides better understanding of the phenomena. And finally, when describing the analysis process, I outlined the main themes of analysis but also reflected on mistakes that I made during the research process. In sum, this chapter was a detailed account of the research journey.

Chapter 4

RESULTS FROM THE CASE STUDIES: COMMUNITY GARDENS

The chapter presents information about community food growing within the Welsh context and the qualitative analysis results from the data obtained in four case studies, namely, participant observations and 19 interviews from four community gardens. The processes of data collection and analysis were explained in detail the methodology chapter. The themes of the analysis are derived from the Alternative Model for Local Innovation (ALMOLIN) framework (Moulaert et al. 2005; González et al. 2010), discussed earlier in the literature review as the suitable analytical framework for this research. These themes are presented in **Table 4.1**. The themes are grouped in four sections, which correspond to different stages of the social initiative, namely identifying the needs, mobilization of the resources, processes of the social initiative, and potential for making change. These form the inputs for further evaluating the role of the initiatives.

Social Economy Initiative – Inputs	
1. Identifying the Needs	*Community needs*
	Personal needs/motives for participation
2. Mobilisation of Resources	*Financial capital (land and funding)*
	Leadership and intermediary organisations
	Human capital
3. Processes of the social initiative	*Visions and expectations*
	Sense of community and belonging
	Personal benefits (perceived)
	Learning
	Decision-making
4. Potential for making change	*Perceptions about the current food system*
	Position of community food growing against the main food system
	Articulating the difficulties
	Networking and prospects for the initiatives

Table 4.1. Themes of Analysis

The chapter is organised in two main parts. The first part provides general information about the place of food within the Welsh economy and about the situation of community food growing in Wales. It examines the institutions and programmes working in support of community food

growing, and the relevant policy regulations. And the second part introduces the community garden cases and presents the results from these cases following the inputs from Table 4.1.

I. The Place of Food and Community Food Growing in the Welsh Economy and Policies

With the decline of the heavy industry in the last decades of 20th century, the Welsh economy is now dominated by services and manufacturing (EC 2017). Food and farming take place among the 9 priority sectors in the Welsh economy; it had the highest self-employment proportion at 44% in 2015, and contributed with a GVA of £16 per hour (WG 2016b). The Food Strategy for Wales (WAG 2010b, p. 1) draws attention on Wales' growing "reputation for its innovative food and drink… sector" and its "high quality foods". On the other hand, Marsden (2013, p. 130) argues that the food strategy of Wales (and Scotland) alongside the UK food strategy are "invocations of the new national importance of food, and of a recognition that changing food policy would require an appreciation of a range of complex interdependencies and trade-offs". He also adds that these "promote a more reflexive governance approach" to food (2013, p. 132). However, food also has a traditional value in Wales because the Welsh population is less urbanised and "closer to the land" compared with England, and the food sustainability is regarded as something Wales can "really distinguish itself" thanks to the fact that most of its produce comes traditionally from small farmers (Henley 2010). Parallel to the Welsh Government's policy documents related to food, there are various organisations working on more participatory governance principles for food security and sustainability. One of these organisations, Cardiff Food Council, has been selected as a founding member of the Sustainable Cities Network, launched in August 2013, for its "pioneering work in transforming food culture" (NHS-Wales 2013).

In 2010 the Welsh Government commissioned the Wales Rural Observatory (WRO) to do an in-depth investigation about community food growing in Wales, which was also included in the Community Food Growing Action Plan (WAG 2010a). The aim was to identify what is needed for the promotion of "community growing" (WRO 2012). The WRO focused on four main models of growing, namely community gardens, community supported agriculture (CSA), allotments and school gardens, and prepared a comprehensive report based on data collected from 196 food

growing projects in Wales and interviews with community growing organisations in England and Scotland between July 2010 and December 2011. Besides the results, the report also includes case studies and key policy recommendations. The research covered different aspects of community grown food, such as networking, land use, motivations, obstacles and achievements. The aim was to examine the current activities and identify the "best practice" comparatively for Wales, Scotland and England, to determine the existing obstacles, and evaluate the opportunities for the future. Most of the key recommendations in the report call for policies at higher level, e.g. provision of strategic leadership at national and local level, more integrated policy response to the community growing activities; release of land for the growing projects by the Welsh Government; better coordination for horticultural training and education; and "establishment of a Wales-wide support network [...] that links different types of community growing" (WRO 2012, p. 6).

As a follow-up to this comprehensive research, a new program Tyfu Pobl (Growing People) was launched in 2011 with the aim to address some of the policy recommendations in the report, specifically the need for a better organisation and coordination of the community food growing projects; this new program ran for 3 years and was delivered by the Federation of City Farms and Community Gardens (FCFCG) funded through Rural Development Plan for Wales, which was funded by the Welsh Government and the EU (OCW no date). The aim of the program was to provide support and advice to the existing and emerging community growing projects, especially on how to access funding, and organise training courses. Moreover, Tyfu Pobl's work was specifically oriented towards eliminating some of the barriers identified in the report by bringing together all the fragmented community growing projects, organising visits for knowledge-share purposes by covering the travel expenses of the gardeners, and organising regional gatherings (Space_Saviours no date).

Building on the success of Tyfu Pobl programme, a new programme that aims to take community food growing to a different level, Tyfu Fyny (Growing Up), has been launched by the FCFCG, funded through Welsh Government Rural Communities - Rural Development Programme 2014-2020, which has 5 key areas: Growing Enterprise, Growing Communities, Community Supported Agriculture, Care Farming, Climate Change and Sustainability Education and is considered as the "next phase of development support to community growing groups" (FCFCG no date-b).

Federation of City Farms and Community Gardens (FCFCG) is the umbrella organisation that connects all types of community food growing initiatives with one another, and plays the role of intermediate organisation between the Government and the grassroots projects. FCFCG has launched another programme to support community food growing in Wales. One of these is Community Land Advisory Service – CLAS Cymru, which is funded by the Big Lottery Fund, and aims to address the problems relating to finding land by working as an intermediary or brokerage service between landowners and communities wanting to grow food, including direct advice and support and bilingual service (CLAS no date). FCFCG is also a partner organisation in a UK-wide programme funded by the Big Lottery Fund, called Growing Together, which aims to help food growing communities with ways to generate income and make them more financially sustainable, by working "with Government and big business to unlock land, skills and money" (Growing_Together no date).

Apart from the Community Food Grown Action Plan (WAG 2010a) mentioned earlier, very few arrangements in other policy documents at government level relate to community food growing. For example, 'One Wales: One Planet' focuses on sustainable development and includes more higher level, general actions about food that mainly targets the ecological footprint and specifically, reduction of food waste. It acknowledges, though, the "huge" increase in community food growing (WAG 2009c, p. 22). More specific arrangements are included in the 'Action Plan for Food and Drink' (WG 2014b, pp. 31, 55), where it is suggested that there are more than 440 community food growing initiatives in Wales that teach skills and sustain communities and that "ways must be found to 'free-up' more publicly owned land and to explore options for utilising private land to extend this tried and tested initiative". The plan sets that target for exploring of "all options to increase the land availability for community growing, also to ensure an enabling planning system and an appropriate support network for community growing initiatives".

II. Qualitative Results from the Community Garden Cases

This part starts with introducing the community garden cases. Comparative summary information about the community gardens is presented in **Table 4.2.** In addition, the location of the gardens is shown in **Figure 4.1.**

	DINAS	AFON	COLDWELL	GLYNDWR
Size	Small	Small	Big (6 acres)	Medium (1 acre)
Year	10 years	5 years	30+ years	8 years
Location	South East	South East	South West	North
Rural/Urban	Urban	Urban	Rural	Rural
Purpose	Community and fresh food	Outdoor space for tenants	Learning disabilities	Tackling the ecological problems
Management	Social enterprise	Housing Association	Charity for disabled people	Independent project

Table 4.2. Comparative brief introduction of the community gardens

Figure 4.1. Location of the community garden cases

Dinas Community Garden

Dinas Garden is a community garden in a central urban area in South East Wales. Established in 1994 by a social enterprise running sustainable food projects like farmers' market and a market garden, the project has been running for more than 10 years and has become a place for frequent visits from schools. Even though its total land is less than 0.5 acres, over 1100 people throughout the last year became involved in the garden's activities and projects. It is open to everybody who wants to grow and share food in a sociable environment, and attracts volunteers from very different social and ethnic backgrounds. The garden has raised beds, 2 polytunnels, a

pond, a covered communal area for socialising and activities, a solar cooker, a tool-shed and a compost toilet. All the areas in the garden are for collective growing and there are no individual plots. The list of the interviewees with some demographic information is presented in **Table 4.3**.

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Mei	Dinas	Volunteer	42	F	Unemployed	Higher National Diploma
Vince	Dinas	Volunteer	57	M	Retired	Postgraduate Degree
Darren	Dinas	Volunteer	55	M	Shoe Maker	Completed Primary School
Matt	Dinas	Garden Manager	32	M	Garden Manager and Self Employed at Other	Medical Degree

Table 4.3. Demographic data about the participants - Dinas

Afon Allotment Garden

Afon Garden is located in a central urban area in South East Wales and is an allotment project initiated by a housing association initially for their tenants who want to do gardening; but there are also members who are not tenants. It is a relatively new project that got hold of the land in 2010 but have not started until 2011 after clearing up the area. Later, after the project was initiated, a part of the garden was made a communal area with some raised beds, and part of it was designated to the New Foundations alternative 'growing' school for home schooling children. The garden is well settled with a polytunnel for shared use, a tool container, a shed for socialising and activities, and a compost toilet suitable for disabled gardeners. All these facilities have been provided by the housing association with some financial help from supporting organisations. **Table 4.4.** presents the list of the interviewees with some demographic information.

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
William	Afon	Member	70	M	Retired	N/A
Warren	Afon	Member	68	M	Retired	Higher National Diploma
Ralph	Afon	Member	77	M	Retired	Degree
Zoe	Afon	Member	62	F	Pensioner	High School Degree
Linda	Afon	Community Investment Officer	25	F	Community Investment Officer	Degree

Table 4.4. Demographic data about the participants - Afon

Glyndwr Organic Garden

Glyndwr (pronounced Glyn'du:r) Garden is situated in North East Wales, near the border with Mid Wales high up on a hillside in a rural area. It was established in 2007 under the leadership of a horticulturalist with some help from her partner who did studies in agrology. They established the garden in accordance with the permaculture principles, by preserving and protecting the wildlife in the area, on a 2-acre gorse by building a series of raised beds as a natural amphitheatre. Volunteers pay £5 a year to become members. They come one day a week to help and learn, and share the produce at the end of the day. Some of the produce is sold at the local grocery shop and part of it is delivered to a few customers. The garden is predominantly a place for learning, and the garden founder also visits other gardens to share her knowledge. **Table 4.5.** shows some demographic information about the interviewees.

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Luke	Glyndwr	Member/Volunteer	40	M	Unemployed	Degree
Ethan	Glyndwr	Founder	56	M	Student	Degree
Owen	Glyndwr	Member/Volunteer	74	M	Retired Teacher	MA Hons
Eric	Glyndwr	Member/Volunteer	52	M	Occupational Therapist	BSc Degree
Faith	Glyndwr	Garden Manager and Founder	57	F	Garden Manager/ Development Officer	O Level/ PTLLS Teaching City

Table 4.5. Demographic data about the participants - Glyndwr

Coldwell Gardens

Coldwell Gardens are situated on a 6-acre land in South West Wales, in a wildlife area of the National Trust and run by a charity for people with mental disorders. The nearest city is at 7 miles' distance. The area is predominantly a place for wildlife conservation and research, birdwatching and outdoor activities. Coldwell Gardens' history goes back to 1770, when the original gardens were established. Today the place provides learning facilities for gardening and growing food for adults with learning disabilities. Apart from individual plots for the participants, the gardens also have a vegetable growing area and orchard that provides fresh fruits and vegetables to the shop and café, operating now 7 days a week in the summer. The gardens also possess polytunnels, greenhouse and a sensory garden as well as a big covered area for training and socialising. The shop sells not only fresh produce but also preserves, potted flowers and some memorabilia. The students are taken from their homes to the garden and back by a

designated driver and a minibus. Demographic information about the participants is presented in **Table 4.6.**

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Daisy	Coldwell	Volunteer/ Trustee/ Secretary	54	F	Freelance Communiy Developer	MA
Emma	Coldwell	Student	31	F	Participant Gardener	Entry Level
Adam	Coldwell	Student	24	M	Participant Gardener	Entry Level
Riley	Coldwell	Horticulturalist/ Trainer	31	M	Horticulturalist/ Trainer	A Level
Brooke	Coldwell	Garden Manager	52	F	Garden Manager	PCE

Table 4.6. Demographic data about the participants - Coldwell

1. Identifying the Needs

In this section I attempt to identify the 'alienated' needs that caused the exclusion dynamics and led to the mobilization of resources for setting up the initiatives. First, I examine the community needs based on the accounts of the leaders, and then, the personal needs based on the accounts of all the participants.

Community needs

The interviews with the leaders of the community gardens revealed a wide range of community needs that triggered the establishment of the initiatives. In the case of ***Dinas Garden***, the need was access to "fresh, good quality, local food" by the local community. However, although food was the central need, there were also some additional complex needs, such as social inclusion of people from different backgrounds, access to outdoors and ending people's feeling of isolation due to retirement and other factors, learning and sharing knowledge about growing food, building, cooking, different sustainable options, and developing people's self-esteem.

Similar were the community needs at ***Afon Garden***, which was initiated by a housing association for its tenants to give them the opportunity to grow their own food, to eat healthier, and to overcome the social isolation. The housing association had a Community Investment Group, responsible for addressing the social needs of the tenants. Before the garden was established,

the members of the group invited all the tenants to meet and discuss what their needs were and how the association could improve their lives. One of the ideas that came up from the tenants, specifically those who lived in the new-built flats without public area, was to have a gardening place. Therefore, the primary social need behind the creation of Afon Garden was to provide the tenants with outdoor space where they can do gardening and socialise. After 4 years, the garden now is well-established with all necessary infrastructure, and is open to people who are not tenants too.

- *"We thought we would […] basically provide an opportunity for tenants to get involved in gardening who otherwise would not know how to do or did not feel confident to take that hassle themselves to secure an allotment. […] We knew that a lot of people wanted to do gardening and we've thought how we can address this, how we can give tenants this opportunity that they want. And it's really important now to be focused on healthy eating, reduce the social isolation; there are so many positive benefits of providing this."* (Linda, 26.11.14)

Slightly differently, ***Glyndwr Garden***'s initiation had environmental motives and was a response to the problems caused by the global warming and climate change. The founder of the garden reportedly read about the 'Stern Review on the Economics of Climate Change' (Stern 2006) in the environmental magazine 'The Ecologist' (da Costa 2006) back in December 2006, and she felt that she needed to do something in her own community. She established the garden based on permaculture principles by using the resources available in the surroundings of the garden, with water harvesting system, composting facilities, wormeries[1], beehives, and in harmony with the biodiversity.

- *"I can remember sitting and reading this review. […] It was about climate change and it was just so… depressing. I've just thought 'I need to do something now, in my own community and my own doorstep'. So, that is how the garden began. You could say it was an emotional response to a huge problem."* (Faith, 30.07.14)

Her partner agreed with her initiative and supported her, although he imagined it as a smaller garden and was not expecting it to grow to its current size.

[1] "Worm composting is an efficient method of turning kitchen waste and small amounts of garden waste into nutrient-rich compost and a concentrated liquid fertiliser. However, it is not a substitute for conventional composting." (Royal Horticultural Society, https://www.rhs.org.uk/advice/profile?PID=726, Accessed: 17.04.2016)

Probably the most different among the community gardens is ***Coldwell Gardens***, which is the longest running among all the cases. The initial aim of the garden when established by the local Society for Mentally Handicapped Children and Adults was to provide a "meaningful work experience" via horticultural training for people with learning disabilities. Today, the aims remain centred around developing the horticultural and social skills and the sense of achievement for people with learning disabilities in a secure environment through a work experience and recognised qualification. However, another important aim of the garden as stated on their website is to produce *"a good quality fresh fruits and vegetables for the local residents and visitors"*. Therefore, while the primary social need is the social inclusion of the less advantaged people, provision of fresh local produce is another important social need.

Personal needs/motives for participation

At ***Dinas***, volunteers' individual motives focus more on the social dimension rather than food, and these can be summarised as (1) living in the city and not having any outdoor space; (2) need for fresh air and physical activity, and to be outdoors; (3) need to occupy with some voluntary work after retirement, (4) loving gardening and wanting to learn more; and (5) need for access to fresh and organic food. Participants agree that everybody who comes to the garden has different purpose and different expectations. Their narratives demonstrate that there are a few distinctive motives for people to come to the garden. One of the repeating motives is to be able to do voluntary work. Some of the participants felt they needed something to occupy after their retirement. Some liked gardening and although had their own gardens, they wanted to do it in a community garden. Other participants liked gardening but lived in the city and did not have their own garden, therefore they found an opportunity to do it in a community garden. Being outdoors and having fresh air in a social environment, gaining confidence in growing food and having access to fresh, organic food are additional motives.

All the members of ***Afon Garden*** have similar motives for being involved. They signed for plots because they wanted to be able to spend time outside of their flats, to do gardening as a hobby and as some physical exercise, and meeting other people. One of the member said he was alone in his flat before coming to the garden, because he came from another country and as a foreigner could not meet other people. In addition, almost all members are retired people who have nothing else to do.

- *"We have retired and we have nothing to do, withdrawn behind our flats."* (Warren, 12.11.14)
- *"We found that living in a flat was restricting; […] the prime mover was to come here, get fresh air and exercise, to have the hobby outside the flat, mixing with people but to be able to grow things."* (Ralph & Emily, 12.11.14)
- *"To get out of the house and as a hobby."* (William, 12.11.14)

An additional motive stated by one of the members was learning with the aim to acquire a bigger plot and start something like a small farm. As to the community investment officer, she is primarily involved because this is her job, but since she liked gardening, she asked specifically to be in the gardening group in order to be able to come regularly. In sum, the motives for involvement at Afon Garden are (1) spending time outdoors; (2) physical exercise; (3) need for a hobby to spend their time; (4) need for socialising with other people; and (5) desire for learning.

In a similar vein, members of the ***Glyndwr Garden*** have various motives for participation, and learning/ gaining experience is one of these. One of the members has been planning to set up his own garden but did not have the necessary experience. He found out that the market gardens he had approached were not willing to share their experience. Glyndwr Garden was the only place where he was accepted; and he has been learning since. Another member was going through divorce and needed something to keep him busy during the week. Other members thought the garden was a *"brilliant project"* and wanted to help.

- *"People are trying to discover what they want in life. […] Or they have been unemployed and they come to the garden as way of increasing their knowledge and their skills, or to use it as a stepping stone. […] Again, there are other people [for whom] it's a social thing rather than actual learning skills."* (Ethan, 30.07.14)

In sum, the personal motives at Glyndwr are (1) learning about organic horticulture and gaining experience; (2) coping with personal difficulties; (3) helping and supporting the project'; and (4) socialising.

In the last of the cases, ***Coldwell Gardens***, the main motive of the participants with learning disabilities for coming to the garden is that they love doing gardening. Reportedly, they also like receiving the certificates for their training, and like spending time in a safe environment. Some of them remember doing it when they were young, and they still love it. The staff and trustees

have different motives in becoming involved. The secretary of the board of trustees was working at the local Association for Volunteer Services when she was asked to help as a volunteer at the Coldwell Gardens with taking some minutes during meetings. Seeing something put into action was a satisfying experience for her, and she decided to become more involved. She preferred working at the place because of the beautiful surroundings and the feeling of connection to her past when her family used to do gardening. On the other hand, the horticulturalist had previous 7 years' experience in social services with people with learning disabilities, and he felt that this job fits his personality. As to the manager, she had previously volunteered in the garden and had the best work experience. But she also accepted the job because she had the necessary skills of all-round management needed at that time. The motives for participation at the Coldwell Gardens can be summarised as (1) doing gardening because they like it; (2) satisfaction of seeing something put into an action; (3) beautiful surroundings; (4) possessing suitable skills for working at the garden; and (5) personal preference for the place and the job. The summary of the community needs and personal needs/motives for all community garden cases is presented in **Table 4.7.**

	COMMUNITY NEEDS		PERSONAL MOTIVES/ EXPECTATIONS
DINAS	Access to "fresh, good quality" food for the local community		Access to fresh and organic food
	Inclusion of people from different backgrounds		Occupying with some voluntary work after retirement
	Learning and sharing knowledge/skills		Learning more about gardening
	Access to outdoors and ending people's feeling of isolation		Fresh air, physical activity and access to outdoors
	Developing people's self-esteem		Meeting people and making new friends
AFON	Providing the tenants with outdoor space where they can grow their food and eat healthier and overcome the social isolation		Spending time outdoors/ out of the flat
			Doing physical exercise
			Gardening as a hobby to spend their time
			Socialising with other people to overcome the isolation/ feeling part of the gardeing community
			Grow and harvest vegetables and crops from their country of origin
			Save money and meet needs for fresh food from the garden
GLYNDWR	Doing something in the local community to fight the problems caused by the climate change and protect the environment		Learning about organic horticulture/ permaculture and gaining experience
			Starting own business
			Coping with personal difficulties/ therapy
			Socialising
			Supporting the project
COLDWELL	Horticultural and social skills, and sense of achievement for people with learning disabilities		Like gardening and harvesting the food
			Receiving college certificate for horticultural training
	Providing a "meaningful work experience" and recognised qualification for people with learning disabilities		Social aspect and being in a safe environment
			Satisfaction of seeing something put into action
			Personal preference and skills for the place
	"Good quality fresh fruits and vegetables for the local residents and visitors"		

Table 4.7. Summary of the needs in the case of community gardens

2. Mobilisation of Resources

This section provides the results from the interviews and participant observation about how communities mobilized resources to create a socially innovative initiative, and how they sustain

it. First, it looks at the land and funding. Then it examines the role of the leaders and intermediary organisations. And the final part is about the human resources.

Financial capital (land and funding)

Dinas Garden was established by a social enterprise on a land that has been obtained from the city council as three allotment plots and a derelict and overgrown corner that later has been cleaned and developed into what today is the garden. It is regarded as a good opportunity since at the time the area was not well used. The core funding that the garden received is used for the garden management. Initially the garden applied for and secured funding from Environment Wales for 5 years' period by fulfilling the required criteria; it is £12.000 for the initial year but scaling down after the second year. The garden also used short-time funding from a few charitable trusts to finance the two part-time positions of outreach worker and garden manager. At the time of the interviews, the funding for the staff was due to expire soon, and the future funding was uncertain. Sometimes the garden receives project grants for the expenses, but the enterprise also invests about £100 a month for the essential needs of the garden, which is a small profit coming from its other projects.

In the case of ***Afon Garden***, the housing association bought a few plots from an allotment site of the City Council, located at quite a central place in the city, and distributed individual plots for free to each tenant desiring to do gardening, additionally establishing a communal area. Reportedly, the process of acquiring the land and clearing it afterwards was very long.

- *"[Land] is from the Council, but it was quite a long process. And my colleague has told me how it took quite a long time, and when we were given the land it was very overgrown. It did take a lot of man/hours clearing it of rubbish and debris. Yes, and looking at it today from the photos that were taken back then, it is amazing how far it has come along."* (Linda)

Some of the gardeners explained how advantageous they feel compared to the allotment holders outside of Afon Garden.

- *"This whole area belongs to [the] Council, and they (the allotment gardeners outside the Afon Garden) have to pay for their gardens. But ours is free."* (Ralph & Emily)

One thing that makes a great impression at the garden is that although it is a relatively new initiative, it is well established with many facilities, e.g. a spacious shed for gathering and training purposes (**Picture 4.1.**), a storage container for tools, a polytunnel, a 1000 lt. tank for rainwater harvesting, and a compost toilet suitable for disabled gardeners (**Picture 4.2.**). The toilet is twinned with one in Uganda as part of a project called Toilet Twinning, which is a way to provide the poorest communities in the world "with a decent toilet, clean water and all the information they need to stay healthy" (ToiletTwinning.org). The garden has also raised beds for the disabled members. The community investment officer comes once or twice a week and brings the gardeners fruits and snacks.

Picture 4.1. Afon: The training and gathering shed

Picture 4.2. Afon: Compost toilet suitable for disabled members and the tool container at the back

A plot is allocated to the Women Connect First project, which supports women from minority ethnic backgrounds. Also, there was a plot for New Foundation Home Education where children used to learn how to grow food before the person who was running the project had to leave the garden for personal reasons. Apart from giving the plots for free, the housing association also provides things like top soil, manure and chippings for the walking paths, which they buy from the council. Besides, in the first years after the garden was established, the organisation allocated a budget of a few thousand pounds for new tools and other necessary items. However, since the garden is already well set up and due to budget cuts, the housing association reduced the amount of funding. Therefore, the members of the garden are encouraged to keep a communal pot of money where to put a pound or two for any items they may need. On the other hand, the housing association organises day trips and action days, and café at the garden, which are all free of charge for the members. The garden has received grants from Environment Wales, Big Lottery Fund, and another scheme funded by the Welsh Government Community Facilities and Activities Programme. These grants financed the polytunnel, the storage container and the toilet.

Different from the first two cases, ***Glyndwr Garden*** is a rural garden, situated on a hill. The land was given by the landowner for free use with the agreement that the project owners will look after the site. It was completely covered with bracken that had to be cleared; then the raised beds were built by using wood from the area (**Picture 4.3.**). Therefore, the land and all the initial materials were acquired without a need for funding, and the garden was initiated thanks to the hard work of the founders and some volunteers. In the beginning, the garden manager did not have the knowledge about available funding sources. At a later stage, they obtained funding from the Welsh Government via the Rural Development Plan, which currently pays the salary of the development officer (project manager) for 20-hours/week. The project also has a small grant from Keep Wales Tidy for materials and insurance for the garden. It sustains itself financially to some degree by selling the produce to a few local customers and to the local Spar shop.

Picture 4.3. Glyndwr: Clearing the cite to set up the garden and first raised beds

(images re-shot from the garden manager's album with her permission)

Coldwell Gardens are situated in a nature reserve with woodlands, lily ponds, beaches, and richness of wildlife species such as otters, bats, birds, butterflies and dragonflies. The gardens existed since 1770 as part of a private estate with a mansion, and since 1976 the land has belonged to the National Trust. The local Society for Mentally Handicapped Children and Adults leased 3.3 acres of the garden from the National Trust, and in 2002 extended the lease agreement for 40 years while also increasing its size to nearly 6 acres. The garden is separated with walls, hence the use of plural 'gardens' in its title. Certain historical facilities still exist on its territory although not all of them are in use, e.g. underground heating unit, sunken melon pits, water reservoir and two pavilions. Other buildings and features have been added recently. For example, the visitor centre with the shop and the tea room was built in 2009 in accordance with the National Trust's development of the area. Similarly, the willow arch was built in 2008.

Two main streams of funding come from the Welsh Government and the County Council's Community Team for Learning Disabilities (CTLD). However, unlike the other community food growing projects, Coldwell Gardens are not funded by the Rural Development Plan but by the Education Department via the local college. The first funding is provided for each participant at day placement rate. The manager explained that this funding has been static for about 10 years and it is less than half of the actual cost of running the garden. The second funding is based on learner hours while until recently it was based on credit units. The local college takes 15% of it before the garden gets it. At the time of the interview, there was a big consultation going on with the new procurement officer, and the garden management was unsure whether they will continue to be funded by the community team for learning disabilities due to some planned savings related to day services.

The garden management is constantly looking for some new ways to become self-sustainable. The shop and the tea room are two of the ways to financially support the project. In 2008-09 the project became a limited company with trustees. It was then that the trustees realised they do not have enough reserves, and they decided to apply for a funding to build the visitor centre with the shop and the café/tea room.

- *"the ideal scenario in any charity is to have 6-month reserves and we did not have anything like that. And so, they've applied for grant funding for the visitor centre. And we've got £285.000 to deal with that from 2 sources – Natural Resources Wales […] and*

the Pembrokeshire Coast National Park Sustainable Development Fund. We match-funded it by £70.000 with voluntary labouring kind by the 2 trustees" (Brooke, 23.07.14)

Since the area is popular for tourists, the manager thought it would be a pity not to attract them to the garden. For this reason, they also put new signs and information panels for an easy navigation and guidance. In addition, they organise events such as open cinema during the summer. Some other ways of funding are donations from visitors and the income from the sale of everything grown in the garden, except the produce grown by participants on their own plots.

Leadership and intermediary organisations

The first of the cases, ***Dinas Garden***, had three managers throughout the 10 years' period since it has been founded. The last manager during the time of the interviews has been at this role for two years but before that, he performed this role voluntarily for some time. Under his leadership, the garden became an award-winning project. But he has been involved in many other community projects by developing green spaces and mentoring other community gardens, and received awards for his community work. Because of the manager's personal involvement with different organisations and the informal network among people from other community projects, the garden has access to support when needed and can offer support in return. The garden is a member of the Federation of City Farms and Community Gardens (FCFCG) and has communications with organisations such as the Wales Council for Voluntary Action. These links provide an access to training opportunities or other technical information when needed.

Afon Garden has received help from various organisations. For example, the garden had donations of materials from some retailers, while also benefitted from some help from its contractor companies in the form of physical work on the site.

- *"There was a lot of support from our contractors in terms of man-hours turning the overgrown area into a usable plot and a usable site. And this is a lot of donations of time from our contractors apart from their agreement for working with us. It is called Targeted Recruitment & Training (TR&T) and it's for community benefit really."* (Linda)

Another supporting intermediary organisation that improved the road to Afon Garden was Community Land Advisory Services for Wales (CLAS Cymru), introduced earlier in the chapter. There is a long road running from the main road though the allotments. The community

investment officer explained that the road was not safe especially for the disabled tenants who wanted to come to the garden, and there was an incident when a disabled tenant fell off her chair with its wheel stuck in a pothole. CLAS Cymru helped the housing administration to put together a case and lobby the council to make the roads to the garden.

In the third case, ***Glyndwr Garden***, there is a strong leadership at that made the project come into life. The garden manager is a trained horticulturalist who is also dedicated to the permaculture principles and preserving the biodiversity. Although she is paid only for 20 hours per week, she spends twice of that time in the garden and apart from the volunteering days, works either on her own or with her partner who has a degree in agriculture. The garden manager attaches great importance to a good communication between the members, and on volunteering days allocates special time for a collective lunch with all the members. Although the project did not benefit from any funding at the initial stage, it has been supported in other ways by some organisations. FCFCG is one of the intermediary organisations that provides various support to the initiative, including advice and travel bursary.

- *"They tend to be a linkage between different groups. […] There is also information on different ways of getting grants from other funding bodies. There is also the educational side. And they are just there for you if you want support. [Faith] […] is involved with the group, she actually does sometimes get paid to go and see other groups."* (Ethan)

Garden Organic is another organisation that was involved with the project at the initial stage, specifically helping with the promotion of the garden, and procurement of tools and seeds.

- *"We were allowed to use their logo on our posters that we put up locally. Because I was a part of their programme, that was a big confidence boost. […] And they also helped us find some tools and seeds to get us started, which was fantastic."* (Faith)

Leadership situation is different at ***Coldwell Gardens***, which is governed by a board of trustees on a voluntary basis and a paid executive manager. Reportedly, there is a sustainability issue related to the demographic structure of the Board since most of the members are old. This is an issue that is discussed during their meetings. One of the trustees explained that some of the members are still the original members who founded the garden in 1980s and especially one or two of them devote much of their time to the works in the garden. However, they think it will be difficult to find new members because not many people have much time. She gave an example with the role of the treasurer, which now includes more responsibilities because of the

café and the payroll involved. But the manager, who has a business background and has been in this role since 2009, made some large-scale improvements that resulted in doubling the visitor numbers. Firstly, in the past the garden was only open from Monday to Friday, and on Friday it closed early in the afternoon. Now the garden is open seven days a week during the summer. The shop and café also played an important role in boosting the numbers. However, the manager did a lot of promotion work, e.g. opening of social media accounts, new signage around the gardens, and interpretation panels with historical information. In terms of intermediary organisations, the manager mentioned the FCFCG as a potential place for getting support:

- *"If people do join things like the Federation, there is help available, support available. And there are occasionally little pots of funding"* (Brooke).

On the other side, the secretary of the board of trustees stated that number of the supporting organisations is gradually decreasing.

- *I know that since I started as a secretary, [the local charity for learning disabilities] was the sort of the local arm, and the person - the representative - was made redundant. So, almost as part of this gradual slimming down of all the authorities and agencies […] I think there is probably less and less. And it is all more competitive as well.* (Daisy, 23.07.14)

But she also added that the enterprise side of the garden is developing with the skills of the manager who is good at boosting the funding with small contracts.

Human capital

Dinas Garden is open two days a week to anybody who wants to volunteer. Therefore, taking part does not require any special arrangements and is flexible. Only for reporting purposes the garden manager keeps daily lists of participants with the number of volunteering hours. But he does not know in advance who will turn up on a given day because there is no commitment for regular participation. Because of this flexibility, the number of volunteers vary and may go down during the winter. But although there is no pattern, the garden manager is aware when numbers fall or somebody from the regular volunteers does not turn up. The garden is usually not short of volunteers and there are many people coming through word of mouth or through its social media pages, or through different means of marketing and promotion of the project, such as the

Voluntary Community Service or Student Volunteer Service, also by hosting corporate volunteer days. Accordingly, the garden has participants from various backgrounds, including families.

- *"For what I have noticed is, since I've taken on we have a lot more families, more families bringing their children down for home education and stuff like that. And new facilities have been implemented in the last 12 months – shelters, slides – making sure gardening is fun; there is appropriate stuff for children to also get involved in and being a part of the group."* (Matt, 13.06.2014)

The project management has discussed official membership for the garden but only in the form of a steering group for a constitution, where those members will undertake roles like chair, treasurer and the like. However, it has not been decided yet.

- *"On the garden structure itself, […] people have […] voiced their concerns. They don't like formal structure; they like the fact it is loose, flexible and they don't feel there is an overall commitment for, but in doing that, they have more of a commitment to turn up for every session because they feel there is no pressure on them."* (Matt)

In the other urban garden, ***Afon Garden***, people who are involved are mostly tenants of the housing association. There are also a few plot holders who are not tenants but are given plots. The total number of the gardening community group varies between 15-20 members. All the tenants heard about the project at a meeting with the housing association. Non-tenant members were introduced to the housing administration by friends. As mentioned earlier, one of the community investment officers at the housing association is responsible for the gardening group. She is the link between the association and the gardening group, and performs the organisational tasks for the project. One of the tenants who has a plot is the chairman of the group and his role is "to try and advance the upkeep of the allotment". He comes nearly every day to the site. As reported by the community officer, the housing administration puts a lot of effort, e.g. organises cafés and action days to bring all the members of the gardening group together. However, some of the tenants need to look after other plots as well because reportedly, although there are good gardeners, many of the plot holders do not come and work at the garden most of the time. The community investment officer also shared her disappointment that despite the great efforts put by the housing management, very few people come and work at the garden, and there are no young people.

Glyndwr Garden is a volunteer-based initiative as well but the biggest load of work is upon the garden manager (development officer). Apart from her and her partner who helps whenever he is available, there are volunteers from the local area who come to help on Thursdays, which is the volunteering day. One of the volunteers comes twice a week and sometimes even more but he has been coming only for the last seven months. The garden has been networking with a local organic farm hosting regularly international volunteers via the WWOOF organisation (World Wide Opportunities on Organic Farms), which will be explained further in the part about Community Supported Agriculture (WWOOF_UK). Two or three of these volunteers come to help at the Glyndwr Garden too. Their help is considered vital for the garden.

- *"They are of a huge help to be fair […] If they weren't coming, I think the garden would really struggle. Because it just would not have the manpower."* (Luke, 29.07.14)

Finding a continuous flow of people to help in the garden is one of the difficulties. The reason is that people come whenever they want. Only a few of them are regular volunteers and others come and go occasionally. Volunteers can become members by paying an annual fee of £5 and receiving a formal Health and Safety induction.

- *"There is a group of people but as the very nature of volunteering is transient, so that's one of the frustrating things – you just get a volunteer up to speed and they know what to do, and then you lose them. […] I've come to realise that I can't expect people to have the same passion as I do for the environment and growing food. I just have to be very grateful that they turn up at all on a Thursday."* (Faith)

The nature of the human capital of the ***Coldwell Gardens*** is different. The initiative provides work experience and training to 30 people with learning disabilities called 'students'. They usually choose on which days of the week to come. Therefore, not all of them come at the same time. They are collected from their homes with the project's van and start at 10 am, then taken back to their homes after 2 pm when they finish work. They usually start the day with a cup of tea or coffee, and are rather flexible in their work; they can choose not to participate if they do not wish to. They all have their own garden plots and are completely free to plant whatever they want to. In terms of their status, they are not considered employees.

- *"We can't call them employees; they are all in receipt of a benefit. We are not allowed to remunerate them in any way. Obviously, the produce that they grow on their garden plots they take home and they don't pay for that. […] They all work in the garden to*

varying degrees of ability, and there is a real limit to how much productive work some of them can do on the main garden." (Brooke)

Like with the other community food growing projects, Coldwell Gardens are also in need of volunteers and advertise through the Wales Council for Voluntary Action (WCVA). However, the number of volunteers is very limited and reportedly, there are only five people – usually retired - who come regularly for 4-5 hours at a time. There are two possible reasons why the gardens do not attract more volunteers. One is the location of the gardens; the closest residential area is 7 miles away and even during the high season there are only two or three buses a day. The other reason is the DBS check (formerly CRB) that is required from everybody who works in the garden and its facilities as a legal requirement, but is issued by paying a fee. Apart from the manager who also has a teaching role, the head gardener and the full-time horticulturalist are the two other paid staff who teach the students at the same time. In addition to teaching and guiding the students, they are responsible for all the work related to growing and harvesting food, and looking after the gardens. The three people who work at the café are volunteers; one is a mental health participant and the others are with learning disabilities. This is a trial of mixing people from different vulnerable groups as suggested by the county council.

3. Processes of the Social Initiative

This section aims at examining whether the visions and expectations are shared by all participants, how they feel about the sense of community and belonging, what benefits they get from being involved in the garden, what they learn and how they learn, and whether they participate in the decision-making processes of the initiative.

Visions and expectations

At ***Dinas Garden***, the management and volunteers share the same vision in terms of the garden's social purpose. They regard the garden as a model of good practice, training, and experimenting with various designs and techniques. Recently it has been a place for frequent visits from schools and other community food growing projects from the UK and abroad. Therefore, the participants want to see the place as '*an example and best practice of excellence in particular fields'* (Matt), and *'an example of what you can do and to do it, a good example of the positive-*

ness of the community gardening' (Vince, 13.06.14). For these reasons, both the volunteers and the manager want to see the garden functioning, and even make it better and increase its impact for community growing. The volunteers expressed concern about the funding running out at the end of the year, and shared their hope that the garden will not close and the project will continue.

- *"It would be great if people could come together […] it will stop people being isolated and there will be less exclusion and illnesses like depression, all sorts of diseases, you know. I am sure a lot of it can be cured trough something as simple as this"* (Mei)
- *"My hope is that it continues […] to provide an informal place for people to come and do gardening in a social way"* (Vince)

The project was in its 10th year at the time of data collection, and the management was considering whether the garden should separate from the governing association and become an independent charity or a charitable incorporated organisation. They formed a steering group with members from the volunteers, staff and directors of the association to discuss the idea and take it further. There was an idea to open a bank account for the garden and have the means to '*apply for more significant funding to […] take the project to the next phase'* (Matt). In the meantime, people who are involved in the project try to find out new ways of growing more and getting more from the available gardening space. But in the longer term there are plans to take additional places or to take one bigger space. Other options that they consider for the future are to start a commercial nursery or grow on a slightly larger scale to provide for a café or a market. None of the participants wants the current space to be given up, though. On the personal side, volunteers' expectations overlap with their motives, e.g. learning about organic gardening and different plants, experimenting with new plants, meeting people, and making new friends. None of the volunteers has an expectation to take a managerial position, even though they have been offered. Some of the expectations have changed over time, and people are happy to be learning new skills like woodwork and building.

- *"We now started to build the projects and that. So, it has changed a lot. So, I do like doing a woodwork and that."* (Darren, 13.06.2014)

The expectations of the members of ***Afon Garden*** are predominantly personal, reflecting its different way of gardening, which is individual rather than collective. The garden is well set up and does not have the self-sustainability problems that the other cases encounter. Participants

are generally optimistic about the future of the garden either in a short or long term. Some of them suggested that it will be much nicer and tidier the following year because more people are coming. Others expressed their hope that it will thrive.

- *"I hope it is going to go from strength to strength. I'll be coming down here as long as I can."* (Zoe)

They all want to grow and harvest vegetables. Some of them come from different countries and want to grow particularly the food they used to have in their countries of origin. In addition, some of them expected to save money on vegetables and to meet all their needs for fresh food from the garden. Reportedly, their expectations were met to some extent and they do not buy much vegetables from supermarkets. But they have even higher ambitions for the garden:

- *"My vision for the garden is, we want to take it a step further. We want to make sure that 90% of what we eat in terms of vegetables and fruit, we grow it ourselves. That is what I am looking forward to."* (Warren)

Other members expected to feel as part of a gardening community, but their expectations were not met since they could not find that social environment in the garden. On the other hand, the managers' expectations to set, arrange, and equip the garden has been met, and now they have more specific aims for the garden.

- *"I think it is far more established than we've originally wanted; it's had fantastic output… I think it will continue to run in the way it is running at the moment but we'd like to have more tenants down here of mixed ages. […] I hope we can have more young people coming here on a regular basis really. I also hope that now that we have a community plot at back of the site, […] to have a homeless charity down here coming, but a community group that regularly come down, may be a disabled's charity. […] And I hope it will continue being run by tenants." (*Linda)

Differently from the other initiatives, at ***Glyndwr Garden*** both volunteers and the management share the same higher visions for biodiversity conservation and ecological preservation.

- *I think I like the conservation and the ecology part of the gardening as well and the overall global aspects of it.* (Eric, 31.07.14)

Managers' aims are to find ways of sustaining the project. Their initial aims were to keep it as a social project for food growing and conservation. In the beginning, they did not have any income and started the project with their own resources. However, as the project developed and the

demand increased over time, they had to find funding for things like water harvesting system or wage for the development officer (founder) who had to leave her job to dedicate more time to the garden. Therefore, they acquired funding from the Welsh Government. The vision of the managers for the garden is to improve certain facilities such as building a larger covered social area and a polytunnel. In terms of making it more self-sustainable, they expressed certain difficulties, e.g. insufficient volunteers and lack of outlet to sell the products.

- *"We have to be open to the fact that if we don't sell to the shop down there, we have no income. […] We also supply directly to one or two customers. And we used to – but we don't do anymore – supply one or two restaurants. The problem with the restaurant trade is that they want certain produce on a certain day, and a certain amount at certain price. And we can't just grow the quantity or the types that they always want."* (Ethan)

Volunteers expressed different views about how they see the garden in the future. Their personal expectations were focused on learning about organic horticulture, permaculture, biodiversity, and growing food in general. They felt that their expectations were met because after coming to the garden they learned a great deal about these issues and developed their skills. Some of them think the garden should continue with the same aims and as a not-for-profit place, because it is not business driven but has "softer aims" like teaching people about growing food in an ecologically sound way.

- *"I think it is a resource certainly for learning a lot and passing on information to other people about permaculture and being [gentle] with wildlife. So, it is a navigational resource very much, I think. And that's how I see it pretty much in the future."* (Owen, 31.07.14)
- *"I think it would be spoiled if […] it was too much focused on a product. […] It's not a business, it is about some of the softer aims of what the project is about as well as the hard products, I think."* (Eric)

However, some of the volunteers had different ideas about the way the project is managed, and said they would run it in a more commercial and profit-driven way, or as a community supported agriculture scheme, which they thought would be more efficient because the funding is a burden for the garden due to the targets they are obliged to reach on a regular basis.

- *"I think it will keep ticking over as a commercial venture because there is not really a drive behind pushing it [...] from the community aspect of it. […] I think the funding they have at the moment feels like a bit of a millstone around the garden's neck."* (Luke)

At ***Coldwell Gardens***, the expectations are either personal or centred around the garden. The students' expectation is gardening because they like harvesting the food. In addition, the horticulturalist-teacher emphasized that the students really like receiving at the end of the year the certificates issued by the local college, and they are proud of it, but the best thing they like about the gardening is the social aspect and being in a safe environment. The trustee, on the other hand, is also volunteering at the shop and likes communicating with the visitors because she is interested in personal stories. The horticulturalist-teacher's expectation was to get a job in the garden because he liked doing community work. He describes his experience as very positive, with things in the garden changing everyday due to the seasonal changes. The manager's expectation when she was offered the position was "complete change" for the garden. She had a lot of help from the local college, where she also graduated with a professional certificate of education to be able to teach the participants with learning disabilities.

The primary vision of the staff and volunteers for the project is to keep it running with the help of funding and eventually making it self-sustainable. One step toward achieving this target was to make the charity a limited company with trustees in 2008-09, and build the visitor centre with the shop and the café. These facilities opened in 2013 and since then the project is doing well, and the manager is hoping that it will become more self-sustainable in the future. In addition to the financial stability, people want to keep its integrity and quality. The peacefulness of the place is praised by everybody who is involved with the gardens, and although they want to see it 'standing on its own feet', they want to preserve its "rustic charm" and pristine nature, and while aiming to attract more tourists, to keep in mind their primary purpose, which is to provide work in a safe environment for people with learning disabilities.

- *"It's important not to lose the integrity of the place because the peacefulness, the quality is really important […] hopefully perhaps to have more students that could benefit from the whole idea behind it of actually been trained and upskilling, and getting the sense of satisfaction."* (Daisy)
- *It would be nice if it did not become too big to keep its rustic charm and its personality [...] everything has got to be pristine […] We are here for the students and you have to*

remember primarily that the students do come first. But it would be nice if funding rise and we are able to stand alone. Rather than running a college course for the students, we could open it out a bit more. (Riley, 25.07.14)

Sense of community and belonging

Relations between people at ***Dinas Garden*** are generally friendly. They like talking to each other and working together. Also, they like contributing to the project by working hard. They like it when there are more volunteers, because they get more help.

- *"There were not many people when I first came here and I did not get that much help"* (Darren)

At the same time, the garden provides a medium for everybody to cooperate and collaborate with each other. And even if people do not socialise outside of the garden or they do not feel very involved, they know that they can get help if they ask.

- *"The garden […] forces people to get on even if they don't want to. If you want to be involved, you have to put up with the other people here. So, in a sense it forces people to go outside their comfort zone so that people work out together."* (Vince)

People generally feel that there is a sense of community although there is a big diversity and volunteers come from different backgrounds and age range, and they have different personalities and lifestyles. However, some members also think it is more individual because of the constant change in the human capital. Reportedly, only occasionally there are groups who socialise in the garden and extend it outside the garden as well. Nevertheless, no matter if people socialise outside or not, generally everybody tries to respect and help each other. And the sense of community can be witnessed best in all the hard, collaborative work achieved in the garden – not only in growing food but in other jobs too, like building the covered area (**Picture 4.4.**). All the participants feel part of the community and are happy to be a part, although some volunteers feel it to a degree, because they think everybody except the project manager is "expendable", just coming and going. There is a core of 4 or 5 volunteers who come regularly and some of them even keep the key to the main gate, and took over the responsibility to lock and unlock it, because they are the ones who come very early in the morning.

Picture 4.4. Dinas: The covered area for socialising and training where the interviews took part and which was built by the volunteers doing woodwork.

The project manager compares the garden community to a family where there is tolerance toward and acceptance of every member, including people who find it difficult to communicate, by sharing stories and offering help.

- *"But we show tolerance like you do with your own family members, and things are good or bad. […] And we do see people change over time, conversations change, people interact differently over time. There is a familiarity about it, there is a tranquillity about the space as well, which I think people respect; mutually respect the space."* (Matt)

The family atmosphere could be felt in certain moments. For example, one of the volunteers who came one day with her child decided to bake flatbread for everybody during the lunchtime. She prepared a sourdough by also teaching her child how to do it, and they put it together in one of the polytunnels to rise. Then she baked flatbread in the cob oven for everybody who was volunteering on that day. She had also brought some vegetable soup and homemade spelt bread, and shared it with everybody in the covered area. Afterwards, people helped with cleaning the dishes. The family feeling is also helped by the fact that every volunteer is free to do whichever work they want, and they are free to relax whenever they wish. There is always

tea and biscuits, and people do frequent breaks and have a chat over a cup of tea. Therefore, nobody feels obligation to do anything, and this informal environment is one of the positive aspects that attracts people to the garden.

At ***Afon Garden***, people have different opinions about the relations in the garden and the sense of community. Some of them suggest that the relations are good or "not bad", that people are helping each other, and that there is certainly a sense of community even if they do not socialise outside.

- *"Well, I am very well with them. […] You can come over here, you can have a good chat about anything even about the weather, if you know what I mean, about what people are growing. I find it very stimulating."* (William)
- *"You know, people might have different opinions but I find that if there is plenty of people down here and they see somebody needing help, they would go and do it. And they don't look at it as a responsibility. They are looking at it as helping a friend. […] You always feel part of the community and you meet different types of people; you meet people from all walks of the life. And I have got some great friends here. Being disabled, the help that people do meet is great down here."* (Zoe)

On the contrary, some members of the garden were very certain about the lack of a strong community. They suggested that one of the reasons is that nobody comes to the garden at the same time, therefore people do not have the opportunity to socialise. In addition, they spoke about problems with the use of some common areas and absence of rules in the garden, giving as an example an incident when the polytunnel was predominantly used by one person to grow cabbage – a crop that is not suitable for growing there, according to them, because it is bulky and because a polytunnel is rather suited for growing seedlings.

- *"The community spirit is lacking here. And I will tell you why it is lacking here. [The housing association] has made everything too easy. Everything here is free."* (Ralph)
- *"At the moment […] it's sporadic. We have not really bonded, if you like. […] There are no hard and fast rules about anything as far as I can see. There are basics laid down. […] We talk to the gardeners outside this little world of [Afon] […] and they say 'oh, don't buy any seeds; do you want this and you want that'. You see, now, that's […] community and we don't have it here. There is no camaraderie here, because nobody comes at the same time."* (Emily)

The community investment officer explained that the relations between members have been good although there were some issues due to change in dynamics when some people at key roles had to leave. But she also added that one of the members is now a chair of the group.

- *"He is like the father of the allotment and everybody loves him. And his contribution really is noted. [Many] hours he spends here because he really loves gardening, and everyone knows that they can talk to [him], he is very fair."*

She also acknowledged that as a staff member who is responsible for the project she is not able to spend in the garden as much time as her predecessor because of change in priorities for the organisation.

In the case of ***Glyndwr Garden***, people's views about a strong cohesive group vary significantly. One volunteer said there is no core group of people that comes regularly and there was no sense of community. The other volunteers, on the other hand, argued that there are a few people who come regularly and that the relations between people are 'welcoming', 'sharing' and 'friendly', and that there is a group of people who share the same values, such as saving the planet and doing conservation work.

- *"Yeah, we get on really well. We have hardly had anybody who was not in cooperation. […] The couple who run, […] they do really keep it going because they make everybody so welcome. Now there are two or three people who still come, like myself, regularly for such a long period."* (Owen)
- *"Yeah, there is a strong cohesion here and we are simply very welcome."* (Eric)

The project manager's views about the sense of community in the garden is that some of the volunteers feel they are part of the garden.

- *"We have a couple who have been involved with the project for quite a long time. And I think they do [feel part] but is very difficult and I've heard the other people say the same – getting the right commitment or the right volunteers that come along with the right commitment is just always a problem."*

The relationship between people involved with ***Coldwell Gardens*** are described as very good and friendly by all participants, and they speak of the place as a 'family'. Some of the students with learning difficulties loved it so much that they increased the number of days they were coming to the garden.

- *"We all become a family sometime."* (Emma, 23.07.14)

- *"We are all one big team, and with the volunteers and students. There are so many different dynamics. But they are all one family, which is what count. What they say, they love each other."* (Riley)
- *"I think there is a coherent group […] The students are great, it's friendly, and there is a sense of equity."* (Daisy)

Because there are many visitors to the garden, students have the chance to interact with them. The whole area of the gardens is open to all the visitors, and the students are flexible to work wherever in the garden they prefer. And although some students said that visitors ask a lot of questions and *'it is hard to trust them'* (Emma), it is an opportunity for increasing their social skills, and many of the students are happy to interact.

- *"Some participants come one day a week, some come two days, couple come for 3 or 4 days a week. So, they see different people. Obviously, they are improving their social skills by mixing and being with people –standards of behaviour I expected. It's also good for them because we are used to public and we do get such lot of visitors to the garden. It's really good for inclusion and social interaction."* (Brooke)

In addition to the strong sense of community, both students and staff also feel proud of being a part of the project.

- *"Yes, I am proud of it."* (Emma)
- *"Yeah, definitely […] I am quite proud to tell people where I work and to send them the link for the website."* (Riley)

Personal benefits (perceived)

The three main benefits that volunteers get at ***Dinas Garden*** are (1) health benefits, (2) fresh food, and (3) learning. Some of them find the gardening experience at Dinas '*extremely therapeutic*'.

- *"There are sounds of birds and you see the occasional wildlife: a crow, or even a fox if you are lucky, and seeing certain species of moths, and just seeing things change"* (Mei).

Other volunteers also mentioned physical and mental health as a benefit. The manager explained how coming to the garden is good for their mental health.

- *"There is a lot of social stuff, and mental well-being is a key thing. […] We share stories; it is not a deliberate thing; people only share it when they are comfortable. Sometimes*

conversations come up about depression, about suicide, about relationships, about skills, about desires, about where people want to be, where people were and their life story, and we tackle them as a group, we share them, we care about others who are there; those who want to get involved do, those who don't, do not." (Matt)

Fresh food is another benefit that people get. Reportedly, they have plenty of crops in summer when they hardly ever need to buy vegetables. The food is weighed after being harvested. Then the coordinator takes written notes of the crops and quantities harvested on the specific day. All the crop is then put on a table and everybody is invited to help themselves and take home. People generally behave consciously and consider everybody when taking from the produce. Usually everybody takes only what they will cook on the day. People are not after the food to save money but because of its good quality.

- *"It is the freshness and the quality of the food, and the fact that it is local and seasonal, and all of that. That is what is important, not the money, for me."* (Vince)

Learning is the third main benefit stated by the interviewees. And reportedly, it goes beyond practical skills and gardening, and includes social learning, problem-solving and communication.

- *"Some people learn how to teach other people new skills that they did not realise they could do. […] They learn how to embrace new members, how to discuss activities, how to look at problems in a logical way. […] There is knowledge exchanged in small amounts but it's not only knowledge of gardening, it is like philosophies, ways of behaving, acceptability."* (Matt)

On the other hand, the garden does not benefit only the volunteers but also the visitors from schools and nurseries. Children learn practically about how vegetables are grown.

- *"You could clearly see how some kids are […] [excited from] being outside, and actually physically doing stuff instead of just reading from a book or shown on the screen."* (Mei)

Members of ***Afon Garden*** indicated a few distinctive interlinked benefits they personally get from the garden: (1) home-grown food, (2) being able to spend time outdoors, (3) physical exercise, (4) having a hobby, (5) satisfaction of seeing something grow and develop, and (6) social interaction with other people. Many of them explained that before having a plot, they were bound indoors in their flats, socially isolated, and without an opportunity to exercise, but the garden helped them to cope with all these problems. The social aspect is specifically important for people who came to the UK from other countries (**Picture 4.5.**).

- *"I am out of the house. And when you are doing a garden, it's a hobby. So, you get both ways, don't you? […] And then you got the pleasure there of seeing what you have grown. […] Meeting people is a big aspect, yeah."* (William)
- *"When I started coming down here, I started meeting people and with so many friends we share produce here; we meet for a drink and we chat. I am beginning to be a part of the system. […] My health has improved tremendously since I got this allotment. It makes me go out there and do some exercise."* (Warren)

Picture 4.5. Afon: Socially inclusive environment for people from different backgrounds is a reported benefit

Growing their own food is a benefit that members value a lot. And they all explained that in the season they have a good harvest, and they share and exchange the produce with other members.

- *"The benefits are you get home produce. […] I find it exciting with my new seeds and then you start see things grow and they get bigger and bigger."* (Zoe)
- *"Some of the vegetables that I used to eat when I was at home, I can manage to grow here. […] You grow what you want but if you got surplus, you can share it with other people."* (Warren)
- *"I grow more than enough so I put some for other people, if you like."* (William)

For the management, the overall benefits provided for the tenants are access to a plot in a well-established, clean and safe area with all necessary facilities, free training, and social events. She explained that the housing association organises specific events, such as Christmas lunch with all tenants or trips aiming to create for them a better social environment.

- *"Benefits… they get an amazing access to a fantastic plot; […] they have got established area; the plots have been cleared of rubbish and it's quite safe. It is accessible, there are facilities like a toilet. […] Other benefit… they have access to lot of our free training. […] There are a lot of single individuals who otherwise would be stuck at home. So, we really try and target social isolation through events really."*

At ***Glyndwr Garden***, (1) learning, (2) socialising, (3) wellbeing, (4) contributing to the ecological sustainability, and (5) fresh food are the benefits that participants reported. Learning how to grow organically is important for those who are after starting their own gardens. And it is not only about growing things, but also about the ecological principles. Even the manager who has a teaching certificate admitted that she improved her skills in the garden, but most of all, the project boosted her confidence.

- *"I think there is knowledge gain both in terms of here and what the ecological elements really mean."* (Eric)

However, the downside of learning as a benefit for the garden is that once members learn how to do it, they start their own gardens and do not come again to Glyndwr. Thus, the garden loses members. Nevertheless, the project manager is glad that people learn and then start their own gardens as a way of reversing the ecological damage.

- *"I love it when you can see volunteers learning and going home and beginning growing food themselves, and slowly understanding just the damage we are doing to the Earth."* (Faith)

Social aspect and meeting people is another benefit suggested by most of the members. Whether it is a communal meal or a conversation around a cup of tea, or the opportunity to meet people from different countries to communicate in different languages, this is an important aspect for some of the members. For the communal meal, the garden manager and the volunteers who want to contribute bring some dishes. The manager keeps some porcelain plates and cutlery at the garden. After being used, they are washed in an environmentally friendly way by saving water. This job is also a shared responsibility.

- *"Communal meal during the day is really good, and sharing the food from the garden is good. And you have a cup of tea before you start just being sat up together. You are here to help grow a garden but it is […] very much about doing it in a community way."* (Eric)
- *"I really enjoy meeting people, […] especially people from abroad. Because I used to teach languages and I am interested in that, the chance to speak French and Spanish and generally making friends and meeting people from different places, [walks] of life and so on."* (Owen)

Wellbeing and contributing to the ecological sustainability is yet another reported benefit.

- *"I think when I first started coming here my life was a mess. […] I think it gave me something to look forward to once a week. […] Therapy wise is well really and I think there is a spiritual element of gardening where you see something grow and develop."* (Eric)
- *"I just think 'Oh, this is amazing. Why has not any community in any town got one?' […] In the nature of organic growing it ticks all the boxes: climate change, food security, conservation, your physical health, your mental health, everything. And the other thing that I really love is the wildlife I see within our boundaries living with us, supporting us; […] it gives me a real buzz."* (Faith)

Some members also explained that they feel proud of taking home vegetables that were grown by themselves. And they acknowledged that it changed their purchasing decisions as well, because instead of thinking what they want to eat, they think of what they already have and how to utilise it.

- *"I guess for me personally it is purely around learning. And I guess the other benefits is actually taking some fruit and veg home that you know you had a hand in growing yourself and that you know has been done organically. […] There is a sense of pride there."* (Luke)

In the case of ***Coldwell Gardens***, although the main purpose for the garden's existence is to provide working experience for adults with learning difficulties, benefits also extend to the staff, volunteers and even the visitors. These can be summarised as (1) therapeutic benefits, (2) social impact and sense of independence/safety, (3) sense of achievement, (4) quality food, and (5) job satisfaction.

Therapeutic benefits have been articulated both by the students and volunteers. They suggested that being in the garden makes them happy and keeps them busy. But they also explained that the sensory environment of the garden contributes to the therapeutic experience (**Picture 4.6.**).

- *"[I feel] happy; it helps me when I'm stressed."* (Emma)
- *"It is very good for me from a health and wellbeing point of view, and that is a message that I get from 99% of people that come and say […] 'Isn't it lovely just to sit?'. It's peaceful. […] It's a very sensory place to be because I think you see beautiful things, you smell things, you taste things, and you do hear things."* (Daisy)

Picture 4.6. Coldwell: The secret garden: Participants think the sensory environment makes the garden a therapeutic place

The staff also emphasized the social aspects of the garden in addition to its health benefits. They explained how the place gives students the opportunity to do teamwork and talk to the visitors while at the same time keeps them safe and makes them feel independent. And the participants' accounts supported this argument as well.

- *"There is a really good community feel about this place with all the participants as well. And they feel safe but it also gives them independence because they can't go anywhere […] we know where everybody is. […] But they do get the feeling of independence. There isn't somebody standing on their shoulder the whole time."* (Brooke)
- *"[I like] working here and working with team."* (Adam)

- *"I say the social aspect [is] absolutely fantastic; and the safety […] and the ability to influence and interact with the public."* (Riley)

Besides the social side, another perceived benefit according to the results was about the sense of achievement both for the students and staff, and the job satisfaction for the staff members.

- *"There is a massive sense of achievement and satisfaction for the students when they harvest. They see the full cycle of the veg from sowing, caring, harvesting, and then turning the soil back […] I don't know if it will affect their spending and such but it's more about the personal achievement. But it does give you a sense of achievement yourself coming here."* (Riley)
- *"I think all of us benefit from working in such a beautiful environment. […] It's pleasure to get up and come to work."* (Brooke)
- *"That's what is nice about it – there is no pressure here, just do what you have to do, make sure everybody is safe and they are learning, and take care as we can. […] I enjoy people I work with, I enjoy my job, I enjoy my surroundings, everything about it, [and] feel privileged."* (Riley)

Picture 4.7. Coldwell: Fresh produce harvested in the morning for the shop and the café

Finally, a benefit for everybody, including the visitors, is the fresh food that grows in the garden and is sold at the garden's shop or used to cook the meal served at the tea room/café. The crops

are not certified organic but they are grown almost organically (**Picture 4.7.**). The trustee who comes to volunteer regularly explained that she has been eating more vegetables since she got involved in the garden and experimenting with new vegetables she has not tried before.

- *"It's fantastic! At about quarter to ten the gardener comes up with this great barrow stuffed. It all has literally just been picked, and it's beautiful."* (Daisy)

The summary of the perceived benefits in the community garden cases is presented in **Table 4.8.**

Personal Benefits	DINAS	COLDWELL	GLYNDWR	AFON
Good quality fresh food	✓	✓	✓	✓
Learning	✓	✓	✓	✓
Physical and mental health	✓	✓	✓	✓
Social aspect and meeting people	✓	✓	✓	✓
Sense of achievement		✓	✓	
Job satisfaction for the staff members		✓		
Contributing to the ecological sustainability			✓	
Spending time outdoors				✓
Having a hobby				✓

Table 4.8. Summary of the perceived benefits in the community gardens

Learning

This section explains what people learn and how the learning process happen. At ***Dinas Garden*** all the volunteers reported continuously learning various gardening skills, such as propagating, composting, distinguishing between different weeds, pruning, plants terminology, and how to look after the plants. Some of them said they only had the theoretical knowledge before coming to the garden, but by volunteering they gained the practical experience. Others described in detail their favourite gardening job.

- *"Thing that I find the most satisfying is propagating and transplanting seedlings from the nursery, infant stage; they are in pots basically but doing it by hundreds. Because I find it extremely therapeutic, coz obviously, these are extremely delicate and you have to have such a light hand and have to be so careful, trying not to break anything basically."* (Mei)

Some volunteers also pointed out that they learned other practical skills like woodwork.

- *"… woodworking, how to mend forks and spades when people break the handles so we try and mend them. And I have learned lots of woodworking skills for making stuff."* (Vince)

Apart from practical skills, volunteers learned communication skills as well. Dinas Garden is quite popular in the city not only for volunteers but also for different groups of visitors, particularly from schools and nurseries. As explained earlier in the human capital section, there is an outreach worker who is involved with similar activities and speaks to the visitors. However, the volunteers also talk to children and adults that accompany them, which helps them develop their communication skills.

- *"I obviously have to talk to different people. I mean, […] there would be schools and kids, or mother and toddler groups. So, we have to talk to them again, maybe just say a few things about the garden and just for them to get an idea what it is like to be here basically, what we are working on or can't working on depending on season."* (Mei)

Meanwhile, due to the nature of working together with other volunteers, who normally do not socialise with each other out of the garden, participants need to communicate among themselves and solve any problems that may arise during the work.

- *"On the social end […] there is an element of group learning […]. When difficult individuals are socially unaware, may be disrespectful, I try and encourage the group to take ownership over this situation and not leave it to myself as a manager […] I try and get the group to stand up to these kind of behaviour to say 'look, that's not acceptable' or also to take credit in commending people when something goes well, it is not just about the bad, and to be aware of what might have triggered them to behave in such a way."* (Matt)

All participants agree that learning is motivating and is a very important part of working in the community garden. They explained that if you continue coming to the garden, you observe how something is progressing, and you learn from it and always ask the others if there is something you do not know.

- *"You can learn how to grow things, how to make things, and I think that is part of it. […] I have certainly recommended it to people who want to learn gardening skills and I say "Yes, come along, you learn"."* (Vince)

Occasionally, there are some training courses in the garden.

- *"I had couple of classes here about pruning and all that."* (Darren)

However, the process of learning is predominantly informal and people learn by watching, asking questions and doing. Some volunteers ask to be put in charge of an important task in order to learn how to do it. The project manager also explained that learning process is informal and specific to the task and to the person doing the task, as he acknowledged that everybody learns in a different way.

- *"I always find it easier or much nicer to just ask someone who might know. It's just more immediate. […] Everybody teaches each other."* (Mei)
- *"It is very much ad hoc, person-centred, adapted to the individual. Some people like to read about it, so I find some information for them to read on, or to suggest websites for them. Some people like videos. I try and link on the Facebook group different things I find interesting coz I know they enjoy that too. Others are very practical, so we have lots of practical jobs for them to do. Others like to watch and observe. […] But there are many activities in the garden where they are self-led and only guided by the idea of what needs to be done."* (Matt)

At ***Afon Garden***, some of the members had previous gardening knowledge and skills. However, they admitted that they continue learning from other people while sharing their own knowledge. Therefore, there is an exchange of knowledge. Other members learned about gardening at the regular training courses organised by the housing association in the garden shed. The community support officer explained that the courses were provided by the Workers' Educational Association (WEA) and were open not only to Afon Garden members but to all gardeners in the council allotment site, and it was provided for free. Members said that at these courses they also learned about wider sustainability issues.

- *"We also learned we could play a very important role by growing food locally so that we save the planet. We would save quite a long in terms of jets going to Africa, to South America, [about] the carbon footprint."* (Warren)

In addition, members spoke about communication skills.

- *"We are learning that if you mix with the group of the people […] you have to find a way to meet somewhere in the middle. […] So, we have to learn to break down the barriers and amalgamate. Communication is end of all the world's problems."* (Ralph & Emily)
- *"You learn to be patient, you learn to communicate with other people and you learn to understand people. And you learn to listen."* (Zoe)

The community officer explained that sometimes problems emerge due to the cultural diversity, because people tend to do whatever they learned in their home countries. She also added that the management helps with resolving the problems.

- *"If there are any disagreements between people, we look at working it out the right way and hopefully they learn from that. […] They learn new friendships. As well as the gardening, they learn social skills […] they are learning more about these cultures. […] And it's learning about inter-generational work."*

I discussed earlier that learning was one of the main benefits at ***Glyndwr Garden***. The learning of practical skills go beyond basic gardening skills, because the garden runs in line with the permaculture principles and this involves wider environmental and biodiversity concerns.

- *"We are building habitats. […] It is a different way of gardening when you've got the creatures on site with you. You can't just put the spade in the earth, there might be something alive underneath it. It is a way of being with the wildlife, working with them."* (Faith)

Most of the volunteers explained that they had some practical gardening knowledge before coming here, but after coming to the garden they learned to do it in a different way. Some of them said that they had to re-learn things. Others admitted that if they had a garden, they would run it in a different way with this new knowledge.

- *"I realise by coming here as what I was doing in the garden was fine - I was producing my own food, but I was not doing it with enough care and attention […]. So, it is almost stripping it back to its basics and learning again. I guess permaculture plays a big part here."* (Luke)
- *"I've learned a lot more about the permaculture aspect of the garden and a lot more to do with doing things in a green way, whether it is about building or other aspects of conservation than just gardening really."* (Eric)

One of the managers talked about some occasional training sessions in the garden provided voluntarily by local people about various skills such as grafting or hedge laying. He explained that even if attendants would not necessarily use the knowledge, these sessions were an opportunity to share skills. However, although the garden founder is a trained horticulturalist who is often invited to deliver courses at other gardens, all the learning process at Glyndwr Garden is based on observation and practice and there is no structured training. The garden

manager would explain how a certain job is done, and would let people do it. In addition, she would also explain why things are done in a specific way. For instance, a bed of carrots needed weeding and it was covered with mesh to protect it from moths. Before uncovering the mesh to clear the weeds, she cut some chives, chopped them and spread them over the bed to keep the moths away until the job was done (**Picture 4.8.**). Another time we collected comfrey, and covered the soil around the roots of some plants. The manager explained that comfrey provides some essential nutrients to the plants.

Picture 4.8. Glyndwr: Preparing a bed of carrots for weeding with the help of a volunteer from Spain

Therefore, whenever a job is performed, volunteers have the chance to learn why it is done in a specific way (**Picture 4.9.**).

- *"[The garden manager] is very exact in the way that she likes things done. […] We sometimes get it wrong and she would correct you."* (Luke)
- *"It's a case where [the garden manager] works, informal, but shows and explains you why something is done in that way. […] And I think there is a very supportive element to that where people can ask any questions, even daff questions."* (Eric)

- *"We have that kind of demonstration for things like pruning. […] And we talk with [the garden manager] about various aspects of growing and sowing. And most of it part, I suppose, is doing and see other people doing."* (Owen)

Picture 4.9. Glyndwr: Preparing some fine compost by sieving under the project manager's instructions

The manager's partner described the learning process in a similar way.

- *"Well, they learn by doing. And they also learn by being with someone else who has got the knowledge. And they see an alternative to something that they might thought they knew. […] Sometimes they might learn in a way that they don't realise they are learning."* (Ethan)

And the project manager added that they have 20-30 minutes' sessions of skill-share on the volunteering days, where they would focus on a specific topic to learn. On the other hand, one of the volunteers have been doing land courses outside the garden and for one of his course works he chose the garden as a case study. In return, he felt empowered by the opportunity of contributing with his knowledge from the courses and '*bring a few things back into the garden'*.

There are different levels of involvement at ***Coldwell Gardens***, which leads to different type of learning. The main purpose of the garden is to give a meaningful work experience to people with

learning difficulties, which happens through a formal learning. Therefore, these participants are the central category in the garden in terms of learning, and they are also called 'students'. The students learn various gardening skills in their structured courses at the college and then have the opportunity to practice in the garden either by working in the communal areas or on their own plots. But in addition to the gardening skills, they also have many courses on other skills like safety and teamwork.

- *"I learned everything here. […] To do my own crops."* (Adam, 23.07.14)
- *"Skills for life at entry level, safety skills, how to be safe together at work, tools and signs and alarms, how to work toward a goal, [and] problem solving."* (Adam with help from the manager)
- *"Gardening skills and safety. I can't remember anything else (laughing), [and] working as part of a team."* (Emma)

The students learn from their college courses and from the head grower. The garden manager and the horticulturalist are both trained teachers who deliver various courses. There is a building for gathering and training purposes (**Picture 4.10.**), where students can also have their tea, and where the interviews took place.

- *"[I learn] from [the head gardener] and from my college course".* (Adam)
- *"When I couldn't do when I started, I asked all the time. It is the head gardener and he shows; [he] also shows the other people how to do the things and helps them."* (Emma)

The garden manager explained that the training program is made to suit all the students and the wide range of abilities. She explained that for the last few years they were doing the City and Guilds Program at entry level and doing training on various subjects that they always tried to do relevant for the work in the garden.

- *"… work safety, general health and safety, fire alarms, safety signage and chemicals, […] team working, working towards goals, solving problems – who they go to ask for help, how they will tackle a problem"* (Brooke)

However, they decided to switch to a different provider because the City and Guilds added more units on social and personal development designed to help young people get a job, which "*is not appropriate here. In reality, the people that come and work in the garden are never going to be employed".* That is why they chose a new program with *"purely practical horticultural units".*

Picture 4.10. Coldwell: The building for training and socialising

But it is not only the students who learn. The volunteer trustee admitted that she learned more about gardening although she did gardening before. But she also added that she learned communication skills by helping in the shop and talking to the customers or listening to their stories.

- "*people skills and relations, relationships."* (Daisy).

On the other hand, the teacher-horticulturalist talked about constant learning in the garden in addition to the teacher training he completed to set up and deliver courses, and do invigilation.

- *"Oh, I am constantly learning, constantly learning. Everything changes […] from month to month. But there are so many different variations with the weather, rainfall.* (Riley)

Summary of the learning in the community garden cases is presented in **Table 4.9.**

Learning	DINAS	COLDWELL	GLYNDWR	AFON
Basic gardening/horticultural skills	✓	✓	✓	✓
Communication skills	✓	✓		✓
Problem solving and teamwork	✓	✓		✓
Other practical skills (woodwork, grafting, hedge-laying)	✓		✓	
Safety		✓		
Advanced horticultural skills (organic gardening, permaculture)			✓	
Ecological and sustainability matters			✓	✓

Table 4.9. Summary of what participants learn in the community gardens

Decision-making

The section examines the governance at micro-level and explains how the decision-making happens in the community gardens on daily basis and at a managerial level. In the first case, ***Dinas Garden***, both day-to-day and managerial decisions are taken mostly by the project manager. However, the volunteers are given the opportunity to discuss the issues relating to the garden and to share their ideas and opinions in various ways. Informally, they participate in the decisions by contributing to discussions during tea times. But they can also talk to the manager directly at any time. In addition, there are regular monthly meetings where the volunteers are invited to bring any issue and to discuss. However, when asked whether they go to the meetings, some admitted that they have not attended for various reasons, e.g. short notice or time scarcity. But they explained that they participate in decision-making in different ways, such as discussions with the manager before he takes the final decision.

- *"You know, occasionally [the manager] would actually bring something up that needs addressing. Or somebody else would actually bring something up that they were unhappy with. So, it will actually be discussed around tea sometimes. [The manager] obviously needs to be the coordinator here when it comes to be the 'happy medium' between everyone."* (Mei)

Others were asked by the manager about an opinion.

- *"Yeah, recently, […] about the management mainly."* (Darren)

To the questions about who takes the decisions at the garden, some volunteers gave very straight answer by repeating a few times the manager's name, and made an explanation in a joking way.

- *"I tell him when he is doing wrong and he ignores me, and we fight over it. Yes, we discuss it but he is the coordinator. […] I would tell [the manager] or other people what I think and they would carry it to the meeting or not."* (Vince)

The project manager described in more detail the decision-making process on a daily basis. He explained that some days he writes a list of jobs, which is a more formal approach. But he found the flexible approach better for the garden due to the unpredictability of the number of volunteers who come on a certain day.

- *"On day-to-day basis responsibility actually lie with myself […] but I try to share some of that with some of the core members of the volunteer group, and I try to involve them in my decision-making process so they feel some ownership. […] But many projects are discussed with the volunteers; if they got ideas, we always listen to […] and I would go through the process with them and work out whether it is actually feasible, sensible, practical, affordable, all of that."* (Matt)

At a higher, managerial level there are issues that are taken to the association and the Board of Directors. Also, every 12 or 18 months there is a formal group feedback session where participants can assess what is achieved and what needs to be done in the future. On a different side, there were changes happening in the garden at the time of the fieldwork, and a new steering committee was formed among the volunteers to undertake more formal decision-making role by meeting every month. Thus, volunteers were given more power in having their say about the garden.

Volunteers were also asked about the way the responsibilities and jobs are shared in the garden. The answers reveal that there is no set way of sharing, and there is quite a flexible approach. People can choose what to do and how much to do. However, observations showed that there is an informal way of organising things, and people usually ask the project manager or the key volunteers about jobs that need to be done. Also, in the beginning of the day, these issues are discussed together around the tea table. And volunteers admit that sometimes they may want to do something but end up doing another job because it seems more urgent. And some of the core members always come regularly and earlier than the opening time to prepare the kettle. Accordingly, there is a routine and a balanced way of organising things, or *'nuanced weighing'* (Vince).

Decision-making at ***Afon Garden*** happens at various levels. At the lowest level, every member is responsible for their own plot and can decide what to grow there. At a higher level, all the members of the garden represent one of the community groups at the housing organisation, and one member is the chair of the group. They meet regularly, raise important issues and take the decisions together by voting. For example, as explained earlier, there was conflict about sharing the polytunnel, and the issue would be discussed at the group meeting.

- *"I am going to propose that cabbages are not grown in the polytunnel but I might be voted down […] whatever everybody's decision is."* (Ralph)

Another example was the manure. Some of the members explained that the gardeners decided they needed some manure, and they asked the housing association for financial sources. The community investment officer is the link between the group and the organisation, therefore, the members talk to her.

- *"We decided we need some manure, […] so we decided to go to [the organisation] to ask for little bit of funding. That's how you see the heap of manure out there. So, we take the decisions together. During meetings."* (Warren)

The manure was also an issue that caused conflicts, because some members did not agree with the fact that it was in the middle of the car park, which was inconvenient for the disabled people coming by car. They told the meeting would solve the problem. On the other hand, members feel that their opinions are valued and taken into consideration.

- *"That's what I found – your opinion is valued. And also, with me being disabled, because they include me in a lot of decision-making, like about the paths and ramps for the polytunnel. […] there was a ramp going up to the toilet that was a bit steep, so they asked of my opinion to make it less [steep]."* (Zoe)

These examples demonstrate that the group meetings at Afon Garden are an effective mechanism for decision-making, and everybody can propose issues and take part in the decisions. And although the garden was planned as a self-running project, the housing management is regularly involved when there is an issue the garden members cannot resolve or when there are training courses and events such as the annual Action Day. The community investment officer explained that she visits the garden regularly every 2 or 3 weeks for half day. And she keeps the members informed by writing regular updates.

At ***Glyndwr Garden***, the garden founder/manager (officially development officer) is the key person who takes the decisions. Her partner explained that there is also a management committee consisting of voluntary members such as solicitor and librarian, whose role is to discuss important issues and give advice, and that they usually meet once a month but have not met in the last few months because there were no "pressing issues". One of the members also admitted that the decisions at a higher level are brought to the management committee, adding that there is an annual general meeting where all the members of the garden can take part. However, another member suggested that all the decisions are taken by the manager because this is 'her' project. However, some members argued that rather than management there is a leadership in the garden.

- *"[The garden manager] makes the decisions. It is her garden basically. […] you can suggest something if you want to; if she think it fits with what she wants in the garden, then she'll go with it. Mainly [the manager] knows what she wants; […] it's her baby kind of thing, so let go of her baby is very difficult."* (Luke)
- *"[The manager] leads the project but you don't feel like you are made to do anything you don't want to do."* (Eric)

All members agreed that they can make suggestions and participate in the day-to-day decisions, or they have been asked about their ideas. Nevertheless, the manager agreed that she is the main person who takes the decisions on a daily basis.

- *"On a daily basis it is just me, because I am the only one aware of what needs to be done on a daily basis. […] And also, we encourage [the members] when they arrive to go around the garden and have a look for themselves; what they think needs doing and they can add it to the list of the day."*

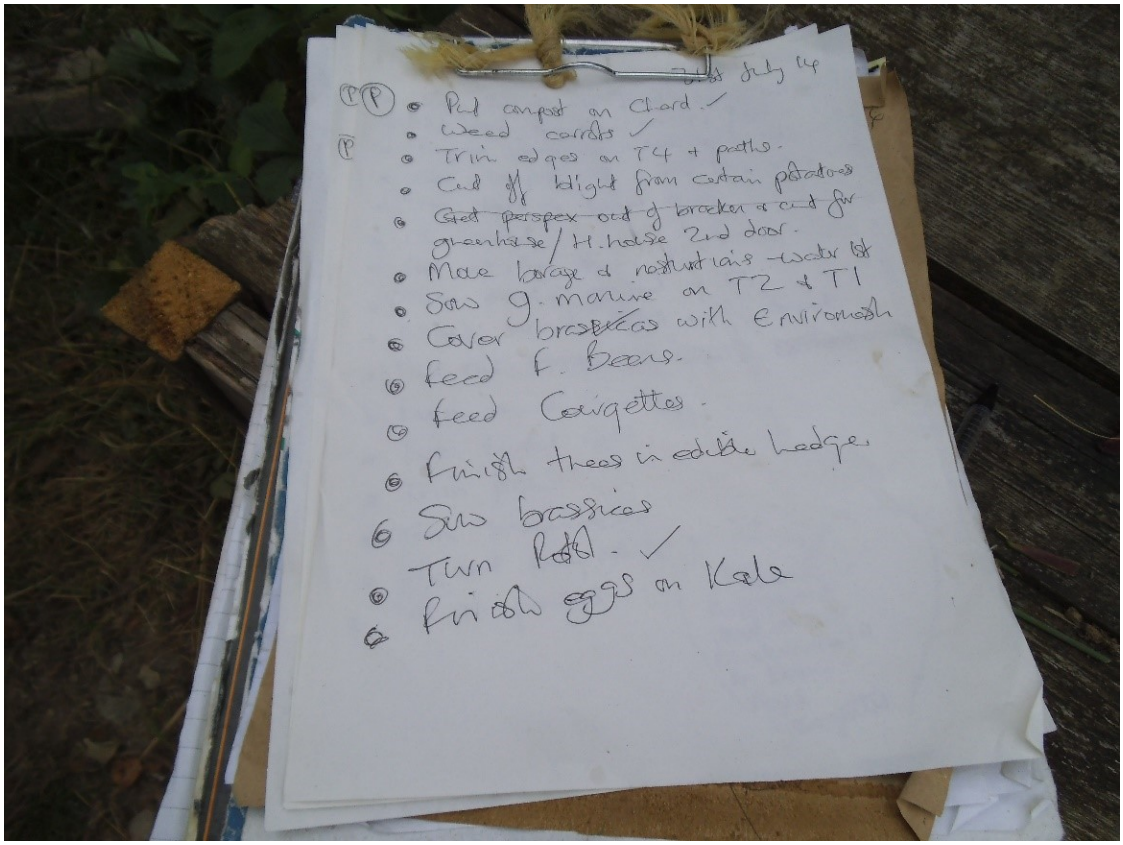
The members were unanimous about sharing the responsibilities in the garden. They explained that there is a list of jobs that need to be done and that are written down (**Picture 4.11.**). And instead of distributing the jobs, everybody volunteers to do a certain job that suits the person.

- *"We've got priority jobs and non-priority jobs that need to be done on that day."* (Ethan)
- *"But it is not like 'you do this; you do this'. […] It is very loose end around. [The manager] has adopted an approach of 'do what you feel like you want to do'."* (Luke)
- *"There is a list of jobs that could be done during the day and you quite often pick one of the jobs."*

- *"Well, we have a list of jobs and we can choose what to do. We ask [the manager] for an advice and she explains things."* (Owen)

However, the garden manager argued that the responsibilities are not shared much because she is the person who is responsible for all the work, and although she is paid only for doing it part-time, she spends every day working in the garden in order to meet the targets for the Environment Wales, the organisation that provides the funding.

- *"[The responsibilities are not really shared and I think that's been a bit of a misconception since we've got funding, that 'Oh, it's all right now'. […] But I have not had a day off for three months. But it's very good that one of our volunteers come and helps me harvest vegetables on a Tuesday morning."*



Picture 4.11. Glyndwr: List of jobs to be done on the volunteering day

Similar to Afon Garden, decision-making at ***Coldwell Gardens*** happens at different levels. At the top level, decisions are taken by the trustees who meet quarterly. Decisions about day-to-day running of the garden, including marketing and running of the shop/café, and the education are taken by the manager, but she defers to the trustees any serious issue or anything that requires a large expenditure. The head gardener and the horticulturalist, on the other hand, decide what

will be grown on the market garden, about the quantities and rotation of the crops. They are also responsible for the health and safety of the students.

- *"Day to day stuff is run by [the manager] who has great capability as a manager because she is right across the Board. She is really good with stimulus and understands the whole thing but also a very good business brain. […] But in terms of the main decisions, everything is validated by the trustees."* (Daisy)
- *"Me and [the head gardener] decide what we want to plant and how much. We get brought into conversations about new students, the people looking to come here and whether we feel it suitable and then the same after they've visited. The main decisions are made by the [Board and the manager]. […] But we get feedback and we have the ability to see the meeting questions, what is discussed in the agenda."* (Riley)

Picture 4.12. Coldwell: Individual plots of the participants with learning disabilities

At a micro-level, students decide what they will grow on their micro-plots (**Picture 4.12**). Also, if they do not want to do particular jobs, they are accommodated with other jobs. Additionally, there is a complaint & suggestion procedure, and the students are well informed how to use it in case they are not happy with something.

- *"I just decide on my own […] I do my own plot". "I say it [when not happy with something]."* (Emma)

The decision-making processes at each level in the community garden cases is summarised in **Table 4.10.**

	DINAS		COLDWELL		GLYNDWR		AFON	
	Decisions	**Volunteers/ Members**	**Decisions**	**Volunteers/ Members**	**Decisions**	**Volunteers/ Members**	**Decisions**	**Volunteers/ Members**
Top Level	*Association's Board of Directors*	*Formal feedback meeting every 12 or 18 month*	*Board of Trustees*	*n/a*	*Managemnt Committee + Garden Manager*	*AGM Attendance*	*Housing Association*	*AGM Voting*
Project Management Level	*Project Manager*	*Informal contribution*	*Garden Manager*	*Informal contribution*	*Garden Manager*	*Informal contribution*	*Community Group*	*Group Meeting Voting*
Day-to-day Level Garden	*Project Manager*	*Informal contribution*	*Garden Manager + Horticultural Staff*	*Informal contribution*	*Garden Manager*	*Informal contribution*	*Community Group Chair + Officer*	*Active*
Day-to-day Level Own Plots	*n/a*	*n/a*	*Members (Students)*	*Active*	*n/a*	*n/a*	*Members*	*Active*

Table 4.10. Summary of the decision-making at various levels in the community gardens

4. Potential for making an impact

This part examines the potential of the community gardens to make an impact. First, it focuses on participants' perception of the current food system with the aim to understand the level of awareness within the initiatives on food problems, which is the first step in making change. The following section is about the perceptions of the position of community gardening against the main food system. Next comes the articulation of difficulties and obstacles for the community gardens, which affects their potential for making impact. And the last section is about the networking activities as a way for changing social and governance relations.

Perceptions about the current food system

At ***Dinas Garden***, participants' perceptions of the current food system are concentrated mainly around the problems created by a profit-driven economy relying predominantly on fossil fuels that does not take into account the needs of people and the environment, and leads to people's disconnection from their food. Participants also think that middlemen take the lion's share and farmers – especially small-scale farmers – are not paid a fair price for their produce.

- *"burning fossil fuels and being very short-sighted about things basically […] it is all about the profit margin at the end of the day"* (Mei)

- *"We are disconnected from growing to the processing […] the producer is losing out every time. And because they are not on the market, they don't manipulate, they are quite honest and straight up, they are being forced into doing things to make the lion share bigger for the middlemen; [… it is not quite a fair system."* (Matt)

Members of ***Afon Garden*** think that the current food system has a few major problems namely transporting food to/from long distances, waste of food by the retail sector due to shape/size selection of the fruits and vegetables, and cheap food resulting in overconsumption, waste, and deteriorating conditions for the farmers. Firstly, participants suggested that shipping food from long distances is not sustainable because it damages the environment and interferes with the food supply in the developing countries. They also explained that the other two problems, e.g. cheap food in the supermarkets and selling uniform fruits and vegetables will result in food waste and will damage farming.

- *"The food chain has been altered to supermarkets; […] they always try to have the biggest and the best and the prettiest on their displays."* (Ralph & Emily)
- *"We are so used to go to the supermarket, having uniform apples, uniform carrots and everything is perfect."* (Linda)
- *"It is too cheap a lot of the food in the supermarkets. I think that's bad because in the long run farmers are not going to be growing it. […] It is going to create more waste; you buy more than what you want, it's human nature."* (William)

But while there were arguments about food being cheap, on the other hand, some participants suggested that some people will need to grow their food because it will become unaffordable.

- *"If you are on benefits and money is not there, people are going to find it easier to grow the more they are to buy."* (Zoe, 26.11.14)

Participants at ***Glyndwr Garden*** described the food system as 'catch 22', 'crazy', 'worrying', and 'dreadful'. They think that problems originate from the food supply chain and changing consumer behaviour. Other two problems were seasonality, i.e. the expectation of people to have all types of fruits and vegetables in every season, and cheap food leading to people's reluctance to grow their own food because it is easier and cheaper to buy it from the supermarkets. According to the participants, the first problem was created by food retailers by providing all varieties all year round on their shelves but it causes environmental damage due to the food miles involved.

- *"You know you can get something at this time but it is gone after a few months and have to forget about it until next year. I think, because of supermarkets that you can get whatever you want whenever you want, […] trying and get people's mind-set from that […] is so difficult."* (Luke)
- *There is a lot of craziness about the way we produce food both in terms of food miles and eating stuff that is actually transported all over the world at huge costs."* (Eric)
- *"When food is very cheap people are going to say, "What is the point of growing it in the garden?" Yes, there is the environmental side but people in general don't always seem to be on the environmental side. […] People now reflect on leisure time and lot of people think being in the garden is eating their leisure time. You know, people who come to the garden are half way converted."* (Ethan)

Position of community food growing against the main food system

Participants were asked two questions about the position of community food growing against the main food system. The first question was whether they see community food growing, specifically community gardening, as an alternative to the main food system or as a part of it. And the second question was about the shared and different values between the two.

At ***Dinas Garden***, all except one interviewee regard community gardening as being outside of the main system or separate from it. They juxtaposed the industrial agriculture and the supermarkets as the main regime actors with community food growing as a different way of growing food by preserving the soil and the biodiversity. To the question about the values, they answered by mainly concentrating on the different values between the two, e.g. organic vs. intensive production, and small scale vs. mass production.

- *"Obviously, we do organic gardening here. It is in contrast with industrial gardening, with GM food and use of chemicals - nasty chemicals - just growing things 'en masse'."* (Mei)
- *"We don't use chemicals; we don't use GM; we don't use all of the things that come with the big agriculture. We don't use supermarkets, etc."* (Vince)

But the project manager argued that instead of looking at the two systems as contrasting, it is better to see their potential for teaching us either by being a good or a bad example.

- *"I think it is generally seen as separate because the […] commercial food system is seen as safe and clean, and organised and structured, and sale-able and marketable […] Community food growing […] does not have huge scales of anything. You can't put so much high demand on it. […] But I believe community food growing show that you can get more out of the land by working together as individuals, getting some of the technology […] And how you care for the soil is actually going to benefit you in a long term."* (Matt)

At ***Afon Garden***, the opinion of the members about the position of community gardening against the main food system was divided. Some regard community gardening as very small compared to the main system and not even a part of it, but as an alternative in terms of its different values.

- *"I think, you never compete with big farm, do you? So, it's obviously going to be an inter-junction of what people want to grow."* (William)
- *"I don't think it is in the food system at all hardly. […] I wish it was more integrated. I would love to see on a high street a community allotment shop, you know."* (Linda)

Other members argued that community food growing is a part of the main system but at the same time has different values than the main system.

- *"I think it is a part. […] I think growing your own is better than main system."* (Zoe)
- *"It is definitely a part of the system. […] It has [different values] because what we grow, we eat fresh. It is not something that has been on the supermarket shelves for weeks. […] But also, we don't use here a lot of chemicals; we use less chemicals; it is more or less organic."* (Warren)

People at ***Glyndwr Garden*** had similar views although they described it from different perspectives. Some participants tend to see it as part of the main food system. According to one opinion, community gardens are a better alternative of allotments because they give opportunity to everybody to grow food without being put on a long waiting list. Another opinion suggested that community gardens are part of the current food system but on a very local level. One of the volunteers attempted to explain that they cannot be an alternative to the main food system because only the few 'converted' people are involved with it.

- *"I think it is great that it is an alternative for people who want change. There is an element where I suppose it is preaching to some of the 'converted' but I suppose you've*

got to preach to the 'perverted' to change the other people's views as well really. But as a percentage of the people's habits and lifestyle changes it is small really." (Eric)

Another participant also admitted the community food growing is either for people with alternative values or is a hobby. He regarded community food growing outside of the main food system based on the criteria that it is not a way for sustaining people's food supply.

- *"It feels to me like it's a bit outside at the moment. It tends to feel like it is people that have either got a social conscience and this is an avenue for them to come and get involved or it is people that, I don't know, have spare time."* (Luke)

In terms of the values, all interviewees agreed that community food growing has different or 'alternative' values compared to the main food system. The main arguments were around sustainability and ethics, and how mainstream food companies are only driven by profit and do not care about sustainability and rely on consumers' lack of awareness.

- *"[Supermarkets are] competing to sell articles that are most appealing or without the ethics behind them perhaps. And people aren't aware of what that might entail with regards to choices, and sustainability of farmers, and cost to the planet."* (Eric)
- *"We are trying to use as little fossil fuels, and […] we are trying to be more sustainable."* (Owen)
- *"People who do community food growing, they research and they are educated about what happens when you grow food and how the soil is something that can be depleted, it is not something infinite. And they are much more aware of that, which the current food system does not really care."* (Faith)

Participants at ***Coldwell Gardens*** had different opinions about the position of community food growing places. Some of them see them as independent from the main system, others argued that they are a part of the system because they cannot compete with the big retailers simply because the supermarkets are *"one-stop shop"* and make it easier for the customers, and therefore, the community food growing projects cannot be an alternative but can be an option.

- *"It is not truly an alternative. It would not take over from because […] a one-stop shop is an easier [option] but it certainly goes alongside because [a] number of people […] prefer to come and get their vegetables here. So, it is part of the choices."* (Daisy)

Others argued that community gardens are alternative to the main system and with a bit of awareness-raising, they can play an important role. For example, the horticulturalist explained

how he made a presentation at his college and inspired 10 out of 14 of his classmates to grow their own potatoes and had a very positive feedback a few months later.

- *"Alternative. I mean, if it can give people a bit of an eye opening of what you can do in such a small space."* (Riley)

In terms of values, they think community gardens have different values from the main food system. However, people need to have some knowledge, believes, time and money in order to choose to buy from community gardens.

- *"It's a bit like recycling; if it's easy to do, more people will do it."* (Daisy)

Articulating the difficulties and barriers

The main difficulty or problem reported at ***Dinas Garden*** was about the image of community gardening, or rather the way it was perceived among other people, or at least other gardeners. Reportedly, people in the garden have been treated in a disrespectful manner and regarded as weird people by those who have individual plots in the allotment site next to the garden, because they could not understand why people do gardening collectively instead of getting their own plot. An additional difficulty explained by the project manager was that the volunteers hesitate to take more responsibility and leadership roles in the garden, which makes it vulnerable in case there would be no person to lead it due to lack of funding. He was planning to overcome this probability by encouraging people to get more actively involved.

The nature of difficulties at ***Afon Garden*** was completely different compared to Dinas. One difficulty, as discussed briefly earlier, is that there is not enough interest from the tenants and even from those who were allocated a plot. The same disappointment was shared both by the community investment officer and some regular gardeners.

- *"I am shocked that we have nearly 1300 homes roughly and we've hardly get anyone down here. It really upsets me. I think sometimes a lot of my time I try and get people here organising different action days. […] Quite often I [arrange] part of the transport for them. […] And I don't feel there is that interest particularly from younger people."* (Linda)
- *"So, with the garden, all these people […] come down once a year, we have a big party and a cameraman come here, and they are all here, and then we won't see them for*

another year. They all got plots or raised beds etc., and they are not used." (Ralph & Emily)

However, while there were members who were plot-holders but barely came to the garden, other members wanted to have much bigger growing place.

- *"I would have liked it three times [bigger] so that I could, you know, do more things."* (Warren)

The other difficulty, reported by some participants, was related to housekeeping rules. Afon Garden has its own fence and gate that is locked, and each of the garden member is given a key. The tools in the storage and the compost toilet are also kept locked. When there is somebody in the garden, people from other groups or allotments are allowed to use the toilet. However, reportedly, there were incidents such as the gate been left unlocked and tools missing from the storage, and upon the suggestion of some participants, the management put a lock on the gate and issued the members with new keys.

- *"I needed the side jammer, which I knew we had, […] and when I was going to use it, it was gone. And nobody has seen it. So, things like that are annoying. [This] is a relatively new garden; because it is going through growing pains […], though nobody else in this whole [site] have got sheds like this – learning shed, potting shed, tool shed, toilet, polytunnel [and] the car park."* (Ralph & Emily)

At ***Glyndwr Garden*** the main difficulty is insufficient human capital, also mentioned earlier. One reason is that the initiative relies on volunteers but they have their own life outside the garden and cannot be forced to come regularly and show greater commitment. Some participants think that the garden is not well promoted and there are plenty of ideas that can attract more helpers.

- *"Thursday is the standard volunteer day but maybe they could have another day, which is specific to certain populous [like] try and affiliate some colleges so they […] can come and do their sort of outdoor field studies here*." (Luke)

And the garden manager stated that not many people shared her passion for the biodiversity and the environment in general, which she described as 'isolation'.

The difficulties and challenges experienced by ***Coldwell Gardens*** were discussed earlier related to mobilisation of resources. One challenge is the remote location of the garden, which makes it difficult for volunteers and visitors to access. An additional barrier for recruiting volunteers is the requirement for DBS certificate, which is not difficult to obtain but costs money. A third issue

is the old demographic of the Board of Trustees and difficulty with finding new members who would be able to commit their times. And a final problem articulated by the manager is that the initiative could not offer voluntary placements for more people because it was not self-sustainable.

- *"The criteria for learning disability has shifted drastically in recent years. And I've got participants here who are in their 40s and 50s, who, if they were 18 or 19 now would not be classed as having a learning disability, they would be classed as having a learning difficulty. But difficulty does not attract funding and disability does."* (Brooke)

Networking and prospects for the initiatives

This section examines the ways community gardens collaborate with similar initiatives and with different types of community projects. The aim is to evaluate the potential of community gardens to take the governance relations to a higher level and scale up. The section also includes the perceptions of people involved in community gardens about the potential of the initiative in particular and community food growing in general to make a bigger change in society.

Networking of ***Dinas Garden*** is mainly in the form of having visitors from or visiting other gardens. At the same time, the garden is a member of the FCFCG, as mentioned earlier, where the project manager takes active role. Some volunteers took part in visits to other gardens. Also, groups from other gardens from all over Europe came to Dinas.

- *"I can't remember where but I've been to several [gardens]. We used to do every year but since the last year we stopped doing that for some reason."* (Darren)
- *"It has always been part of the management to make sure they know what is going on in community gardening around the place here close-linked with the Federation."* (Vince)

Another way of collaborating is seed swaps with other growing projects or giving them seedlings. The garden actively uses the social media sites as well to promote its activity and connect to other community projects. However, the interviews revealed that it is the project manager who plays the leading role in networking, since he takes active role in various projects and has a large personal network including not only food growing projects, but other community projects as well, e.g community currencies, community energy, cooperatives, and the transition movement. The project manager explained that although his involvement is at a personal level, he often extends these links to the garden so that volunteers can be involved too.

- *"[The manger] has been to lots of other places, so he knows lots of people in networks. He has a wide, wide network of people that he knows. We do actually hear of projects that he gets involved with."* (Mei)
- *"We have visitors all over Europe. […] I try and make sure that I am present or other people are present at different events, and if there is something that the Fed is doing, I am trying to support that and share my experience with them and connect with researchers. […] And some of us wear many hats, they are involved in many groups. […] So, we use our skills from community growing but we do it in a different manner, through various different projects. But we do find food is what connects everyone."* (Matt)

With regard to the diffusion potential of community gardens, perceptions of the interviewees can be summarised in a few points.

i. Dinas Garden cannot grow more but it represents a good example of what can be achieved as a community. It is also a place for learning and transfer these skills to new growing places.
ii. Dinas Garden and other community food growing spaces are only the start to encourage more people back to the land as a viable option or one step to introduce it to people.
iii. Community food growing movement is developing and more people are becoming interested; there is more demand for growing food and similar projects.
iv. Community food growing has the capacity to change the current system but it is not a quick fix; it will be in long term because with the community cooperation you need to discuss things with everybody. Also, it requires change in people's perceptions, ideas and attitudes, which takes time.
v. Community food growing is not the only solution but people need to reconnect to their food in order to be more resilient in the future. Growing food is a life skill and it should be taught to everybody.
vi. It requires the vacant land to be used efficiently or more land to be allocated for food growing.
vii. One problem is that community gardens are not trusted enough; the idea of nurturing communities is not well understood.

viii. Dinas Garden takes part in policy-making indirectly, via the project manager who is personally involved at many platforms and invited to meetings where he makes suggestions that are taken by people with more powerful position to act upon.

Afon Garden did networking with other gardens in the first years of its establishment with the initiative of the former community investment officer. Members who have been involved for longer time said they exchanged experience with other garden in West Wales, which was set up by another housing association. They visited the garden twice and had the visits returned to Afon. There also arranged a visit to another popular garden in the city. However, newer members have not heard about any visits or networking with other gardens. In terms of collaboration between Afon Garden and other types of community projects, members indicated they have heard about some of them, but there were only two examples of collaboration they mentioned. The first was the toilet twinning project as explained earlier (see 'Mobilisation of resources' section). And the second was a collaboration between a local cooperative and the housing association that supplied the tenants with weekly fruits and vegetables at an affordable price.

Regarding the future potential of Afon Garden, all members believe that it will grow in long term and will be running for a long time because the number of people who want to grow their own food is growing. The community support officer explained that with the support of programmes like CLAS Cymru, they can lobby for more growing spaces. She also added that the housing association recently took part in debates with the City Council about the welfare reform and related issues, where they spoke how the community garden helps tenants to eat healthily on a budget while otherwise many cannot afford to buy fruit and veg from supermarkets and grocery stores due to the high cost.

In terms of the potential of community food growing to make an impact on the food system, all participants suggested that it will *"become more popular"* (William) but in a longer term. Some of them explained that it needs "*to go a step higher"* (Warren) with more land available, more places like Afon Garden, and many more people involved. Some members argued that at present 99% of the food comes from supermarkets; therefore, community food growing places need to produce "enough for the nation" if they are to influence the food system, which can only happen with more land made available. On the other hand, the participants think community food growing can only be part of the solution firstly, because of the climate and secondly, because of

the limited type of crops that can be grown. But they also added that yields can be improved with the use of polytunnels and greenhouses specifically for vegetables and herb. Additionally, some members suggested that Welsh people love gardening because *"it has lot to do with pride"* (Ralph).

In relation to networking at ***Glyndwr Garden***, both volunteers and managers reported visits to other gardens or community projects to share ideas and experience. Some of the visits were for the annual gathering of community gardens organised by the Federation of City Farms and Community Gardens. Also, Glyndwr Garden hosted one of the meetings the previous year. In addition, the garden collaborates with another farm, which houses international volunteers from the WWOOF organisation, as mentioned earlier. The farm sends a few of the volunteers to Glyndwr Garden both for training purpose and as a support, which is considered as a vital for the work of the garden.

- *"I am in touch with another CSA project and we, kind of, support each other in times of extreme stress, which is nice to know, that someone else is going through the similar feelings that I go through."* (Faith)

The garden keeps contact with other gardens via emails and newsletters but the gatherings of the community gardens organised by the FCFCG give better opportunity to hear about new gardens in the area and to promote Glyndwr Garden to those. The garden has its own website and occasionally publishes updates via social media sites. In addition, it supports a local Incredible Edible project and tried to set up Transition Town in the area, but is has not been finalised. Regarding the future possibilities and potential of the Glyndwr Garden, participants spoke more about difficulties rather than opportunities. Firstly, although the garden needs more people to help, members think it would be difficult to work together if there were more than 8 or 9 people at the same time. Meanwhile, the garden manager was hoping that the funding would continue and there would be more support from organisations.

- *"[We need] a lot more input and support from specialist people in this field. Otherwise the individuals out there […] just get burnt out, trying to do everything on [their] own."*

On the practical side, the co-founder of the garden explained that instead of making the garden bigger and with more raised beds, it would be better to build a polytunnel, which will extend the growing season, which is very important for the garden because it is located on 1000 feet

altitude where the season starts late and finishes early. A polytunnel would have another positive contribution to the garden by providing a covered area for socialising in rainy days.

As to the diffusion potential of community food growing, participants' perceptions were centred around the idea that people should be educated more about eating local food and the options for alternative living. Some members think that people's attitudes toward food must change first.

- *"If they have some kind of almost passion about the food, then I think that's then where people will probably may want to start trying to grow it themselves. And then, places like this will potentially get utilised better."* (Luke)

Others suggested that the interest toward organic growing and sustainable living was expanding, and there was *"a lot more thirst for knowledge around alternative ways of living and getting out of the rat-race"* (Eric), but at present it is mainly retired people who are interested in growing food.

Participants think the role of community food growing is important for transitioning toward more sustainable food system, because it is an example of what can be achieved in a more sustainable way. The manager argued that *"local agriculture in communities"* is a way to reconnect people to the source of their food and re-educate them, but whether it can be the solution for a more sustainable food system, depends on its scale and ability to feed a bigger of the population.

- *"small community garden can inspire individuals to start doing something bigger, […] a whole system in a ripple effect"* (Faith).

In similar vein, some members also emphasized that small steps like the community garden are the beginning and they can "snowball", but they have to be supported with relevant policies at macro level. On the other hand, some argued that community food growing can play more important role in urban places, firstly, because in rural places people have their own gardens and secondly, because *"the city is where the people are, where the volunteers are; it's where the people need to be educated"* (Ethan).

Networking at ***Coldwell Gardens*** includes links with similar projects for adults with learning disabilities. For example, the garden collaborates with a care farm in the north of the region, which works on several micro projects such as refurbishing equipment for disabled people and sending it to the poor countries. During the apple harvesting season Coldwell sends all the apples

to the farm to be juiced, bottles and pasteurised; then puts their own label on the bottles and sell these in shop and café. Besides, they take part in the cricket tournament arranged at the care farm and in return, the farm takes part with a stall at Coldwell Gardens' craft fair in August. Coldwell supports some other gardens by donating plants and seeds *"just to get them on their feet"*. In addition, the garden is involved with the network of day service providers in the area for people with learning disabilities, which share the best practice and help each other. In addition to these collaborations, the horticulturalist talked about the garden's link with some local grocers in the nearest town. He explained that whenever there is a big quantity of crops in the garden, they take the excess to the local grocers to swap for other products. But the growers reportedly never visited any other garden because *"there is too much work here"* (Riley). Regarding the networking, the social media sites and other promotion means seemingly contribute to garden's publicity and attracting visitors. The volunteer-trustee mentioned how some visitors heard about the garden when they picked up a leaflet at some venue in their town while others found out about the garden through the social media, which is effectively used by the manager.

As to the diffusion potential, interviews revealed that the future of Coldwell Gardens depends very much on funding from the government, but also on becoming more self-sustainable. The difficulty of becoming more self-sustainable, according to the manager, is that the garden relies on recruiting more people specifically for the tea room/ café but does not have the resources to pay them. For the moment, the café operates with three volunteers but they need to recruit a training officer in that area. On the other hand, the county council in the area reportedly asked the garden management to consider other vulnerable groups for the future, such as mental health participants and substance/alcohol misuse participants.

- *"all obviously have to be very, very closely risk assessed and we'd have to be very careful how we got mixed but we have agreed in theory to trial that".* (Brooke)

At the time of the data collection, one of the team members at the café was a mental health participant.

The perceptions of the participants in Coldwell Gardens about the potential of community food growing in general can be summarised in a few bullet-points.

i. Community food growing projects need people who have *"time and inclination"* to do it.

- *"… you need an individual with a vision and a drive, and the time to be able to set this up and get things going". "… once you've got that ambassador if you like, then projects in most areas stand every chance."* (Brooke)

ii. Community food growing has more potential for success in towns and cities, because especially in areas like the one where the Coldwell Gardens are located, people have their own big plots and back gardens.

iii. Community food growing places have to be accessible in order to be successful. When they are located in area with no reasonable public transport, many people would not be able to go there.

iv. The government must prioritise to allocate land for community food growing because people in the country need to become more self-sufficient.

v. Community food growing is only a part of the solution for more sustainable food system.

vi. The difficulty with community supported agriculture is that very few farmers have the vision to do it; the farmers were competitive and do not want to cooperate (Daisy).

III. Conclusion

The community garden (CG) cases were selected specifically from different locations, size, set-up time, and both urban and rural areas. The aim was to examine how these differences affect the processes of creation and transformative potential of the gardens. The results reveal both commonalities and differences between the cases. In terms of the emergence of the initiatives, the number of the Welsh CGs increased dramatically in the last decade. However, it is difficult to determine whether this happened as a response to the recent crises or due to the availability of funding via the Rural Development Plan as part of the CAP policies. Interestingly, many participants articulated the possibility for an incoming food scarcity and new crises due to the peak oil, and emphasized the role of the food growing as a preparation for such a situation.

Another point is that CGs in Wales have not emerged by contestation and fighting for 'right to the space' (Schmelzkopf 1995,2002), differently from the American context. However, neither they are a result of a top-down planning for 'rolling out' neo-liberalism (Pudup 2008). They are grassroots innovations started by communities by mobilizing range of resources. And they have opportunity to receive institutional support, either financial (although minimal) or technical. In addition, some of the cases did not use 'common' land but used different sources of acquiring it. The urban cases, Dinas and Afon, got hold of land from the allotment areas provided by the city council. Hence, they are the smallest in size. Glyndwr acquired the 2 acres for free from a landlady in exchange for looking after the property. And Coldwell leased it from the National Trust through its charity for mental disabilities. It is worth mentioning that in the first three cases the land was not suitable for growing food. Volunteers had to clean the area and cover it with top soil and compost. In the case of Glyndwr, the area was totally covered in bracken. Therefore, the initiatives turned unusable resources into usable ones.

The benefits reported by the participants from getting involved in community gardens match some of the benefits documented in the CG literature, e.g. emotional health, self-esteem, safety, and learning social skills (Hynes and Howe 2004; Wakefield et al. 2007), physical and mental health due to physical activity and healthier diet (Castro et al. 2013), the sense of achievement (Hale et al. 2011), and contribution to a better environment and ecological sustainability (Ghosh

2010). Some additional benefits from the case studies include job satisfaction, spending time outdoors and fresh air, having a hobby, and the most important – learning.

Results show that apart from the first order learning of horticultural and communication skills, second order learning (Seyfang and Haxeltine 2012; Marsden 2013) about sustainability, ethical issues and food policies is also present in the gardens. Participants are aware of the shortcomings and externalities of the conventional food system, and usually discuss these issues during tea breaks or lunch breaks, or whenever they come together. For example, they spoke about the problems of cheap conventional food, food waste and uniform fruits and vegetables, food miles, conditions of the small farmers, retailers taking the 'lion's share', consumers' preference for the 'convenience' of the supermarkets, and expectation to have all types of produce all year round and out of season. As for the first order learning, differently from the other cases, people at Glyndwr learn advanced horticultural skills, and learning is a priority for some participants coming to the garden to use it as a 'stepping stone' with the aim to start their own organic horticultural enterprise. Therefore, community gardens play an important role for transfer of skills.

Difficulties/ Barriers

One of the difficulties reported in the literature is related to securing land for growing or the temporary nature of the tenure (Armstrong 2000; Henderson and Hartsfield 2009). As explained earlier, the Welsh CGs succeeded in finding creative solutions for securing the land. Another difficulty linked to CGs is obtaining financial support and bureaucratic challenges (Jamison 1985). In the case of the CGs, the difficulty is not only obtaining but also the continuity of the financial support. Usually, the grants are provided for limited time and are subject to reaching certain targets. For that reason, participants at Glyndwr compared the funding to a 'millstone around the garden's neck', while Dinas and Coldwell mentioned uncertainties for the future. The funding for Coldwell is different from the other three cases since it is supported by the Welsh Education Department and the County Council's Community Team for Learning Disabilities (CTLD).

Long-term economic viability is another major issue for the survival of the initiatives (Blay-Palmer et al. 2013; Mount et al. 2013). Again, the CGs in Wales use creative strategies to address

this barrier. For example, Coldwell Gardens introduced a shop and a tearoom, which is a useful strategy as the area is very popular with tourists. The garden still does not have the financial means to pay for staff working at the tearoom and the shop, and recruits volunteers. The other case, Glyndwr, sells part of the produce to a few local customers and at the village grocery shop. Also, the members pay a symbolic £5 a year to take part in the gardening. One of the urban gardens, Dinas, teaches participants woodwork, building and repair skills, which contributes back to the garden as many facilities such as shed and solar cooker are built by volunteers; also, they repair their own tools. The only garden that is self-sustainable at present is Afon, which is due to the institutional support of the housing association that initiated the garden. Participants now need to keep a pot of small cash so that they can buy things like soil, manure or compost.

The organisational structure of the gardens seems important for their economic viability. Those gardens that were initiated by organisations, shows better possibilities for being self-sustainable. Afon Garden was established by a housing association that still supports the initiative. Coldwell Gardens, which are the longest running of all cases, is managed by a charitable trust with the status of limited company. And Dinas is part of a social enterprise that also runs farmers' market and a market garden. The only case that does not have an organisational support is Glyndwr, which is heavily dependent on the hard work of the founder/development officer. It is understandable why it is the only garden that reported fatigue as a difficulty, also reported by Calvário and Kallis (2017).

A third major difficulty is related to insufficient human capital, which is also widely documented in the literature (Guitart et al. 2012; Blay-Palmer et al. 2013). This is where urban cases differ from the rural ones. The urban gardens are better in finding volunteers and participants, while the rural gardens are short of volunteers. One possible cause may be another difficulty reported by the participants: accessibility. Both urban gardens are situated in central areas of the city. Especially Dinas is a very popular garden that is regularly visited by schools and nurseries. In Afon all participants have their individual plots apart from the communal area. On the contrary, Glyndwr relies heavily on volunteers as the entire burden of growing is left to the development officer/founder. The problem is that the number of volunteers is unpredictable. While on most days it is very low, on some days it becomes crowded to the point that it becomes challenging to work. Coldwell Gardens constantly need volunteers not only for helping with the food

growing but also with the tasks at the shop and the tearoom. However, apart from accessibility, the requirements for all volunteers to have DBS (Disclosure and Barring) certificate due to the nature of working with vulnerable people, is an additional difficulty for the initiative, because volunteers need to pay to obtain the certificate.

At the same time, both the interviews and the participant observation demonstrated that the examined CGs are considerably inclusive. They are open to everybody regardless of age, race, gender, or social background. There is a big diversity of participants, particularly in the urban gardens. For example, people from Africa and Middle East grow varieties from their home countries. These are also accessible for the disabled people. Afon garden, for example, had the roads leading to the garden repaired for the participants on wheelchairs. Also, the housing association provided high raised beds designed for physically impaired people. In the case of Coldwell, inclusivity of people with mental disability is the main cause for the existence of the garden, but they were considering adding other vulnerable groups in the future, such as mental health participants and substance/alcohol misuse participants.

Transformative potential of the CGs

One of the ways for the CGs to make change is to collaborate with other initiatives and take part in networks. All the four gardens are members of the Federation of City Farms and Community Gardens (FCFCG). Their networking and collaboration with other initiatives is limited to visits (some of which are part of the annual gatherings of CGs organised by the FCFCG), seeds swaps, or coordinators' personal involvement with other community projects. In some cases, there are attempts for collaboration with Incredible Edible or Transition Towns but these do not result in substantive partnerships. Coldwell Gardens has some form of cooperation with other care farms for people with disabilities.

The perceptions of the participants about the position of the CGs against the conventional food system are divided. Some participants suggest that alternative food is part of the main system, others explained that it is so small that is not even part of it, or cannot be an alternative to the main food system because only the few 'converted' people are involved with it. According to a third opinion, community food growing is either for people with alternative values or is a hobby.

And yet another suggestion was that AFNs cannot compete with the supermarkets, because these are convenient as 'one-stop shop', but it can represent a different option.

A final point reflects on what participants think of the potential of the initiatives to make change. The outcomes from the different cases were similar. CGs are regarded as a good example of what can be achieved as a community and encourage more people back to the land as a viable option. Their number is growing; their role in the food system can increase with awareness-raising, more growing spaces, and with the support of relevant policies at macro level. This argument is in par with Wiskerke (2009) and Matacena (2016) who advocate the coupling of AFNs with urban food policies.

Chapter 5

RESULTS FROM THE CASE STUDIES: COMMUNITY SUPPORTED AGRICULTURE

This chapter presents the results from data obtained in the CSA cases, namely 19 interviews and participant observations from four CSA projects. The themes and the way of analysis are identical to the ones applied to community gardens and described in Chapter 4. These themes were presented in **Table 4.1**. (Chapter 4). This chapter is organised in two parts. The first part is brief and explains the general situation of the CSA in Wales and its place in the policy documents. Then the second part introduces briefly the CSA cases, before proceeding to the detailed results organised according to the themes in Table 4.1. and in a similar way the results of the community gardens were presented in the previous chapter.

I. Current situation of the CSA in Welsh programmes and policy documents

The situation of the community supported agriculture in Wales as a specific form of community food growing is slightly different than the community gardening. On the one hand, it is supported via different programmes and represented by the FCFCG. On the other hand, it has links with the Soil Association and other organisations, such as Organic Centre Wales due to the prevalence of organic growing principles among the CSAs. More importantly, however, is that the CSA initiatives in the UK made a step toward scaling up and launched the CSA UK Network in December 2013. This was followed by the launch of their new website with the help of crowdfunding, and consequently, mapping of all the CSA initiatives in the UK (CSA_UK no date-a). According to the initial statistics, there were 200 CSAs in the UK but only 6 of these were in Wales, which is attributed to the fact that there was a CSA support programme running in England for the last 4 years (Groves 2015b). However, there is conflicting information on the total number of the CSAs in the UK; and a recent report (CSA_Europe 2016) revels this number as 80 CSAs, explaining that not all of these are members of the UK Network and this is the reason why they did not take part in the recent CSA Census. A scoping programme in Wales for creating more CSA initatives has already moved to the next phase, after 20 potential CSA places were identified in Wexham, Aberystwyth, Swansea, Cardiff, Abergavenny, Monmouth and Caldicot (Groves 2015a). Welsh CSA initiatives have their own network within the larger CSA UK Network,

and organise regional gatherings. But at the same time, they take part in the European and International CSA Network (URGENCI no date).

As to the policy documents in Wales, in the Farming Strategy, the only action where CSA is mentioned states that the "general population will be encouraged to visit farms through Axis 2 scheme options and through community assisted farming projects to develop closer links with food production" (WAG 2009a, p. 25). Another document, the food strategy 'Food for Wales, food from Wales' reports that other retail outlets "include farmers' markets, farm shops, box schemes, direct order and community food ventures", also adding that "alternative chains remain peripheral". Further, it sets the goal to "encourage the creation of new public spaces for producers and consumers around a sustainable food culture", including food coops, "formal and informal" community food growing initiatives and CSA schemes (WAG 2010b, p. 48). In addition, the 'Local Sourcing Action Plan' (WAG 2009b) emphasizes the importance of locally sourced food for the economy, environment, and the society, and refer to Sustainable Development Commission's definition of sustainable food that was discussed in the literature review. However, no connection is made between local food and community food growing, specifically the CSA. It acknowledges the role of community food projects in providing fresh and nutritious food, but it only refers to the community food cooperatives. In a similar way, it is stated that people's interest in growing their own food is increasing but only allotments are included as a solution. Finally, the plan sets the objective to "support the development of direct sales operations" but does not mention the CSA as an example.

II. Qualitative Results from the CSA Cases

This part introduces first the CSA cases. Comparative summary information about the cases is presented in **Table 5.1.** In addition, the location of the initiatives is shown in **Figure 5.1.**

	BONT	TYDDEWI	CLWYD	OFFA
Model	Community enterprise, owned by shareholders	Producer-community partnership	Community-led enterprise	Producer-led, owned by the grower
Location	South-east Wales	South-west Wales	North Wales	Mid-Wales
Acreage	5 acres	2 acres (of total 70) is for vegetables	3 acres + 600 m2 + 4 polytunnels	6 acres
Animals	No	Yes	No	No
Members	About 100 shareholders	40 members	About 20 members	About 20 members
CSA founding year	2010	2010	2011	2008

Table 5.1. Comparative brief introduction of the CSA cases

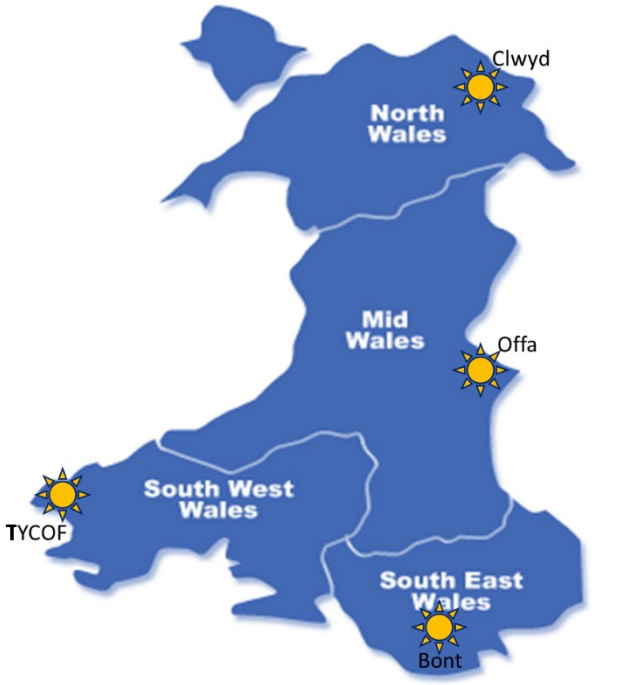


Figure 5.1. Location of the CSA cases

Bont Market Garden

Bont Market Garden is a community supported agriculture (CSA) project situated on a 5-acre land in a rural area in South East Wales. It is only about 10 miles away from a big urban centre. Bont Market Garden is a social enterprise where members are shareholders, therefore, officially it is registered as an industrial provident society for community benefit. The actual growing on the site started in 2010. Since then, the garden has been providing fresh vegetables to the local community via box delivery and by selling at the farmers' market. The garden also provides fresh

produce to local restaurants. **Table 5.2.** shows the demographic information of the interviewees in Bont Market Garden.

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Tim	Bont	Member/Volunteer	62	M	Retired	Diploma In Clinical
Rob	Bont	Volunteer	60	M	Unemployed	N/A
Ryan	Bont	Main Grower	60	M	Market Gardener	Postgraduate Diploma
Terry	Bont	Founding Director	60	M	Association Manager	Postgraduate Degree

Table 5.2. Demographic data about the participants - Bont

Tyddewi Community Organic Farm (TYCOF)

Tyddewi is located in South-West Wales, Pembrokeshire. It was initially a private farm since 1938, growing potatoes and producing milk, and was owned by the father of the current owner. The latter was unhappy with the use of chemicals on the farm and decided to convert it into organic farm, which happened in 1996-97 and took 2 years' transition period. He was inspired by the idea of CSA when listened to a presentation by the owner of one of the leading CSA farms in the UK. A year later, in 2010 he established the CSA. Although the CSA scheme runs on a privately-owned farm, in terms of management it has a distinctive model, which is producer-community collaboration. At the time of the data collection there were 40 families who were members of the CSA and was producing vegetables and fruits only for the members, and salad bags for some local cafes. The initiative hosts international volunteers from the WWOOF and UNA Exchange organisations, which are explained further. The demographic information of the participants in TYCOF is presented in **Table 5.3.**

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Will	Tyddewi	Member/ Core Group Member	63	M	Retired	Degree
Paul	Tyddewi	Member/Former Director	30	M	Development worker for South Wales at FCFCG	Degree
Del	Tyddewi	International Volunteer	23	F	WWOOF Volunteer	A Level
Carlo	Tyddewi	International Volunteer	27	M	Self-employed	Degree
Roger	Tyddewi	Farm Owner	66	M	Organic Farmer	Degree

Table 5.3. Demographic data about the participants - Tyddewi

Clwyd CSA

Clwyd (pronounced Clue-ed) is a community-run social enterprise in North Wales, producing fruits and vegetables for its members. Differently from the other CSA cases, it has three growing places spread over the county. Started first as community garden, Clwyd established the CSA project in 2011 and ran both schemes in a parallel way; there was overlapping between members and some of them were in both schemes. However, in 2014 the CSA scheme experienced difficulties after their paid grower and many of the members left, and the Clwyd community decided to put the CSA scheme on hold. At the time of the fieldwork the enterprise was running with the remaining members. The CSA model was based on an annual membership fee and a separate fee for opening a veg account, which then could be credited either with time, by doing any kind of work for the CSA, or money. Therefore, people who spent time growing veg might never had to add money, and the system was based on trust. A few months after the impact of losing members, the enterprise has been evaluating the possibility of re-starting the scheme. Demographic information about the participants is presented in **Table 5.4.**

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Ruth	Clwyd	Member	64	F	Retired	Health V. Certificate
Connor	Clwyd	Member	48	M	Engineering Assesor/Educator	Degree
Trevor	Clwyd	Member/ Director	59	M	Retired	MSc in Architecture
Kelly	Clwyd	Founder/ Core Group Member/	55	F	Horticulturalist	Higher National Diploma
Debbie	Clwyd	Chairperson	54	F	Structural Engineer	BSc Degree

Table 5.4. Demographic data about the participants - Clwyd

Offa Market Garden

Offa Market Garden is a producer-led organic garden on a 6 acres' land situated between two towns in Mid-Wales. First established in 2008 on 4 acres of rented meadow with a caravan for the producers' family and a shed, the garden later expanded to 6 acres with 3 polytunnels, a greenhouse and a purpose-built packing shed. It is run by a couple who built an eco-house and live there with their family. Certified organic since 2010, the produce from the garden has been sold at the market gardens in the nearby towns as well as local pubs and restaurants. In 2015 Offa Market Garden also started selling its produce at a local shop opened jointly with another retailer. The CSA scheme has been running since the establishment of the enterprise and is

based on a voucher system rather than membership fee. Community members receive free introductory box of fruit and veg when join the CSA and then buy voucher books of £200 to purchase their food from the markets or the shop. In addition, they volunteer at the garden at specific organised sessions, usually in the evenings during the week. **Table 5.5.** shows the demographic profile of the participants.

INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
Hannah	Offa	Volunteer	62	F	Retired	Degree
Lynn	Offa	Volunteer	66	F	Retired	O Levels
Nora	Offa	Volunteer	66	F	Artist	BA
Dave	Offa	Paid Half-Time Grower	32	M	Self-employed agriculturalist	BSc Degree
Chris	Offa	Grower/ Owner of the Garden	48	M	Market Gardener	National Diploma

Table 5.5. Demographic data about the participants - Offa

1. Identifying the needs

Community needs

There are a range of motives for setting up ***Bont Market Garden***, from the need for organic vegetable production in South-east Wales to the wider sustainability and environmental concerns. One of the directors of the enterprise indicated that the deficit in terms of vegetable production in Wales was an issue they wanted to address but they were driven by ethical values rather than profit.

- *"We weren't really driven by a desire to make a business. It was more mainly to make a contribution to a sustainable food economy."* (Terry, 5.07.2014).

In addition, the garden was also intended to be a demonstration project, to educate people who wanted to establish their own small scale organic food growing projects, and to create employment. The director explained that this type of food growing was particularly suitable for Wales because of the insufficient land.

- *"We are not saying it's going to be the answer to Wales' food supply […]. But we say, we believe it will be an important component because the evidence shows that small-scale highly labour-intensive horticulture is very productive on the land that's available. […]*

Also, I suppose we were very interested in creating employment; we were interested in being part of contributing to not only a sustainable food chain for Wales but also a lower-carbon Wales." (Terry)

In sum, supply of organic vegetables, transferring knowledge and skills about growing food, creating employment, and contributing to the environmental sustainability were the community needs that led to the establishment of the social initiative.

Similar to Bont Market Garden, the main social need for starting the CSA on ***Tyddewi Farm*** was the lack of local and organic produce in the area. One of the founding members explained that although there were a couple of non-organic local growers, there was no organic grower in the area, other than Tyddewi Community Organic Farm (TYCOF). At the same time, additional community needs were the reconnection of people with the source of their food by eliminating the food miles and packaging, in a way that food would not be regarded as a commodity anymore but would be respected as something valuable. The farm owner was convinced that the CSA would address all these needs.

- *"I liked the whole principle of it: feeding local people direct from the field and having people care about the farm and about the source where food came from"* (Roger, 20.07.2014).

Clwyd CSA is yet another case where the main drive in establishing the enterprise was the need for local and organic vegetables in the area. The founder of the CSA is a trained organic horticulturalist who started doing courses in the area and realised that many people wanted to grow their own vegetables because they could not find a place where to buy local and organic produce.

- *"A lot of people were asking me where they can buy local veg, [and this was] the reason why they wanted to grow in their local gardens, which is only growing very small quantities really. They wanted to know where they can get veg that have been produced locally and preferably organically"*. (Kelly, 9.02.15)

The founder had come across the idea of CSA during her training, and after doing some further research she decided to start the project in the area in liaison with Citta Slow movement in the nearest town. However, although the motive for starting the CSA was the need for accessible fresh local and organic vegetables, there was a less articulated need, which was growing food with the community.

The motives for establishing ***Offa Market Garden*** are slightly different that the previous cases. The producers had substantial horticultural experience having worked on various projects, and wanted to use their skills to try and make a living out of it.

- *"It became the next step for us to see if we were able to ultimately have our own enterprise, […] if it was feasible to make a living from growing food."* (Chris, 17.07.2015)

However, although indirectly, the CSA members spoke about the need for a good quality local and organic food producer in the area that would provide a year-round fresh produce.

Personal needs/motives for participation

Individual motives for people's involvement with ***Bont Market Garden*** can be summarised as (1) having free time due to retirement or unemployment; (2) doing something different from their usual job; (3) meeting other people; (4) gardening as a hobby; (5) attracted to the ethical aspects of the project; (6) learning with the aim to set up own horticultural business; and (7) desire to help. Some volunteers have been looking forward to coming every Friday, which is the volunteering day, in order to spend time outdoors and do gardening. Some of them attach great importance to the fact that the garden produces organic food and works toward sustainability. Also, one of the unemployed volunteers added that he likes the relaxed environment in the garden, and while he helps with the works, spending time in the garden helps him in return. Additionally, learning is an important motive specifically for the paid grower who wanted to set up his own business and for that reason, he started volunteering at the garden until he was offered the job.

At ***Tyddewi Farm (TYCOF)***, participants had various stories and motives for getting involved with the CSA. One of the founding members who worked for a local action group at the time decided to participate after attending a meeting about CSA schemes at the nearby town, and although he had never heard about this type of agriculture before, he really liked the idea and signed as a member.

- *"It fits my values and I have always been fascinated by food and the idea of coming together with people to grow substantial amount of food; but also, to provide the livelihood of [the farmer's] family was a good idea. It was sort of community that I was looking for really."* (Paul, 19.07.2014)

Another member who is also currently in the core group and comes to volunteer regularly every Friday and the last Saturday of every month, first came to apply for a paid marketing position at the farm; he did not get the job but was invited to join the CSA as a member. He spoke about people's motives for joining the CSA in general.

- *"I would have thought that the biggest attraction is locally produced vegetables and for the proportion of the people, that they are organic."* (Will, 18.07.2014).

The international volunteers from the WWOOF organisation, however, had different motives for coming to the farm. One of them explained that he wanted to try the experience because he liked the nature and working outside, also he was interested in sustainable agriculture and organic growing. He tried communicating with farms in the UK and the first to reply was TYCOF. Another international volunteer wanted to work at a farm with cows and sheep because she wanted to experience the rural idyll. And although at Tyddewi she was only offered horticultural work, she was happy with the experience. The motives for participation can be summarised as (1) growing food together in a community; (2) provide livelihood for the farmer; (3) local and organic vegetables; (4) learning about sustainable, organic agriculture; and (5) working outdoors in a farm.

The personal motives were relatively the same at ***Clywd CSA***, namely (1) local and organic vegetables, growing their own food, knowing how the food was grown; (2) learning about growing and about different vegetables; and (3) socialising, being in the community. For most of the participants, the primary motive was the need for local and organic food, and the desire to grow it on their own. Some participants also liked the social side of it.

- *"To actually have food grown locally, that's quite important for us as a family, and to know that food is grown naturally, without any sort of nasty pesticides and herbicides."* (Connor, 7.02.2015)
- *"My motives at the beginning were because I wanted to find a way of buying local vegetables. And there did not seem to be anywhere where local vegetables were grown. […] I started off just being a member but because I got more and more committed to the principles of sustainable eating really and sustainable food, I have just become more and more involved."* (Debbie, 9.02.2015)
- *"I think it is a good idea to grow food and in a community; it is a nice, it is a sociable thing to."* (Ruth, 7.02.2015)

Learning was another motive expressed even by the experienced members of Clwyd.

- *"I think a lot of our growers join so that they can talk to other growers and share experiences, and if something is gone wrong, they've got someone to talk to. And also, to get ideas – you know, what else can I grow? You know, standard things are easy to grow but people want to grow something a bit more difficult."* (Debbie).

In the case of ***Offa Market Garden***, due to the rural character of the area, all participants had their own gardens and have been growing food. However, they preferred to work for Offa as well either because of practical or ethical motives, which can be summarised as (1) social side, growing food as part of the community; (2) nice place to spend time; and (3) supporting the values of growing local and organic food, helping a good cause. Some volunteers like the place and the social side is important for them.

- *"That was something that I wanted to do, to [work] as part of the community*." (Lynn, 14.07.2014)
- *"Because I like it here; it's a nice place to spend some time and I enjoy growing things; […] [and] the social side of it."* (Hannah, 14.07.2014)

In addition, majority of participants expressed higher motives for becoming part of the CSA, such as supporting local, organic and sustainable growing.

- *"I just strongly believe in the local organic food, and I like the work; and it is just something that I feel is important and makes sense to me."* (Dave, 14.07.2014)
- *"I believe very much in what they are doing in terms of organic, local market garden, family community but also for my own wellbeing."* (Lynn)
- *"I am very keen on sustainable growing and organic growing. I am a huge admirer of what they are doing."* (Hannah)

One of the volunteers is not helping with physical work but mainly with marketing and communication.

- *"I hoped to be able to help them to grow, to make it more viable, and to promote them in what they are doing."* (Nora, 14.07.2014)

Summary of the community and personal needs for all CSA cases is presented in **Table 5.6**.

	COMMUNITY NEEDS		PERSONAL MOTIVES/ EXPECTATIONS
BONT	Supply of organic vegetables		Having free time due to retirement or unemployment/ Desire to help
	Transferring knowledge and skills about growing food		Learning with the aim to set up own horticultural business
	Creating employment		Doing something different from their usual job/ Gardening as a hobby
	Contributing to the environmental sustainability		Attracted to the ethical aspects of the project
			Meeting other people
TYDDEWI	Need for local and organic produce in the area		Local and organic vegetables
	Reconnecting people to the source of their food without the food miles involved		Growing food together in a community
	Having people care about the farm		Provide livelihood for the farmer
			Learning about sustainable, organic agriculture
			Working outdoors in a farm
CLWYD	Need for local and organic vegetables in the area		Need for local and organic vegetables
	Growing food in a community		Growing own food, knowing how the food was grown
			Learning about growing and about different vegetables
			Socialising, being in the community
OFFA	Need for a good quality local and organic food producer in the area		Supporting the values of growing local and organic food, helping a good cause
	Using horticultural experience and skills to make a living from growing food		Social side, growing food as part of the community
			Nice place to spend time

Table 5.6. Summary of the needs in the CSA cases

2. Mobilisation of Resources

Financial capital (land and funding)

Bont Market Garden is a unique model of a CSA, based on a shareholding system where the members are its shareholders. Part of its initial financial capital has been provided via selling one-off shares of £50 each. Therefore, rather than a monthly or annual subscription fee, members only buy shares, which can be withdrawn if the shareholder does not wish to continue being a member. Reportedly, more than 100 individuals and community investors contributed

with almost £10.000 to the CSA. This enabled the purchase of a tractor and building two polytunnels in the garden. Polytunnels are regarded specifically important in the Welsh climate since they give the opportunity for either growing some vegetables out of the season or growing certain varieties that are not suitable for the climate, thus extending the growing season and variety. Another big part of the funding comes from the Welsh Government via the Rural Development Plan under the EU Common Agriculture Policy (CAP), which was given over the first four years and was used for "knowledge transfer". It is expected that the project will get another funding from the new Rural Development Program that will be used for diversification of the current activities. Bont Market Garden has been also funded over three years by an independent grant-making foundation that was used to get the field into production by paying the rent of the land, employing a horticulturalist and purchasing some basic infrastructure. The garden also received one-off small grants from the City Council and from another foundation giving grants to local communities.

The land is rented from a neighbouring community that runs a forest garden project and hosts events. The project's revenue comes from selling fresh organic produce at the local farmers' market and via delivering weekly boxes of vegetables. However, in order to keep producing, the project needs certain investment for better machinery and at least two more polytunnels. As explained further, another need that emerges specifically during the summer and is essential for keeping the produce fresh and in good quality, is a cold storage facility. There are ideas to diversify the activities on the site for more revenue, for example, to offer some training programs. However, at the time of data collection all the efforts were concentrated on producing on time, and the ideas for diversifying the services needed manpower and financial resources. Both the management and the staff, members and volunteers think that becoming financially self-sustainable is an important priority for the project.

Tyddewi Farm had the advantage of being an established farm with its own land and some equipment. However, it was not a horticultural farm in the past, and they needed tools and additional equipment, polytunnels, and seeds, and they also needed to promote the CSA in order to attract more members. They managed to provide all these resources with the help of local and national organisations and businesses in form of small grants. The founding members also paid for the initial fund, first without receiving any vegetables.

- *"We signed up to start paying £30 a month towards [the CSA] as if we were getting vegetables. We put the money for seeds and start-up costs but mainly for buying seeds."* (Paul)

2 acres of the total 70 acres at the farm is currently allocated to the CSA.

In the case of ***Clwyd CSA***, as explained earlier, the enterprise has three growing sites spread over the county. One of the sites is a part of a wooded hillside in proximity to a village. It is a private property but part of it was given with an agreement for five years to the use of the Clwyd community. The members had to clear all the bracken in the area to prepare it for growing. Reportedly, the landlord is invited to come and take from the produce, but he is more interested in the land being useful for growing rather than taking food. The second site belongs to the local university and is usually used for training purposes but again, it was given to the use of the Clwyd enterprise with an agreement. The community can use the four polytunnels and the orchard on the site. This site is also used as a hub, and food from all three sites is weighed and distributed here to the members. The third site is a small part of a farm estate that belongs to a local landlord but was given to Clwyd for growing purposes.

Differently from the previously examined case studies, Clwyd enterprise did not use much financial support from intermediary organisations.

- *"We've had bits and pieces but we never managed to get a big chunk. They have tried a few times but not successfully."* (Debbie)

They used a grant from the Welsh Government funding via the county's Rural Development Agency, which they succeeded in securing by tendering. It was initial £7.000 for starting up the CSA with a further extension of £3.000 for mentoring, which was mainly used for visiting other CSA initiatives for getting ideas. As a community, the only other financial resource that Clwyd enterprise has, is the annual membership fee because the model is not based on an upfront payment from the members.

The other CSA that owns the land is ***Offa Market Garden*** where the couple of growers initially rented 4 acres of land to establish the initiative and 3 years later they bought 2 more acres of land to expand the garden and build a house for their family. Half of the investment was financed personally by the family, and the rest of it was paid with small grants and interest-free loans. They received a grant from the Welsh Government through the Organic Centre Wales for conversion to organic growing and another small grant from the local council. The loans were

from the landlord and from a trust that lends to small-scale organic growers. The enterprise also used some technical support from Organic Centre Wales as part of the organic conversion package.

Leadership and intermediary organisations

The leadership in ***Bont Market Garden*** is performed by a board of four directors, who brought their various expertise and skills either in the founding stage or in the management of the enterprise. One of the directors has experience in establishing sustainable businesses and social enterprises. Another is a founder of a community network in the nearby town and provides networking and marketing support to the garden, but also has horticultural skills. There is a director in the Board who is a popular cultural figure in the city and has access to a wide range of community groups. Finally, the fourth person, who also took part in the case study, is the founding director of the project. He is a sustainable food mentor and is directly involved in the garden's daily issues by being in touch with the growers and visiting frequently the site. On the other hand, he is actively involved in other community projects and local food council, and takes part in related food sustainability events. The directors used their networks and links to mobilise both financial and human resources for the garden. They secured grants from various organisations and managed to find more than 100 shareholders as described earlier. Besides, they use their networking and marketing skills to find individual and business customers. On the other hand, they use the expertise provided by intermediary organisations, e.g. they collaborate with the Soil Association and Organic Centre Wales. They are also a member of the FCFCG, which all provide information, knowledge transfer or networking opportunities, and a member of the CSA UK Network.

At ***Tyddewi Farm***, establishing a CSA project only became available with a dedicated leadership, particularly the farm owner who is passionate about food sustainability, and the networking of many people and organisations who put financial and physical resources as well as time into the project. One of the key organisations in the nearest town, the local Eco City Group, provided a start-up fund and grants for a grower's salary (the farm owner's son), a caravan for the WWOOF volunteers, and a lot of technical support and expertise to the CSA.

- *"They were the basis encouragement to really get it going on this farm; […] without them possibly we would not be able to get to succeed [the CSA] established here"* (Roger).

- *"They formed the platform for the core group and have been strong supporters of the [CSA]"* (Paul).

Tyddewi also received grants from the National Parks UK and a local CAP (Common Agriculture Policy) group in establishing polytunnels, and for the first 2 years had seeds sponsored by a bank as a start off. In addition, all founding members put a lot of time and effort in the project.

- *"We had weeding sessions every week, we had weekly directors' meetings at that point. It was quite intense as time and energy we put into and lot of enthusiasm as well"* (Paul).

Apart from the financial resources, TYCOF used help from organisations for making their constitution document and for training. One of the intermediary organisations providing technical support was the Federation (FCFCG).

Leadership played a key role in ***Clwyd CSA***, since the idea and mentoring came from its initial founder who is currently a core group member and the treasurer. Additionally, the enterprise had various support from intermediary organisations, and many are acknowledged on Clwyd's website. One of the organisations is the FCFCG, which provided them "moral" help and has been facilitating their networking by sending them information about all relevant events and gatherings. In addition, the CSA was offered a help with their business plan but the members realised they have the necessary resources to do it internally.

- *"We were offered and we had support from the […] Cooperatives UK who had a community fund available to send somebody to help us to our business plan. We thought that would be really helpful but it did not turn out to be helpful."* (Kelly, 9.02.2015)

Other supporting organisations were Organic Centre Wales, the local Citta Slow, Keep Wales Tidy, and the town council. The local university and the landowners of the two sites were also acknowledged for their support in providing the land for growing. Thus, although the CSA has not used much financial support, it had technical help or support with facilities from intermediary organisations. Exactly during the fieldwork, Clwyd had a shed delivered at one of the growing sites, which reportedly became available with the help of a small grant, and was much needed on the site especially for the cold days (**Picture 5.1.**).

Picture 5.1. Clwyd: The arrival of the much needed shed to one of the growing sites

Human capital

At ***Bont Market Garden***, members form the biggest part of the human capital. As briefly described earlier, membership to the Bont Market Garden means becoming a shareholder. The founding director explained that shareholders were driven by ethical motives rather than being investors.

- *"People who invested money with us have not done the investment for a return; it's more eco-social investment. In other words, they believe in the values, the ethics and the goal that we have."* (Terry)

This was confirmed by one of the members.

- *"I was attracted to […] the drive to developing a project, which was organic, producing organic crops, and providing that on a local basis to the local community. […] It was the whole ethical notion of the project."* (Tim, 4.07.14).

Apart from a very few members that volunteer regularly, the members meet only at the annual general meetings (AGM) and when there is a gathering event. According to the management, participation of the shareholders to the AGM is not at the desired level and they cannot hear

much from them, except from those who buy vegetables boxes. The project needs more shareholders to provide sources for two more polytunnels (**Picture 5.2.**) and a new tractor. However, reportedly, after certain number of people, the project could not find more shareholders. They have been planning to put a word through the social media and some food networks where they take part.

Picture 5.2. Bont: Polytunnels are an efficient way to extend the growing season

Volunteers can come and help anytime but the usual volunteering day is Friday. Some of them are shareholders; others are unemployed and come via volunteering bureau. The main grower explained that only a small number of volunteers have been coming regularly for two years but most of the time there are ad hoc volunteers who come only at a certain time and do not turn up again. During the fieldwork at the garden, there were only 3 of the regular volunteers, who also took part in the study. However, two days before that, a group of about ten people working for one of the governmental institutions came to help as part of a scheme for voluntary work for the society. The problem with constantly changing volunteers is that the grower needs to spend extra time in showing them how to do the work whilst the regular volunteers already know how to do it. However, both the main grower and the director agree that the garden needs more volunteers due to the project being labour-intensive.

Meanwhile, the regular volunteers and the management are aware that the paid growers already put too much effort to the project.

- *"I have learned that people who take these jobs on, they often work more than they get paid, because they are committed to it. So, I think, you can't ask more."* (Tim)
- *"My guess is they are not just doing it for money because the money isn't fantastic, and it is quite hard work"* (Terry).

But the main grower was offered the job after working for two years as a volunteer and this was more than he had expected. The assistant grower was also very dedicated and working more hours than she was paid for. For example, to ensure that the vegetables in the boxes were fresh, she came before 7 am in the morning to harvest and make it ready for 9 am when the boxes were picked for delivery (**Picture 5.3**.).

Picture 5.3. Bont: The assistant grower is picking strawberries for the boxes just before delivery

At ***Tyddewi Farm***, there are two different groups of people who are involved with the CSA. The first group is formed of the members. As mentioned earlier, there are 40 families who are members of the CSA – 28 with full share and 12 with half share. They pay annual membership

fee depending on their share. Members can be involved at various levels; some of them are involved with the management of the farm and take part in the voluntary core group, formed of elected members and at least one grower (either the farm owner or his son). They are responsible for the day-to-day running of the farm and have monthly meetings. Members can also take part in the other groups, e.g. growing, distribution, membership, events or governance & finance. Although volunteering is not essential for the membership, all the members can come and volunteer on the farm every Friday and the last Saturdays of every month.

The second group of people who are involved with the CSA are the international volunteers coming through two different organisations, WWOOF and UNA Exchange. The growers at the farm acknowledge the work of these volunteers as essential for their success.

- *"If we did not have WWOOF-ers to help us grow and maintain the vegetables, and have the quality we need for our members, we could not succeed."* (Roger)

The WWOOF – World Wide Opportunities on Organic Farm - is an organisation that was established in 1971 in the UK but quickly grew and became an international organisation. It brings together organic farms and gardens with volunteers who want to do practical work (WWOOF_UK). They are provided accommodation and food by the host farms and gardens but do not get paid for the work. Besides, they are not expected to have farming or gardening skills prior to coming to work because they learn it on the site.

Picture 5.4. Tyddewi: One of the caravans and the yurt provided as accommodation to international volunteers (and to the author)

At Tyddewi volunteers stay in fully equipped caravans or yurt (**Picture 5.4.**) and are paid weekly for food. The other organisation, UNA Exchange, is a Wales-based international volunteering organisation founded in its present form in 1973, but with a history of almost 100 years as a volunteering movement. It works with partners in 70 different countries and provides volunteering opportunities in projects in different areas of work, designed with local organisations (UNA_Exchange). International volunteers usually come during spring and summer months. At the time of the fieldwork, there were 6 WWOOF volunteers and about ten UNA volunteers.

In the case of ***Clwyd CSA***, the human capital is formed only of the members. CSA model runs in parallel to a community garden model. There was an existing group of gardeners when the vision for establishing the CSA emerged inside the Citta Slow movement. In order to realise it practically, they organised a public meeting with the participation of about 100 people from the area. Those who found the idea attractive, became members of the enterprise. From overall 30 community garden members 20 were in the CSA. Therefore, although the two models were running in parallel, there was an overlapping between the members. The founder of the CSA talked about the members as a group of highly skilled people who provided all necessary support to the CSA, including finance, marketing and legal advice. Therefore, they did not have to outsource all these services. However, reportedly, there was different mind-set between the members who were in the initial community gardening group and those who joined the CSA later.

- *"Those people who had come from community garden roots […] [were] very aware of how much work was required. […] they were very committed to giving what was asked of them when they moved to the CSA. The people who did not come from that background […] took advantage and they did not put that hours in. […] So that community garden-CSA link for us is, I think, very valuable and possibly the foundation of a really successful food project, whatever it becomes."*

At the time of the fieldwork, the paid grower of the CSA had left to start her new enterprise and many of the CSA members moved with her due to more convenient location. This left the Clwyd enterprise in a difficult situation, with very few members, and people who remained are trying to re-organise themselves, continuing with the community garden.

At ***Offa Garden***, the overall number of the CSA members is about 20 but there are two levels of involvement in the CSA scheme. Part of the members only support the grower financially by buying vouchers and do not help on the field. The other part is a group of 6 to 12 people who call themselves the 'Weeding Group' coming on a regular weekly basis to help with any growing task (**Picture 5.5.**). One of the regular volunteers was offered later a part-time job and became a paid worker coming 1 day a week or even 2 or 3 days in the high season. Apart from that, there are volunteers who help regularly separately from the 'Weeding Group', one of them practically organising the sessions. Volunteers are predominantly retired people who have the time for involvement.

- *"We are coming from the older end of the spectrum and quite many of us are grannies […], which is quite interesting because we have the time. May be financially we are a bit more solvent; I am able to buy vouchers."* (Lynn)
- *"I was able to come and volunteer after I retired."* (Hannah)

Picture 5.5. Offa: Members of the CSA organised as a voluntary 'Weeding Group' to help with growing tasks

But there are also younger people in the group who bring their children sometimes, and that is why the 'Weeding Group's sessions are usually organised later in the evening, after people finish their workday or school. The grower explained that it was very easy for him to find volunteers to help; he only had to ask them, which demonstrates the existence of a supportive community in the area where people are willing to give their time and work for the cause.

3. Processes of the social initiative

Visions and expectations

At ***Bont Market Garden*** the management has a clear vision for the CSA. Their vision is not only for the garden but for all community food growing projects in Wales.

- *"To be a model small scale viable horticultural operation that supplies significant amount of healthy, organic vegetables into the food chain of [the city], that it finds other people to do something similar so that we can increasingly grow our food in Wales."* (Terry)

But the founding director also emphasised that being self-sustainable is essential for the project. The board has some plans to realise their vision and aims, e.g. to get another field to grow because they believe it is more cost-effective and to sell other locally produced products and diversify the income streams. Meanwhile, the volunteers, members and the grower suggested some more practical needs for the garden's future, mainly related to resources. Some of them think there is much potential in the project but it needs more volunteers, *'more productive use of land'*, and *'to be a bit more attractive'* (Tim). Others argued that the garden needs more funding in order to get the necessary equipment and speed up the work since it is very time-consuming. Yet, according to another opinion, the project needs to improve its financial resources and its service to the existing customers, and enhance its market.

- *"It needs capital investment, market for more customers, improving the service to the existing customers, dealing timely and positively with complaints. […] "we need to […] understand what our market is and focus on that."* (Ryan, 4.07.14)

The management's expectations, as explained by the founding director, were to set the garden to show the viability of producing organic vegetables on a small scale and to train people how to do it.

- *"My initial intention was to set a financially viable organic small scale horticultural enterprise. […] My expectations are still the same; I am still looking at the market garden as a demonstration and training project and because of the funding that we received from the Welsh government, it should remain always like that."* (Terry)

Volunteers' expectations were rather related to their personal motives for being involved. Some of them wanted to become involved at number of levels and for that reason they became

member, customer and volunteer at the same time. But the most important for them was to spend every Friday outdoors, at the garden. Another volunteer's expectation was to help with his knowledge and to learn in anticipation. On a different manner, the main grower's expectation was to learn more about small scale horticultural business and growing organic vegetables. It can be suggested that the shareholders had similar expectations as well, because they invested money in the enterprise knowing that they might not get them back, at least in a short time. But they wanted to support a project working on sustainable food for Wales.

There is a richness of ideas about visions and aims for ***Tyddewi Farm***. In the central place is making TYCOF financially sustainable with more members. All participants accept that having more full-share members would bring the CSA in a good position.

- *"If some people think perhaps we should just stay with the small number of members that we have, and try and make it sustainable at that level, it means increasing the price quite dramatically. And if you increase the price quite dramatically, how many members will we lose because of that?"* (Will).

The international volunteers also emphasised that the project must promote itself in a better way and get more members.

- *"Maybe they could continue in the same way to produce their products but […] it could be beautiful if a lot of people knew this farm and came here to buy organic food."* (Carlo, 21.07.14)
- *"I think it will be much bigger. Not the farm will be bigger […] but I think they will be better known. I think they will have more clients."* (Del, 21.07.14)

Apart from increasing the number of members, TYCOF reportedly needs some improvements with the infrastructure, e.g. a storage with temperature-controlled unit that would enable better planning and prevent the farm from buying vegetables from other places, which will also reduce the food miles. Currently the harvested produce is kept in a shed where it is weighed and distributed in the boxes, and which only contains a small refrigerator for the least durable products (**Picture 5.6.**).

Picture 5.6. Tyddewi: The shed where the produce is distributed and stored until picked by the members

Another interesting idea was about creating a food hub, which would enable people to order their local food online and pick it up from a certain collection point.

- *"I had a sort of vision of half-a-dozen CSAs with two or three food hubs scattered around the county. And those hubs are drawing produce not just from CSAs but may be just from a little lady down the road who used to make a bit of marmalade. [...] You have to start with more CSAs."* (Will)

But the farm owner was not very positive about the idea of a hub because he thought it was not suitable to the ethics of the CSA. His ideal about the CSA was very clear; he wanted the families to come and harvest their own food from the farm, put it in their baskets and take it home. He wanted them to feel the reward of picking their own food.

- *"I want families to come here and collect their veg. Because then they are linked to the farm; they see the pigs, they see the cattle, they see the field and it is their farm. If they pick up a share from another central point, it will be like supermarket, it will be hit-and-run convenient."* (Roger)

But he admitted that they tried it a few years earlier when it was a bad year for growing, and they encountered some problems; members arriving first used to pick the best produce and leaving the worse for the late comers. Therefore, at the time of data collection, it was the volunteers and a few members who harvested the produce, weighed it, and shared it equally the members, which is considered an extra job.

Reflecting upon the popular argument that the CSA initiatives in Wales can only possibly grow certain variety of vegetables and fruits but not crops like grains and legumes, the farm owner replied that CSAs in Wales can grow everything suitable for the climate, including grains and legumes. And he gave an example with an ancient Egyptian variety of wheat that he got at a seed swap in Belgium and was growing on the farm. He was hoping that they would have enough to bake bread for each member. He is very passionate about the idea of CSA and strongly believes that it will succeed.

- *"Wales, for instance, could feed itself like this. […] One day you will see Tesco advertising its food products on the vegetable stand 'Tesco CSA grown for you' [...] It is hype that [corporations] like supermarkets hijack the idea to promote sales."* (Roger)

Another interesting idea about how the CSAs projects can be managed in a more socially just way came from one of the members who was quite familiar with the CSA network in Europe due to his involvement with the FCFCG and the CSA UK Network. He suggested that every member should pay as much as they could afford, and the sum of fees suggested by the members must add up to the total forecast budget. He explained how all members write on a paper in a confidential way the amount they can afford to pay. If the total amount does not add up to the targeted sum, they repeat the round until they reach the amount.

- *"For the British CSAs I want to see the Freiburg model. […] It is much fairer and socially inclusive model where an unemployed person says, 'I can only pay couple of quid in a week' and that's what they put on a piece of paper. […] If you say one price of everyone, everyone has to pay that price. The person who can't afford it really can either drop out […] or you can set your price too low to accommodate everybody, and then the business struggles."* (Paul)

Participants from ***Clwyd CSA*** have very similar vision and aims for the enterprise. At short term, they all want to just keep growing, consolidating at least for one season what have been achieved so far and renewing their energy.

- *"Keep producing food, keep a decent core of membership quite healthy, and just keep that turning over"* (Connor).

But in a longer term their common vision was to find more members and an accessible land close to the nearest town, and to hopefully relaunch the CSA with new publicity and more members, then further doing some outreach programs to the community and schools about sustainable food. This is also the expectation of the management.

- *"What I want is for Clwyd to have perhaps 8 or 10 months, just one season, of consolidating what we've achieved and renewing our energy and love for what we are doing. Perhaps attract more members that will bring in energy again. And I would then like to see Clwyd supporting a new CSA initiative and growing to be supplying 40 to 60 people/households with veg. […] I'd like it to get to a point that we can employ somebody to help with the growing."* (Kelly)
- *"If we do find enough members to reach the point where another CSA […] is feasible, then we have agreed to look at that again and to re-launch it with new publicity and new membership pack, with fresh ideas."* (Trevor, 9.02.2015)
- *"I would like us to have a site in [the town] because it is closer to a bigger population. So, I'd like us to have enough land to actually get a CSA going again […] But I just like us to have three times as many members if not more."* (Debbie)

People's expectations are closely related to their motives for being involved. Some members' expectations are to have access to a local, in some cases organic, vegetables. Part of the members who expected to do it in a social environment, within community.

- *"Just to be in [Clwyd] producing food, really that we like and couldn't eat [otherwise]."* (Connor)
- *"I think what I expected when I started was just the way of getting hold of local veg and a community to be involved with as well […] and I got that; that's definitely in [Clwyd]'s core principles."* (Debbie)
- *"It's not as sociable as I thought it would be because often hardly anyone will return here […]. But it's becoming more sociable again now because we have a hub coming to [the site]* (Ruth)

Other members had higher expectations, such as contributing to an enterprise that feeds the local community. Reportedly, some of them only pay membership fees without taking food for themselves.

- *"They are members because they want Clwyd to succeed, they want local food to succeed."* (Debbie)
- *"… feeding the community and enabling the local community get access to better quality local food, without the food miles involved in commercial hub."* (Trevor)

The common vision for ***Offa Market Garden*** is quite modest. They do not aim for the garden to expand more in acreage but instead, to get more efficient by refining the growing methods. The reason they want to keep it the same size is the limit in the amount of work they can do, as explained in the section about the difficulties.

- *"I hope that they can expand as much as they can cope with, not too much really, so that they can manage the work. They don't have to expand acreage but they can get more food from the same space."* (Nora)

In addition, the growers' aim is to sell better their produce. They already made a big improvement in this direction by opening a shop in the nearby town.

- *"This year has been quite a big year because we have opened the shop in [the town], or at least we started to share a retail. […] I think the vision could be we grow the same amount and sell more from the shop, sell more direct and sell it more effectively."* (Chris)

The common expectation of both the volunteers/members and the growers for the market garden is to be able to supply the nearest towns with locally grown, organic vegetables while at the same provide livelihood for their family and keeping the business sustainable.

- *"I would like them to be able to supply [the town] with their vegetable needs. […] I think we need to be working towards more locally grown vegetables and supplies of all sorts. And this is a big chance for [the town] to be sustainable, and I like to be part of that."* (Hannah)

Related to this expectation, the grower explained that they anticipated the technical difficulties with the soil and fertility would take them five years but it took seven. At the same time, their expectations about the business, the land and the house were exceeded.

- *"When we arrived, we did not have any prospects of owning our own land or owning our own house. […] So, obviously, that has happened and massively exceeded our expectations. And also, the way the business is established, the level of support, and general feeling has definitely exceeded our expectations."* (Chris)

In addition, members had some personal expectations from their involvement with the CSA. These were related to learning, physical and mental health, and the social environment.

- *"Just to learn from [the growers] because they are experienced, and just to get feel for the whole process of organic growing."* (Dave)
- *"Part of my expectations were that it would be good for me and healthy both physically and mentally, so this certainly happened; expectations that I would learn and extend my knowledge of growing things, which happened as well; and expectations about […] working with interesting people, and that's happened too."* (Lynn)

Sense of community and belonging

At ***Bont Market Garden*** people are positive that there are good relationships and sense of community. Some participants indicated that people involved with the garden were only friends in that specific activity and were "acquaintances" rather than friends because they did not socialise outside of the garden. Members and volunteers reported that they feel part of the CSA community.

- *"I have never known any conflict or any discomfort in the relationships."* (Tim)
- *"Everyone is very friendly. […] We work on our own ideas; we have heated discussions sometimes. But usually everything is fine."* (Rob, 4.07.14)

According to the main grower, the community at Bont Market Garden is a very small one and people who came to volunteer regularly do not do it solely for the gardening but also enjoyed the social side.

- *"There is a broader issue that is not just coming to do, to grow, but it's gathering, talking to, share experiences."*

The founding director, though, was uncertain about the strong sense of community because the level of engagement both on the field and at the annual general meetings was generally low (**Picture 5.7.**).

Picture 5.7. Bont: Planting leeks under the rain; the level of engagement is generally low

At ***Tyddewi Farm***, all the participants think there are very friendly relations between all members, volunteers and farm owner and grower. The farm owner acknowledges that the community spirit was brought to the farm when they set up the CSA. Reportedly, they often have feasts together and one of the members bakes pizza for everybody in a clay oven. But best of all, they get to know better the families and each other through sharing their time and friendship.

- *"It is the special part of the love of [TYCOF]. I always refer to it a 'Farm, Food and Fun'; and you need that life."* (Roger)

Not only the member-families feel the community spirit, but also the international volunteers find the attitude of everybody on the farm very friendly and accommodating. They were happy that they had the opportunity to stay and learn at the farm, and give their work and time in exchange. Some of them made comparison between TYCOF and other places they had volunteered in terms of not staying in the same house with the farmer or having the meals together. But another volunteer said she felt she was a part of the community.

- *"There is a difference between this farm here and the others where I did the same job, because here we don't share the meals with their family, we don't share the house, and we don't share anything except work."* (Carlo)

- *"The first day we just met the people and we were already friends. We ate together; we talked a lot. Yes, it was a really good relationship. And during the [following] two weeks when we worked with the [growers], we discovered they were in the same mood with us. So, it was very big community."* (Del)

At the same time, the WWOOF volunteers expressed uncertainty about how these relations would be affected by the UNA Exchange group that was expected to arrive on the following day.

- *"With the UNA people I am not sure it will be the same relationship because the group is very close"* (Del).

The accommodation for the WWOOF volunteers and UNA group is separate. At the time of the fieldwork the two groups also worked separately. Besides, the UNA group members were mainly students whilst the WWOOF volunteers were people of different age and different job backgrounds.

Regarding the presence of a strong community at the CSA, the views and feelings of the participants were different. For some, there was a really strong sense of community because the farm owner was bonding the group together really well, with patience and humour.

- *"For me it has provided a central sense of community for my life here."* (Paul)
- *"Since we have established TYCOF on our farm, there is a great deal of strength of community. The community spirit, the heart of it seems to be brought to the farm."* (Roger)

However, other members argued that the community was not as strong as the farm owner would like to have, because very few members come to the farm and participate to the events.

- *"The vast majority of members […] just come along to pick up the vegetables. I've never met them all. We certainly don't get them all to the AGMs. […] We get the same faces to those. We get the same faces to volunteer. We get the same faces come to a social event. So, I'd say majority […] are members who simply pay their membership, collect their vegetables and that's it."* (Will).

In the same way, people at ***Clwyd CSA*** are very positive about relationships and the sense of community. They think that everybody is friendly and there is a strong sense of togetherness and community. They all feel part of this community and like the events, e.g. they spoke with excitement about the annual CSA gathering hosted by Clwyd. Some of them feel they are not as much as they would like to be involved due to family engagements.

- *"We have an annual get together, some things like that. They are generally well attended, well supported. We have things like the Welsh CSA annual gathering. Now, that was great."* (Connor)
- *"I think there is a strong group and strong sense of togetherness and community. I think the people here become friends and we like working together."* (Trevor)

The chairperson explained, though, that there are different communities inside Clwyd where the group cohesion is not always strong.

- *"There is a strong sense of community but I would say that there are different communities. The people who get to site a lot and grow a lot come like a very strong cohesive group. And then there is another group of people who come to our AGM and get involved in the background work but don't get to site. They are not really such a cohesive group but they hang to the outside of the rest of the group."* (Debbie)

However, there are also challenges for the group cohesion. First, as described earlier, there are three growing places apart from each other and in different towns/villages, and although only one of the sites was allocated for the CSA, people tended to go to the site that it nearest to them, which affected the community identity. The other challenge was that CSA scheme was introduced separately from the community garden model, which, reportedly, led to another division between members.

- *"If all people were active […] on one site, I think it would be more cohesive. The vegetable hub that we put in place at [one of the sites] is helping that; it's definitely giving a better sense of community identity. […] I think introducing the CSA alongside the community garden model kind of split the membership; there were community gardeners and CSA-ers. And although they got together for events and that sort of thing, there was a bit of a rival, they did not melt really."* (Kelly)

A short time before the data collection, the initiative had lost many members who left to go to a more convenient garden started by the former grower. Nevertheless, those who remained were the dedicated and loyal members, thus showing the real cohesive group.

In the case of ***Offa Garden***, all participants were very positive about the relations between people. The volunteers and the paid worker acknowledged the role of the growers in creating the friendly environment.

- *"It's amazing. [Both growers] are so warm and friendly people; they foster a nice environment for everyone."* (Dave)
- *"I think there is a really good community that developed around them […] and it's getting bigger*." (Nora)
- *"Really, really good! And because [both growers] are always open to sharing and hearing, and taking other people's ideas on-board."* (Lynn)

Participants also agree unanimously that there is a good sense of community at Offa Market Garden with people who are friendly to each other and have similar values. People feel that they are part of the community.

- *"Very much so! […] I enjoy being here: we have fun; we have a good laugh. We also work very hard."* (Hannah)

From the growers' point of view, there is a mutual recognition of the significance of each side to the other side.

- *"It is interesting because we have recognised how important people are for us. But what we get back often is that how important we are to other people. That is quite nice. It is obviously two-way stream. We could not do it without support. But people are obviously able to outsource good food. And some of the people who come and help, find it very beneficial, they enjoy the social side of it."* (Chris)

The community spirit at Offa Market Garden was tangible during the fieldwork, especially when the garden had their annual open day. Horticulturalists, story-tellers, artists and amateur musicians, all friends of the growers, came to the open day and made displays and workshops, played music and organised various competitions (**Pictures 5.8.** and **5.9.**).

Picture 5.8. Offa: One of the workshops at the annual open day

Picture 5.9. Offa: The annual open day attracted high number of visitors from the nearby towns.

Personal benefits

The main benefits that members and volunteers get at ***Bont Market Garden*** were reported as (1) fresh air and being outdoors; (2) social contacts; (3) fresh, organic food; and (4) supporting organic food growing. Participants spoke additionally about the relaxing environment and sleeping well after working outdoors. It is specifically important for people who have retired or are unemployed because it gives them an opportunity to use their time creatively by doing something they enjoy. The social aspect seems important, too.

- *"I also enjoy the social contacts, the company that brings together a range of people but with similar desire"* (Tim)

Personal benefits are slightly different for the grower, for whom learning, earning modest wage, and staying fit were the main benefits. But he also added that seeing the crops grow, harvest them and give them to people to enjoy, is also a benefit that he gets.

- *"I am enjoying the learning of how to cope with the difficulties and making mistakes; it took me a long time to get my head around about quantities and varieties, getting all that crops sown or planted and ready for harvesting. That is a big issue for learning."* (Ryan)

Personal benefits at ***Tyddewi Farm*** can be summarised as (1) good food, vegetable share; (2) sense of community, social environment; (3) learning, sense of achievement; (4) therapeutic benefits, being in a beautiful environment, access to a real farm; (5) accommodation and work; and (6) contributing towards sustainability. Vegetable share and good food were the benefits articulated mainly by the members. Some of them explained that this is the only benefit offered formally by the CSA, but people get the other benefits by being involved with the farm.

- *"Some people like being involved in organizing things; some people like being involved with the social side, community side. [...] So, there are individual benefits for people. But the only benefit that we offer to a member is the veg share."* (Will)
- *"Personally, the sense of community, having really good food, and the sense of being able to contribute towards creating more sustainable world […] and having an access to a farm really. It is a beautiful place, it's great being down on the farm, […] it's a real environment."* (Paul)

Others explained how being in a "real" environment helps both therapeutically and with making connections and learning (**Picture 5.10.**).

- *"It is a therapy because you are in touch with the soil, you are weeding, you are in connection with the nature. […] It is centre for young people to connect to the food and the soil, and themselves."* (Roger)
- *"The contact with yourself, because you have the possibility to […] live here and work here without any disturbances, […] in contact with the country, the nature, and follow the cycle of the day. For example, it was funny, but when we stopped working, we started watching the sheep and the sea. […] I think that is very nice."* (Carlo)

Picture 5.10. Tyddewi: Members and volunteers think the beautiful surroundings and contact with the nature provides therapeutic benefits

And another very important personal benefit that members and volunteers find rewarding is seeing the process of food growing from the start until the harvest, and this gives them sense of achievement and confidence.

- *"I can see it from the first [stage] to the end, the results, and I think it is good for the confidence because you can say 'Yes, I can do it!' and because [the growers] are really good with us and they say 'Yes, you can do it!'"* (Del)

Finally, having an accommodation and being able to work for the CSA is an additional benefit for the international volunteers.

At ***Clwyd CSA***, the main benefits reported by the participants were good food, being in a community, and physical and mental health. Food was the first benefit the members talked about, and according to the founder, it is central for the CSA. Members described it as '*good quality'*, *'cheap'*, *'nice'*, *'grown properly'* and *'fresh'* vegetables. Some of the participants said they do not need to buy from the supermarket, except for a few things that they cannot grow. However, although food is central, for some of the participants the community and the social benefit of growing together is even more important. They like the teamwork because the tasks are shared and the work is done in a much shorter time than if they did it on their own.

- *"It's the community thing that I really, really like."* (Debbie)
- *"It's that community feel, it's that community involvement and also the teamwork aspect is very good. […] I like the fun and the humour, and the good will that you find within the community. […] It is like a wider family and you feel committed to helping each other to do something."* (Trevor)

The third benefit members spoke about was the positive impact of community food growing on their physical and mental health.

- *"It's good for your physical health and your mental health. […] It is peaceful […] and it's quite therapeutic really."* (Ruth)
- *"I actually feel physically and mentally better when I can get down there […] I think there is something medically beneficial from having you hand in the soil and I feel it, and when I've not been there, I really, really miss it and I get stressed."* (Debbie)
- *"I think working on the land is a lot better than going to a gym. It's less expensive and it's more fun, it's fresh air."* (Trevor)

And finally, a benefit that was stated by the founder of the CSA, was a personal satisfaction from initiating a project that benefits many people.

Fresh food is the main benefit at ***Offa Garden*** too.

- *"Initially, we get fantastic food to eat, which we did not before. So, there was a real gap. So, being able to go the market every week has, I am sure, transformed many people's eating habits."* (Nora);
- *"Primarily, the supply of quality organic veg; that is obviously benefit because that did not exist before."* (Dave)

- *"Having decent food. It is about having organic, basic food […] that's been tenderly cared for. […] And it is grown in a lovely farm with very special people."* (Lynn)

Other benefits reported by the participants were physical and psychological wellbeing, meeting others in the community, fresh air, and physical activity. In addition, there were some benefits that were less tangible in the physical sense, e.g. sense of fulfilment and *"the pleasure of knowing you are doing something positive"* and *"something productive"* (Hannah).

- *"I get fulfilment in the way that I see the whole process; I can see the results of my labour."* (Dave)

Summary of the personal benefits that people get from their involvement with the CSA cases is presented in **Table 5.7.**

Personal Benefits	BONT	TYDDEWI	CLWYD	OFFA
Good quality fresh, organic food	✓	✓	✓	✓
Sense of community/ Teamwork/Social contacts	✓	✓	✓	✓
Physical health	✓	✓	✓	✓
Learning	✓	✓	✓	
Mental health		✓	✓	✓
Being outdoors/ Fresh Air	✓	✓		✓
Sense of achievement and fulfilment		✓		✓
Contributing toward sustainability	✓		✓	
Work/ Modest wage/ Accommodation	✓	✓		

Table 5.7. Summary of the perceived benefits in the CSA cases

Learning

At ***Bont Market Garden***, learning varies according to the different roles people have in the initiative. Members and volunteers, for example, reported learning mainly gardening skills.

- *"I know there are specific things like planting, knowing what certain seeds or certain plants need, being part of planting pattern [and] how to look after plants."* (Tim)

However, the management and the main grower spoke about teaching people more than just gardening.

- *"We are not trying to teach people gardening. We are really interested in people understanding about horticulture, profitable horticulture. We are sharing the difficulties, the challenges but also the opportunities."* (Terry)
- *"People learn about some of the difficulties both of trying to grow on a small scale like this and growing wide range of crops, but also difficulties in dealing with customers. […] They learn about running a small business in this nature, how management works or does not work, some of the frustrations, some of the difficulties the management has." (Ryan)*

Some volunteers also mentioned they learn communication skills because they meet different people at the garden, and others explained that they have informal conversations about environmental sustainability matters. The process of learning for the volunteers is mainly by listening to the main grower, by doing specific tasks, and by chatting. The main grower is the person who shows people what to do and decides about the work that needs so be done. But he also discusses things with the members and volunteers.

- *"There is no formal sort of learning. We sit down and look at growing magazines and stuff, and a thing like seed catalogue. And I've talked about the process of co-planning, […] rotation […] varieties and organic principles. So, it is a drip-drip in informal process."* (Ryan)
- *"Sometimes we just have a little conflab all of us. And you mention something and somebody says "I know how to do that". And you just pick it up then."* (Rob)

Additionally, the garden provided courses on the field to apprentices who want to become horticulturalists through their involvement with a government-funded training and employment project, Horticulture Wales (Horticulture_Wales), which came to an end in August 2015.

- *"We get the wages paid for six months while they are training in the field. We got two now and potentially, when they finish they will know an awful lot about how to run this kind of business."* (Terry)

Based on my observations during the fieldwork, the main way of learning how to practically do the work was observing the growers and asking them about specific things. Even a few days of volunteering there demonstrated the difficulties of a social innovation niche, such as having enough produce for the boxes and the market every week, sorting these out and keeping them fresh without any cooling facilities. There were long conversations during tea times and lunch times about the current food system and the role of community projects like Bont Market

Garden. Thus, socialising and working together inevitably brings with it learning about sustainability issues and social skills as well.

In the same way, learning at ***Tyddewi Farm*** varies according to different participants. Everybody learns practical things about growing. Especially for the WWOOF volunteers, the knowledge and skills are completely new, and they even mentioned they learned about different types of vegetables they had never seen before.

- *"I learned that we can grow vegetables and use it without produce of big machines. We can just do it with our work and our hands. […] I learned everything here. I was an absolute beginner."* (Del)

Members and even the grower also learn about food growing. The grower, for example, has a horticultural mentor who helps him improve his knowledge.

- *"Somebody, perhaps one of the more experienced people, mentors [the grower] a little bit. [She is] one of our members."* (Will)

Some members also added that being practically involved in producing food teaches people to appreciate the hard work that it takes. In addition, the farm owner indicated that one of the things they learned was that it was not possible to grow everything and be answer to everything but it is better to grow what can be best grown at that place. Apart from practical skills, participants learn multicultural skills due to the high number of international volunteers from all around the world.

- *"I think certainly there is a multicultural learning that goes on because we've got volunteers; we have WWOOF-ers […]. We had a girl from Vietnam a few weeks ago. This year we've had Russians, Turks, even from the Bask country in Spain, Spanish, French, German, Dutch [...] I mean, it's amazing. There is a real cultural learning, cultural conversation that goes on there."* (Paul)
- *"[I] improved my English and I learned about how they think and about their lifestyle."* (Carlo)

Thus, the multicultural learning works both ways, because the international volunteers improve their English language skills and learn about the British and Welsh lifestyle (**Picture 5.11.**). The process of learning is informal, by practically doing things. Usually, the mentor or the grower explains how something should be done, and the volunteers follow their instructions. Some

WWOOF-ers explained that they feel good and appreciated when the grower tells them *'Yes, very good!'*.

Picture 5.11. Tyddewi: International volunteers working on the farm contribute to the multicultural learning

People at ***Clwyd CSA*** learn wide range of growing issues and skills. And even though many are experienced growers, they accept that they did not know much about different pests and diseases and learned it when working at Clwyd. Members find it important to have a trained horticulturalist, from whom they learn a lot about seasonal changes and organic principles, such as crop rotation, companion planting and soil care.

- *"Mainly practical but also about certain vegetables."* (Ruth)
- *"To grow as part of the community was a new skill to learn; [...] I am experienced just in growing my own vegetables and fruits. I am not trained to know about seasons and about different types of plants, and about different diseases and about different pests. I have learned. I think, to have someone who is a trained grower and is experienced in commercial growing, is quite important really."* (Trevor)

Apart from practical growing skills, members they learn much wider issues, such as ecological sustainability and organic growing.

- *"We have a wide remit for biodiversity on that land. We don't put any chemicals down. We work in rotation – crop rotation - and some companion planting. So, we are also experimenting with different techniques how to grow."* (Trevor)
- *"A lot of people think that [organic and sustainably produced] just means no chemicals whereas it is a much-much bigger picture than that."* (Kelly)

Additionally, the founder of the CSA and its horticulturalist admitted that she improved her 'people skills' but also how to discover their skills and give them agencies. This is reflected on the process of learning as well. First, the CSA founder organised structured workshops but the attendance was low. Now the learning is mainly by talking to members on the site and by doing it. For instance, during the fieldwork all the people gathered in one of the sites to plant garlic. Part of the group cleared the raised bed and prepared it for planting while the others did the actual planting (**Picture 5.12.**). The horticulturalist explained to everybody how deep and how far apart to put the cloves of garlic. But she also explained why to do it by talking about seasonal factors and how garlic would be differently sawn if it was the end of the year instead of February. She also discovered that people learn better by teaching others how to do a certain job, because it helps them to consolidate their knowledge.

Picture 5.12. Clwyd CSA: Preparing a bed for planting garlic; the beds at the back are already planted and covered with mulch for moisture and nutrients

- *"I can remember it was 3 years ago when she taught me how to plant leeks. And then the next thing I had to do was teach someone else […] to make sure I knew how to plant leeks. And I have never forgotten […]; I can still show anybody."* (Debbie)

Some members also added that they learn certain things at discussions around the table.

At ***Offa Market Garden*** volunteers mainly learn practical growing skills. Some of them have been growing their own food and yet, they still feel there is a lot more to learn.

- *"I've been quizzing [the grower] all the time about growing, about veg, this and that. [...] I've learned a lot as well."* (Hannah)

Apart from practical skills, some volunteers have developed their communication skills and teamwork abilities.

- *"I've certainly learned more about working together in a team, and how to sort things out. […] And communication with people is something that I've developed."* (Lynn)

As to the growers and the paid worker, they learned managerial skills and the ways to improve the growing techniques. But they also realised over the years that financial sustainability is very important.

- *"I hopefully would be able to see what works and what does not financially and efficiently. […] what tools could we get to make it more efficient, […] planning, managerial skills."* (Dave)
- *"I hope that we have improved technically over years. And also, the more experienced you become the more you begin to realise that some things do not matter, some things really do, like the true sustainability."* (Chris)

Volunteers mainly learn by demonstration, i.e. watching how the growers do things, and by asking. But the volunteer who organises the sessions argued that certain situations require a different approach in terms of making people do things.

- *"The expectations on the desires and needs are often very different, and obviously, the volunteers are unpaid, so you have to be conscious of that. And you can't always say 'That's the way to do it'."* (Lynn)

Meanwhile, the paid worker explained that he learns things in different ways: by thinking on the field about better ways of doing things, by discussing with the growers, and by reading materials from related organisations, such as the Organic Growers' Association.

The summary of what people learn by being involved in the CSA cases is presented in **Table 5.8.**

Learning	BONT	TYDDEWI	CLWYD	OFFA
Basic gardening/horticultural skills	✓	✓	✓	✓
Advanced horticultural skills (organic gardening growing)	✓	✓	✓	✓
Communication skills	✓		✓	✓
Sustainability Issues	✓		✓	
Managerial skills/Planning/Dealing with customers	✓			✓
Variety of vegetables		✓	✓	
Running small horticultural business	✓			
Multicultural skills		✓		

Table 5.8. Summary of what participants learn in CSA cases

Decision-Making

At ***Bont Market Garden***, there is a hierarchy in the decision-making processes. At the lowest level, everybody as responsible for their own health and safety. Decisions about day-to-day running of the garden are mainly left to the main grower. The members and volunteers only do whatever they are told by the main grower, because they see him as a responsible person and "take instructions" from him and from the assistant grower. But they also stated that they usually know what and how to do certain things.

- *"[The main grower] has got the main responsibility. And you are basically responsible for yourself […] health and safety in general, and obviously, doing things in a certain way. When [the main grower] says do something in a certain way, we just do it in that certain way."* (Rob)

However, the main grower explained that he was the person who takes the day-to-day decisions but he was constrained by resources and there were times he was unable to do or to improve certain things because resources did not allow. At the highest level, the decisions are taken by the directors. Members can participate to the AGM, where they can bring issues they think are important. Volunteers are invited to participate to the AGM but they cannot vote. However, they can take part in discussions and express their opinion. Besides, although managerial decisions are taken by the directors, the main grower contributes indirectly with ideas about problems they face.

At ***Tyddewi Farm***, there is quite a democratic process of decision-making. The day-to-day decisions about the farm are left to the main grower helped by a voluntary growing group made up by members of the CSA.

- *"We have a growing group, which has been small at times: no more than two or three people. And they all meet more regularly and work on a plan for what's going to be grown and what's to be done for the next three months."* (Will)
- *"[The grower] makes short schedules with [his] mentor. So, they would discuss things and obviously [the farm owner] is on the site as well."* (Paul)

The volunteers do not take part in the decisions but they can make suggestions, and reportedly, these are taken into consideration by the grower.

- *"We don't take part. We can suggest something if we see or notice that there is something wrong or something strange."* (Carlo)
- *"Sometimes I can say 'Oh, I think it would be better if we get the tomatoes like this, because in France we can do it like that.' And [the grower] says 'OK, I will try to do it because may be it is better'. […] they are open to everything."* (Del)

Therefore, although the day-to-day decisions are left to the main grower, it seems that he always takes into consideration members' and volunteers' suggestions. For the decisions at a managerial level, TYCOF has a well-structured system, where the important decisions are taken by a core group of 9 to 12 members. Any member can attend the core group meetings and raise an issue regardless of whether he/she is in the core group or not, which again is a way to democratically include everybody and at the same time, share the responsibilities with the farmer.

- *"And the decisions are then shared, which is for me an ease of the burden."* (Roger)

At ***Clwyd CSA***, all the members are actively involved in decision-making. Day-to-day decisions are taken by a core group, which has regular meetings. All members can attend these meetings and bring an issue. And although, as the founder explained, nobody ever came with a suggestion, this mechanism was there and advertised on the newsletters. Apart from these meetings, there are also regular site meetings at each growing site that are open for everybody. Each of the growing sites has its site manager.

- *"They [site managers] organise the working groups but they also report back to the core group and we organise things all together. […] [And] we have an events team. […] They do lots of work organising the events and things."* [Debbie]

The managerial decisions about legal issues and policies are left to the directors, who are elected among the members. But all the decisions are discussed at the AGM, where members can vote for the discussed issues. Although the responsibilities are clearly shared between these groups and those who have the role of chairperson, treasurer and secretary, their tasks can be taken by anybody who is willing to do the task. People feel they are fully involved in all the decisions about Clwyd.

- *"Everybody is fully involved in the decision-making. […] People want to have ideas; they are actually inviting me to give them new ideas."* (Ruth)

However, reportedly some members put much more effort than the others.

- *"We rely on the good will and the effort of a few […] who put all the effort and make it all nice for me to come out for two or three hours. So, there is not really a fair distribution of labour."* (Connor)

In a different manner, at ***Offa Market Garden*** all the decisions on day-to-day basis and at managerial level are taken only by the couple of growers, which reflects the difference of a producer-led CSA from the other models. One of the growers clarified that they do not delegate the decision-making to the members, and members respect this system because 'it is their living, and it's their work'.

- *"I wouldn't dare interfering; it's their living and it's their work."* (Hannah)

However, although the ultimate decisions are taken by the growers, all participants feel involved because they are asked for an input or ideas, which are taken into consideration. Volunteers usually provide feedback during the lunchtime or break time. In addition, CSA members have the opportunity to share any ideas during the annual open days.

- *"When we have an open day, we all get around the table and fill the ideas that is up to them [to decide]."* (Nora)
- *"Sometimes we talk before we start what's going to happen and so that's sharing ideas. Often at lunchtime or at break time something will come up."* (Lynn)
- *"They make the ultimate day-to-day decisions but I have an input in a conversational sense. I definitely feel involved in that way."* (Dave)

Consequently, even in a purely producer-led type of CSA where decisions are formally the grower's agency, members feel involved by contributing with their ideas that are taken into consideration.

The summary of the decision-making at each CSA case is provided in the **Table 5.9.**

	BONT			TYDDEWI			CLWYD		OFFA	
	Decisions	Members	Non-member volunteers	Decisions	Members	Non-member volunteers	Decisions	Members	Decisions	Volunteers/ Members
Top/ Management Level	*Board of Directors*	*Voting participants at AGM*	*Passive participants at AGM*	*Core Group*	*Active participation*	*n/a*	*Directors (Elected members)*	*Voting participants at AGM*	*Growers*	*n/a*
Day-to-day Level	*Main Grower*	*Informal contribution*	*Informal contribution*	*Main Grower + Growing Group*	*Informal*	*Informal*	*Core Group+Site Meetings*	*Active Participation*	*Growers*	*Informal Contribution*

Table 5.9. Summary of the decision-making at different levels in the CSAs

4. Potential for making change

Perceptions about the current food system

At Bont Market Garden one of the main issues that emerged in relation to the current food system was the intensive farming and the use of chemicals in the food production, driven by the big corporations' interests to produce cheap food that left the small farmers struggling. For example, the main grower spoke of intensive production of food as "very degrading" and "very inefficient". In the same way, volunteers drew attention to the environmental cost of the intensive farming.

- *"produce as cheaply as possible is false economy [because] the cost of raw materials and oil push the cost of the food up [and] governments don't necessarily do the best to support that change" (Ryan).*
- *"there are so many chemicals used across… it is detrimental for the bees and butterflies… intensive farming generally causes that"* (Rob)

Another problem was the farmers' struggles, particularly organic farmers. The main grower was concerned that the premiums paid to support the organic production might be cut in the future because of that change. One of the members talked about the difficulties farmers face in the UK and the fact that people do not want to invest in agriculture.

- *"it's almost like dirty term as if you are doing actual investment in agriculture, you are going back"; "agriculture has to be looked after […] from farms to projects like that", "[there is a need for] very ethical policy about creating food and the supply system"* (Tim).

At ***Tyddewi Farm***, the perceptions related to the current food system revealed similar problems. But the primary concern of the farm owner was the price of the food getting cheaper by day and not reflecting its real cost, originating from their past experiences when Tyddewi was a dairy farm. The farm was producing milk out of self-contained herd of 70 cows that they had for 40 years but were forced to sell in 1997 when the price of milk dropped from 29 p to 16 p, and despite working for 14 hours a day, they could not financially maintain their living. The farm owner argued that to be able to make a living out of dairy production, farmers were driven toward factory farming.

- *"We are driven toward factory farming because food is too cheap… For a farmer to maintain a profit margin from 0 to 5%, he has to increase the number of animals he keeps. In other words, you need 500 cows to maintain a profit of 70 cows that you did 15 years ago."* (Roger)

He added that the situation was similar with the vegetable production.

- *"If you valued every hour you spent growing a carrot, you would not be economical grower. That's why you have machinery in vast acreage; sprays to put the chemicals down. If we want cheap food, we are forcing ourselves to industrial chemical farming."* (Roger).

Discussing about the externalities of cheap food, one of the members, Paul, spoke about the land grabbing in developing countries, displacing people and exploiting them. Other related problems stated by volunteers were the chemicals used in food production and their harmful effects on the ecology and biodiversity coupled with unawareness of consumers about it.

At ***Clwyd CSA***, the arguments were centred around the convenience of the supermarkets as the result of industrialisation, making the access to food very easy and leading to the disconnection of people not only from the source of their food but also from their neighbours, and moreover, to the waste of food.

- *"Since 1960s definitely we have used to easy access, supermarkets providing food from all over the world 24/7… You don't have to grow your food, you don't have to buy seeds*

to sow, to grow, to weed, to crop, to water, to gather and to think about the risks, and where does the next meal comes from because I know it is down the road at the supermarket. So, I think… people become lazier because it has become so easy for them. But I think we should realise that… growing [your] own food is not something that should be ignored". (Trevor)

Members added that supermarkets throw away food only to fill them again, and that if people knew how hard it is to grow food, they would value it instead of wasting it. In addition to the easy access to food, there were also arguments that people now got used to having access to any food at any time of the year which resulted in transporting food to/from long distances while many of it can be produced in Wales.

- *"we have been spoilt, we have been fed the dream that we can have whatever food whenever we like"* (Connor)
- *"people's expectations are to eat a whole variety of food when it is not really in season over here"* (Ruth)

Same arguments came up in the fourth of the cases, ***Offa Market Garden***. These were centred around the cheap prices of the food in the supermarkets, the expectations of people to eat all types of fruits and vegetables all year round, and the public unawareness.

- *"general public does not have a grasp that it is not sustainable"* (Hannah)

Meanwhile, the grower and the enterprise owner indicated that there were two main inter-related problems, the first being lack of skills and the other, access to land. He linked the first problem to the fact that growing food does not generate enough income to make a living out of it because of the low value of the food. And because they do not get enough income, people who grow food cannot afford to buy their own land with a house. He explained that buying land without a house makes it difficult to travel every day from their house to their field that might be tens of miles away from each other. Because of these difficulties, people shy away from becoming food growers, hence the deficit of local and fresh food.

Position of community food growing against the main food system

At Bont Market Garden, to the question of whether they regard community food growing as an alternative to the main system or a part of it, all participants agreed that although it was a small

part, it was an integral part of the main food system. Some participants expressed their belief that it can play a bigger role.

- *"Although it is a small part, I can't understand why it does not have a greater influence in terms of informing the others about this sort of projects."* (Tim)
- *"It's probably going to be relatively minority part of the food economy but that's how change happens."* (Terry)

Another related question was about the values of CSA and the values of the dominant food system, and whether these were similar or different. All participants unequivocally accepted that the two had different values. The major argument was that community food growing was committed to organic principles, and its primary aim was not to produce cheap food.

- *"The dominant food system is 'profit at any cost'. […] It does not seem to understand that there are externalized costs […], [that] there are great farmers out there who are trying to balance profitability with environmental sensitivity and being good employers."* (Terry)

On the contrary, at ***Tyddewi Farm*** participants regard community food growing, specifically the CSA, as 'fringe' or alternative to the main food system in the sense that CSA is still very limited in numbers and very few people know about it. Some of them added that the CSA farms and gardens are not even included in the farmers' organisations. But in the meantime, they agree that community supported agriculture in general is part of the main system in the sense that there is a number of people who get their food from these initiatives, and also community food growing projects are funded by the European Union. As to the values, all participants shared the same opinion that the CSA has different values from the mainstream food system although their arguments varied slightly.

- *"On the one hand, you have the concept of sharing and working together, and producing locally without pesticides etc.; and at the other end of scale, you have intensive agriculture and high-end supermarkets calling the shots for farmers"* (Will).
- *"The difference between the CSA values and the wider society' food system values is that of cooperation rather than competition. So, it is about cooperating with the suppliers, with all the elements of the food system to create something more sustainable."* (Paul).

- *"[community food growing] has more potential […] to give to people and families"* (Roger)

At ***Clwyd CSA***, participants' opinion about the position of CSA compared to the main economy was similar to the previous case. They consider it as a part of the main economy but so small that it does not have any impact at all. However, they also think that CSA can complement the main economy because the initiatives are more than food producing places and can create inclusive environment for different parts of the society, e.g. people with disabilities or health problems, or low income families. That is why they regard the CSA having different values from the main food system by being more for people rather than profit, by producing on a small scale, with the principles of poly-culture, and by bringing value to the food.

Participants regard ***Offa Market Garden*** and CSA in general as a very "tiny part" and "marginal" compared to the main food system because very small part of the population takes part in these initiatives. Those are who have "i*n their souls the idea of growing food, community growing and sharing things*" (Lynn). And although the biggest part of people are either unaware or do not care about sustainable food, *"there are pockets of people all over the place"* who are interested (Hannah), and the movement "*is building up knowledge and skills that could be expanded"* (Dave). The two systems are perceived to have different values, which can be summarised as profit vs. community and conventional vs. organic growing.

Articulating the difficulties

At ***Bont Market Garden***, on a more practical level the participants focused on two major barriers, one of which is the location of the garden, and the other is the second-hand machinery. The garden is situated only about 10 miles away from the major city and a few miles away from a town, but this creates a 'psychological barrier'. Also, for those who do not have a car, it is difficult to get there because it is not on a main bus route. After descending on the main road, you need to walk about a mile and a half to the garden, which, despite being a pleasant walk, may not be easy in a bad weather. Some of the volunteers mentioned it as one of the biggest problems, which might be the cause for getting a low number of volunteers. The other problem articulated by almost all participants was related to the purchase of second-hand machinery,

which often needed maintenance and repair, leaving the management with the only option to borrow from other farms.

However, relying on other people reportedly caused delays in preparing the land and planting on time. According to the director, timing is crucial in agriculture, and delays in planting means late harvesting or not enough produce for the customers, i.e. supply problems. One of the solutions considered by the management is to find more shareholders to collect the necessary financial means for a new tractor. Another option considered by the board is finding land that will be on the main bus route and easily accessible, and moving the garden there. Apart from these practical problems, participants talked about another difficulty on a higher level, namely, the regulatory framework. The problem is that although the government is generally supportive to the CSA projects and provides funding via the Rural Development Plan, in fact there are not many policy documents at government level regulating or aiming at developing community food growing in Wales. Participants referred to the most recent document for sustainable food strategy accepted by the Welsh Government, *Food for Wales, Food from Wales 2010-2020* (WAG 2010b), explaining that there is not much in the document about community food growing.

At ***Tyddewi Farm***, there were three big difficulties that the CSA encountered at the initial stage and afterwards. The first was the lack of initial capital, the second has been the insufficient number of volunteers, and the final difficulty is the lack of demand for the produce from the local businesses. Regarding the first difficulty, the CSA started with 12-13 members and the membership fee could barely suffice for buying seeds, which the managers have considered as a mistake. But at present, thanks to the CSA scheme and the 40 members they have, they are able to pay for 20 hours/week to the grower, the farm owner's son, who lives at the farm with his family and actually works 40-50 hours/week. TYCOF needs at least 65-70 members to provide livelihood to the farmer and feed its members. The difficulties at the initial stage of the CSA projects can be even worse for the communities that do not have a land or funding to lease a land. This is the reason why the farm owner spoke about the importance of a support package from the government for land and grower's wages at least for the first 2-3 years until the CSA reaches some financial sustainability.

- *"To support a grower, you need 65 to 70 members. So, if you begin like we did, with only about 12-15 members, first you won't have own money to spend; you've only got money to cover possibly some seed."* (Roger)

Another related difficulty that was also articulated for the other community food growing projects, was the need for more people working on the farm although the volunteers' support from WWOOF and UNA Exchange certainly makes a big difference for Tyddewi.

- *"We do constantly have a struggle with labour."* (Will)

As to the third difficulty, participants spoke about lack of demand for the produce from the local shops and pubs. At present, the farm provides fresh produce to its own members and salad bags to most of the local cafés, where they are very popular and the farm has steady demand for these. The farm owner believes that the local economy benefits the locality to a greater extend and for that reason, he tried to sell potatoes and meat to the local shops and pubs, but they found the price higher compared to their current suppliers.

- *"They have the logo on their menus of 'locally sourced' [produce] but it is only a buzzword that is being abused. […] Let alone [our product] is local, let alone it is organic, let alone it is washed and beautiful but that is not a priority. […] A survey was done about 2 years ago: if the money is spent locally, it benefits the locality 300% better than if you sourced it from a supermarket. And this is where we should use the word 'locally' and should mean it."* (Roger)

The major difficulties for ***Clwyd CSA*** are related to accessibility and finding new members. In terms of accessibility, the growing site that was chosen as a CSA site is in proximity to a village and a bit far from the nearest town. But although it is the largest in size and has beautiful surroundings of woods, making it an ideal place for people to socialise and bring their children and pets, it is very difficult to access even from the nearby village. The roads are narrow and sometimes a passage through the river gets flooded and it takes a long time to go through alternative roads, which happened during the fieldwork.

- *"The expectation to start was, we would have available land within easy access to town centre. […] But the reality is that it is not. It is more remote, more difficult to access and more difficult to cultivate."* (Trevor)

The other difficulty stated by all the participants, was finding more dedicated members due to the hard work on the sites. There are a few members who go and do the hard work regularly, spending plenty of time for the gardens. At the time of the fieldwork, the CSA side of the enterprise was in a state of limbo, since the number of members to re-launch the CSA and pay for a grower were not enough.

- *"The experience that we went through last spring […] has made us quite vulnerable and compromised our energy. […] At the moment I feel certainly in me, possibly in [Clwyd] as a whole that there is a lack of energy. We need period of rest, I think, before we could think about tackling that"* (Kelly).

Members are vital for a community-led CSA, which is the Clwyd's model. It is only the members that form the CSA and there is no farmer or grower with a land to support the project as is the case with the other models.

Offa Market Garden has different challenges compared to the other CSA cases. One of the difficulties is production-related, namely, about the soil fertility, pests and diseases, and climatic conditions. The grower explained that when they started, the soil was undernourished and they had to cope with perennial weeds, on top of which they had several very difficult growing seasons in terms of the climate. They could control some of them; for example, they improved immensely the quality of the soil. But both the paid worker and the grower accept that they cannot control certain things. Another difficulty is market-related and is about the difficulty of promoting the CSA and the voucher system.

- *"It is quite a big step to ask somebody for £200. And we appreciate that this is quite large sum of money. […] So, we kind of let it promote itself and we let people approach us."* (Chris)

Some members think that the problem is to promote the idea of community supported agriculture to the public. And the third difficulty is something that has been recurrently articulated by the participants in all case studies, i.e. the hard work.

- *"[The growers] could work from 5 in the morning until 7 in the evening, seven days a week. And I can work here for the time they can afford to pay me, and still you can't do everything."* (Dave)
- *"We get very stretched in lots of ways. It is quite difficult to keep focus on all aspects of the business."* (Chris)

Despite all the difficulties, the growers' family lived on the site in a caravan with their two young children for a few years until they built the house.

Networking and prospects for the initiatives

Bont Market Garden is a member of several organisations, namely, the Federation of City Farms and Community Gardens, the Soil Association and Organic Centre Wales, and takes part in their events, such as conferences where participants share knowledge. The initiative is also a member of the CSA UK Network. The Federation provides travel bursaries for visiting other community food growing places. The founding director, the main grower and the members visited other community food growing projects in Wales and England. Meanwhile, the CSA is a part of an association that also runs a farmers' market, where the garden's produce is sold every week. This is another opportunity for networking and promoting the garden. Regarding collaboration with other types of community projects, the main grower and the founding director personally had links with some of these. For example, the main grower took part in the local exchange schemes but he explained that these were unsuccessful. He also spoke about the community energy projects.

- *"Community energy projects, I think, are fantastic. There was actually some opportunity to do it here but we did not take it."*

The founding director, on the other hand, clarified that they have very little interaction with other community projects but recently had more opportunity to come together as members of the local food council.

In terms of the diffusion potential of the community food growing, all participants were positive that it will grow in the future and that more people are getting interested in food growing.

- *"There is absolutely a potential to grow. […] 10 years ago allotments were empty. Now you can't get one because there is a huge demand for them. These are positive changes."* (Terry)
- *"Some people looked to establish voluntary groups to do all sorts of diverse social development and social enterprise. So, I think, yes, it will grow; it will expand. […] if we keep improving the ideas of how to make the things differently, it will eventually have some impact"* (Ryan)
- *"There are friends and people from the family asking questions about it. […] I think it will [grow]."* (Rob)

Some members said they cannot understand why it is not replicated, considering that Wales is a country of farmers. Others indicated that it is important that there are more community food

growing initiatives because they are better for the environment, economy, and people's health, but also, to keep the connection with the source of our food. The founding director stated that the connections between cities and rural places are essential, and that '*the CSA can help create this kind of connection'.* In addition, the main grower explained that small scale CSA places can be successful if they have the necessary support.

- *"It needs the support of the communities growing food either volunteering or buying the produce. But it also needs the people to accept, I think, that if you are going to grow on a smaller scale the costs are going to be higher."* (Ryan)

Participants consider community food growing as one of the solutions for more sustainable food systems, contributing toward a gradual but very slow change.

- *"We have to succeed in changing the ideas and the attitudes of large-scale industrial food production. [...] There is merit in demonstration of projects like ours on a larger scale."* (Ryan)

However, they argued that it can hardly have the potential for a radical change. Some also suggested that it can help in tackling the unemployment.

Tyddewi Farm (TYCOF) is actively involved in networking with other similar projects. The project is a member of the Federation (FCFCG), the Soil Association, and the newly established CSA UK Network. Members of the farm, including the growers, attend regularly the meetings of the network, which has an independent Welsh CSA group where TYCOF takes an active part. Other CSA projects also visit the farm. In addition, the farm hosted one of the CSA annual gatherings. Besides visits, they also had a real collaboration in the form of vegetable exchange with another CSA in Wales. Members find the visits to other CSA projects very useful.

- *"It was good to see a much bigger CSA and how they structured themselves. It was in the early stages of my involvement […] when we were not doing certain things in the way we are doing them now. So yes, it was very useful visit."* (Will)
- *"I am a board member of [the CSA Network]. […] We've been visited by other CSAs; we do learn from them. And I visit other CSAs and take that learning back to [TYCOF] as well. […] We've exchanged vegetables with [another CSA]; they gave us some of their squashes and had some of our potatoes. […] The Welsh CSA gatherings are really about collaborating with each other and sharing information and support about what we are trying to achieve."* (Paul)

In terms of collaboration with other community projects, members and growers spoke about TYCOF's links with a Transition Town project in one of the towns in the region.

- *"[The project] has this community cafe, which is a surplus food project and if we had surplus food, we could give to them. They've provided some of their surplus food to us, not for our members but to feed the UNA Exchange group."* (Will)

Participants explained that there is no time bank or community currencies in the locality due to its rural character. As for the farmers' market in the nearby town, the farm did not find it very efficient.

- *"We wanted more members so it didn't benefit us in getting more members. And it was taking a lot of our time."* (Roger)

But they spoke with a great enthusiasm about the mutual benefits of TYCOF's collaboration with the WWOOF organisation.

- *"By having WWOOF-ers you are turning the farm into an international base for young people to enjoy the organic farm and to enjoy the basic things of life of growing your own food and getting their hands into the soil. […] I was born here and I think it is heavenly here and to have other people enjoy it as well. It is really special."* (Roger)

Regarding the potential of the initiative for making impact, one of the suggested ways was about communicating the idea of community supported agriculture to the public and promoting the existing projects.

- *"There is lot of things we can do better and communication is one of these. […] There is a huge gap in terms of number of CSAs in Britain and Wales. They can grow but it needs to be something that people know about."* (Paul)
- *"I think they have to find a method to make publicity […] and bring the products to the other places."* (Carlo)
- *"The government has to play a huge part surely in promoting it."* (Will)

The farm owner also suggested that the government should support the CSA projects not only with their publicity but also with grants for leasing the land and paying a grower's salary at least in the first 2-3 years of their establishment.

- *"There should be established package to [set up] CSAs in the community. There should be a package bonding the farmer and the community."* (Roger)

Apart from better publicity and governmental support, another suggested way for having more CSA projects is engaging more farms in community supported agriculture.

- *"Through the unions, we need to start doing this really. But the Federation and the CLAS are working with the Welsh government. There is a very strict situation for tenant farms and they are trying to solve this problem."* (Paul)

Regarding the diffusion potential of community food growing and specifically community supported agriculture, people think that the interest in community food growing has been increasing, but it will take time to become mainstream.

- *"You get the feeling that over the last few years there has been a growth of more interest generally in city gardens and allotments, which can only be a good thing. ...The difficulty clearly is how many people are interested in being involved; […] it must be quite small. So, in order to make it the norm […] would be a long haul."* (Will)
- *"I think people are getting interested in this sustainable agriculture already for some years, because now it is more [trendy].* (Carlo)
- *"I think lot of young people like me are really interested in eco-villages, food sustainability. So yes, in the future there will be a lot of people who will be interested, because there are already lot of gardens in the city, community gardens and lot of things like that, so I think it begins*." (Del)

Participants think the CSA in general will have important contribution toward more sustainable food systems by providing jobs for young people in farming, by influencing people's purchasing decisions, and by reconnecting them to the source of their food.

- *I think the food system needs projects like CSAs to restore the trust of where our food comes from."* (Paul)
- *"It would take the power of the food back to the people. […] It has the potential to feed countries – to feed local and to feed countries."* (Roger)

At the same time, participants argued that although community supported agriculture can contribute considerably, it is only one of the many solutions needed for a transition to more sustainable food systems.

Clwyd CSA does a lot of networking with other community food growing places. They visit other gardens and farms through different events, although not on a regular basis. And people from other projects visit Clwyd as well. One of the main organisations that facilitate the networking by organising events like regular regional or Welsh gatherings is the FCFCG. The other organisation is the CSA UK Network, which sends announcements via their internet group.

- *"We don't go off to other gardens on a regular basis and meet with them, because we are busy people, we work here. […] We don't hire a coach and go altogether usually. It's only through the network and that's only a few of us. That's only the core group and the directors who do that. Not many individual members do that."* (Trevor)
- *"We know them and because we are part of the CSA Network, things get advertised at the [internet] group. […] We have a national gathering, we have a Wales gathering and yes, we always participate in that."* (Debbie)

As to the collaboration with other types of community projects, participants know about many of those in the area and they communicate with them either by exchanging materials like brochures/leaflets or by supporting each other's events. Reportedly, members also know people from other community projects because they meet them at events organised by universities of at food festivals, where they have stalls. In addition, some of the members spoke about being approached by different community groups to do joint projects but it did not work because of time and resource scarcity.

- *"We've said "yes, we'd really like to have a relationship" but they seem to want us to do stuff and all our time is taken up doing stuff to produce the food."* (Kelly)

Other members talked about a possible joint project in the past with a Transition Town about 70 miles away from Clwyd, which did not result in a collaboration.

- *"We did look for a land together but it did not work for various reasons. They do their thing with Transition Towns and we do our thing. So, we don't have direct contact."* (Trevor)

Almost all participants mentioned that Clwyd has close connections with the local Citta Slow movement and some rather personal involvement with the local energy groups. In terms of a real collaboration, the CSA was planning to donate their surplus food to the food bank. However, they could not do it because the food banks did not accept perishable food. Therefore, they donate their surplus to a local community café.

- *"There is a local café, community café, that we give food as donation. Also, there are local shops where we sometimes put veg when we have lot of veg of certain things. We can't do food banks because they don't do fresh food."* (Connor)

Thus, even though Clwyd does not have any joint projects or organisation with the other community groups in the region, the members keep their connection with all these groups.

A few distinctive points emerged from the interviews about the diffusion potential and the role of the community food growing.

Some members suggested that growing food is a hard work and that people find it time consuming after they join the CSA. However, there is potential for more people joining community food growing because more people are becoming interested in eating healthily.

- *"I think it is hard work, I would say, and it is very time consuming. Whether people are prepared to give that time and energy, I don't know but I think they should. […] It's very important not to be having to transport food from the other side of the world and just grow it here."* (Ruth)

Another suggestion is that CSA can help the struggling farmers because the community can share the risks in the farming.

- *"The community can help that farmer to survive because not many small-scale farmers are making a good living, they are struggling. […] The small scale private farmer network to the farmer unions can get together with enthusiastic communities locally to do it. Then that may be the way forward, which was the original concept of the CSA model."* (Trevor)

The government can play an important role in supporting the CSA projects, and the diffusion of these depends on that support.

- *"So much depends on the government and how they respond to the movement that we are trying to create; I think the devolution to the Welsh Assembly is an opportunity for Wales to develop that in a way that England will find much more difficult."* (Kelly)
- *"Maybe we should have more grants or something towards it because it is quite a struggle to get what you want, like for instance shed – it took 3 years to get the shed."* (Ruth)
- *"If you go somewhere like France, there is […] lot of funding and there is a lot of public support. You know, people want it, people understand it already. And there are little CSAs in the weeniest places in France."* (Debbie)

Clwyd takes part in a scoping study about creating more CSA initiatives. They spotted numerous enthusiastic communities who want to start CSA, however they need *'just a little bit of push'* (Debbie). Besides, founding new CSAs also depends on very determined leaders, and reportedly, Clwyd has succeeded because of the founder's determination.

- *"Clwyd would not have happened if [the founder] had not been so determined. […] She was never going to let go of it; it was going to happen no matter what."* (Debbie)

All participants unequivocally think that community supported agriculture 'definitely' is part of the solution for more sustainable food systems, and according to some of them, it is the best solution. However, others think that supermarkets should also play an important role for the change, because not all people would like to join the CSA projects and will need to buy their food from somewhere else.

- *"Maybe there should be some more moral responsibility to put on the supermarkets to try and get us to some sort of sustainable food production level."* (Connor)

The founder of the Clwyd CSA thinks CSA projects can contribute *"enormously*" to the food sustainability by boosting the local economy and creating jobs. She wants to see the CSA movement growing to the level when the mainstream food economy would want to adopt the idea. But she also added that at present it is so small that the main system is not even aware of the CSA existence.

Differently from the other CSA cases, ***Offa Market Garden*** does not do much networking. The growers have many informal connections with other community food growing projects and farms. In addition, they are involved in related organisations. However, due to the hard and time-consuming work, they do not have much opportunity to attend events or make frequent visits to other places.

- *"[The grower] was involved in the Organic Growers' Association and Organic Centre Wales, but I think at the moment he is concentrating on the business rather than that."* (Dave)
- *"I think they are very engaged with the Soil Association's works. [The grower] goes to give talks sometimes. And during the open day there were people from other food growing projects."* (Nora)
- *"They certainly know of and they are in touch with, and sometimes visit various different community growers or organic growers. […] And they are supporting local growers, […] sharing ideas […]. For example, this glasshouse came from another grower."* (Lynn)

Additionally, the grower explained that the FCFCG was helpful after they started the business but before that, they did not know about it. He added that they made all the experience-gaining visits to other places at their own expense. The growers also have some collaboration with other

community projects in the area, such as Transition Town, local food groups or community orchard. The grower's involvement with these projects is mainly by giving talks. Yet again, due to the time constraint, this involvement is limited. But the initiative has their regular stall at the local farmer's market where they sell their produce twice a month.

The grower admitted that they did not think about opening the garden to international volunteers because they want to keep their space for themselves as a family.

- *"We quite like our family space and we quite like to be able to close the door and not have people in the house […] That's why we are quite reticent about a complete community supported project. […] It's time really, it's time for us generally speaking."* (Chris)

As to the diffusion potential of community food growing, results suggest a few distinctive points. First, interest toward similar community initiatives is increasing. However, the financial sustainability of these initiatives is important.

- *"I feel like there is an appetite for more of this kind of things, generally. There are lots of articles […] about it. […] They need to be economically viable."* (Dave)
- *"I think it will expand. I think people are taking control in all sorts of different ways. […] whatever space is available to use, but definitely more growing and more organic."* (Lynn)
- *"We need some sort of food resilience in [the town]. And this is a start."* (Hannah)

However, it is difficult for the community food growing initiatives to expand due to the land prices being high and difficulty getting planning permission. Another important point is that rather than purely community-led food growing, a combination of business and community might result in more successful initiatives.

- *"Personally, I feel that we are still going to need specialist production for our food. I don't think we can purely do it as a community growing exercise. […] Rather than being one or another I like that it is both. I quite like the level of community involvement."* (Chris)

At the same time, participants think that community food growing can be part of the solution for more sustainable food systems. Some participants argued that it needs to be able to provide livelihoods and be economically sustainable. Others added that it can only be a partial solution because the problem has "*many different facets […]: social, political, economic*" (Lynn). Meanwhile, there were participants who suggested that staple food cannot be grown on a

community scale and should continue to be mainstream but vegetables and animal products could be more local.

- *"But I think the ethics of community growing have to be more organic, more welfare-animal-friendly etc. really."* (Hannah)

Related to this argument, the grower suggested that due to unavailability to grow everything everywhere, food still need to be transported. However, his main point was that producers should get more financial reward for their products.

- *"We need to go to a smaller scale regionalisation to a degree. But also, relying to other areas to grow crops that we can't grow. […] We still need to move food around the country. For me personally, I feel that we need to restore the balance to keep a more financial weight to the producer rather than to the retailer so that the farmer, the grower can get more for the product."* (Chris)

III. Conclusion

The CSA cases differ from each other in terms of size, location and ownership type in line with the selection criteria, however, they are more homogenous in terms of motives for setting up the initiatives, as discussed further. The main distinctiveness from the community gardens (CGs) is their commercial activities, i.e. they produce to sell in contrast to the CGs where the produce is shared and there is no commercial transaction involved (with a small exception of Glyndwr garden). Another difference is their number; there were only 6 in total in Wales during the time of data collection as opposed to the number of CGs, which was well above 100 according to the Federation of City Farms and Community Gardens (FCFCG). The primary motive for both setting up the CSA initiatives in Wales and becoming a member, is the need for good quality, sustainable produced food, and community-building. This is in line with the motives documented in the literature (Cox et al. 2008; Hayden and Buck 2012). Compared to the CGs, the emergence of CSA initiatives revolves around the food as a product, while in the CGs it was more around gardening as a process. However, when all motives are taken together, these are similar for both the CGs and the CSAs.

One issue that is often articulated in relation to the CSAs (and farmers' markets) is their potential to create social injustices, excluding the low-income citizens, and being predominantly 'white' (Schnell 2007; Guthman 2008). However, there are counter-arguments that it is an efficient way for achieving food justice (Gottlieb and Joshi 2010, p. 141) and a cheaper way to secure organically grown food (Cooley and Lass 1998). Our case studies demonstrate that they have mechanisms to provide food to all income levels. Firstly, the prices of their shares are reasonable. For example, the price of a small share for one or two people is £25 per month, which means approximately £6 per week. As they receive box of at least 7 varieties (which sometimes goes up to 16), it means that they have all this fresh food for less than a pound/day. Moreover, this is not a set price and the minimum is 'as much as they can afford', according to the initiative's website. A second way is Clwyd's model where people 'pay' with their time. They get fresh produce according to the time they dedicated to the CSA. Only those who are unable to dedicate their time and want vegetables and fruits from the garden, pay with money. Thus, the CSA cases ensure that participation is just and equitable. But they also need to find the balance to provide livelihood for the grower.

Difficulties and Barriers

The main difficulties are very similar to the ones that CGs encounter. Finding enough members/shareholders and building social capital is one of the reported major challenges. Currently, the CSA cases experience to varying degrees what Galt (2013) calls 'self-exploitation'. While trying to attract and retain members, they work longer hours than getting paid. For example, the grower at Tyddewi is paid for 20 hours but works 40-50 hours a week. Therefore, it is important for the initiatives to determine the share prices carefully, as suggested by (Hinrichs 2000), by considering the cost of labour and infrastructure. But in the given circumstances, it does not seem possible and some members, for example at Tyddewi, are not even able to pay fully the share prices despite being cheap. Similar was the situation with the grower at Bont and Offa. That is the reason why it is crucial for them to find more members. One strategy for attracting more members and bringing the community together is organising events, as also documented by Schnell (2007). For example, Offa organises annual open days, while Tyddewi arranges harvest festival, weekend feasts and other events.

The other major difficulty is the economic viability, and it is related to the first, i.e. finding more members. The type of the CSA proves to be an important factor for the economic viability of the examined cases. For example, Offa is the purely producer-led type and is in the best position in terms of economic viability among the four initiatives. It does not rely on funding; the growers own the biggest part of the land; they have a shop in the town and sell at the farmers' market; and they can recruit a part-time gardener. However, they receive much help from a group of regular volunteers, and growers work hard and long hours. Tyddewi is a community-producer partnership, where land is owned by the producer. Currently the initiative has about 40 members, a third of these are with half (small) share; but it needs at least 60-70 members to be self-sustainable and provide for the farmer's livelihood. The most distinctive type is the community-led Clwyd. The case study is an example of how institutional dynamics can affect the success of the project. Clwyd is a self-organised community and there is no grower to bind the community. Also, the initiative has three separate growing places. Moreover, it has a community garden scheme besides the CSA. All these factors reportedly had an impact on the community cohesion, and when their paid grower left, many of the members left with her and the initiative lost many of its members. This example demonstrates the vulnerabilities linked to the organisational structure of the projects.

Other, more practical difficulties are related to the infrastructure and equipment. For example, Bont and Tyddewi need storage with temperature-controlled unit that would enable better planning and prevent the garden/farm from buying vegetables from other places. It will also improve the quality of the food and increase the customer/member satisfaction. Bont reported the need for equipment that will speed up the work and enable better timing and management. The initiative had some difficulties due to late planting resulting in low yields, a problem that is also documented by Hayden and Buck (2012).

The main barrier for some of the cases is the accessibility. For example, Bont Market Garden is situated only about 10 miles away from the city, however, according to its founding director, it creates a 'psychological barrier' for people with a car. For those who do not have car it is more difficult to get there, because it is not accessible by public transport. For Clwyd, the problem is aggravated by the fact that there are three separate growing sites and especially one of the sites is difficult to access even from the nearby village. According to Offa's grower, this is one of the

barriers for becoming a farmer too, because those who cannot afford to buy a land in proximity to their house, need to commute every day. Other major barriers reported by the participants are the lack of regulatory framework for developing the community food growing in Wales, lack of initial capital for the farmers who want to start a CSA project, lack of demand for the produce from the local businesses, and the need for promoting the idea of CSA to the public.

Transformative potential of the CSA

CSA is regarded by the participants as a very small part of the main food system, as 'fringe' and 'marginal' as very few people know about it and yet fewer people are involved with it. They added that it is not included in farmers' organisations, and the main food system is not even aware of the existence of the CSA. At the same time, there is consensus among the participants that the CSA has different values, which can be explained as sharing and working together, producing locally without pesticides, commitment to the organic principles, community instead of profit.

Regarding the potential of the CSA for making change, participants think that the CSA is part of the solution for more sustainable food, contributing toward gradual and slow change. It can complement the main economy because it can create inclusive environment for different parts of the society. Moreover, it can show the viability of producing organic vegetables on a small scale and train people how to do it. Consequently, CSA can help the struggling farmers because the community can share the risks of the farming. Thus, engaging more farms in community supported agriculture and a combination of business and community might result in more successful initiatives, which can also help with tackling the unemployment. However, the CSA needs publicity.

The networking opportunities are better for the CSA compared to the CGs. There are more support organisations for the CSA initiatives, such as the Soil Association and Organic Centre Wales. But the most distinctive contribution for the CSA is that the movement has its own network, which is part of a bigger European and international network. However, apart from the CSA Network, the initiatives can hardly find time for networking and collaborating with other community projects due to the time-consuming and labour-intensive work. This could give a

better possibility for the CSA to scale up on a higher level. Another important contribution is the scoping study for founding new CSA initiatives, mentioned earlier, which determined about 20 potential places with enthusiastic communities around Wales. CSA movement in Wales, though, is at a very early stage and yet needs to prove that can grow and diffuse.

Chapter 6

DISCUSSION AND CONCLUSION

This chapter evaluates the results from Chapter 4 and 5 from the case studies by linking these to the theory of social innovation and the wider literature on community gardens and community supported agriculture. The chapter is organised in three parts. The first part provides summary of the findings by comparing the cases. The second part elaborates on the findings and attempts to answer to two main research questions. It also discusses the theoretical and policy implications, and explains the limitations of the study. The first research question about the role of community food growing initiatives is addressed by discussing four of the dimensions of social innovation, namely, the satisfaction of needs, mobilization of resources, empowerment, and change in social relations. Specifically needs and exclusion dynamics are scrutinised in relation to the first question. And the second question about the potential of community gardens and community supported agriculture (CSA) for making a socio-economic change for food sustainability is addressed by examining the empowerment and change in governance relations at macro level, and the territoriality of the initiatives as an additional dimension. The final part is the conclusion that wraps up the thesis by summarising the main arguments and highlighting the contributions of this research.

I. Summary of the Results

The summary of the results is organised in four parts that correspond to the main themes of analysis presented earlier in **Table 4.1**. (Chapter 4). These are satisfaction of needs, mobilization of resources, processes of the social initiative, and potential (of the initiatives) for making change.

1. Satisfaction of needs

In order to determine to what extent do community food growing initiatives play role in satisfying needs, the community needs and personal motives/expectations for each case study were compared against the benefits that people get from being involved. In the case of the community gardens (CGs) (**Table 6.1.)**, the results demonstrate that in each of the cases both

the community and personal needs have been satisfied for those who were involved in community gardening. Moreover, there were instances when the benefits exceeded the needs.

	COMMUNITY NEEDS		PERSONAL MOTIVES/ EXPECTATIONS		PERSONAL BENEFITS
DINAS	Access to "fresh, good quality" food for the local community		Access to fresh and organic food		Good quality fresh food
	Inclusion of people from different backgrounds		Occupying with some voluntary work after retirement		Less isolation and social exclusion
	Learning and sharing knowledge/skills		Learning more about gardening		Learning practical and social skills, and problem-solving
	Access to outdoors and ending people's feeling of isolation		Fresh air, physical activity and access to outdoors		Physical and mental health
	Developing people's self-esteem		Meeting people and making new friends		Meeting different people
COLDWELL	Providing a "meaningful work experience" and recognised qualification for people with learning disabilities		Like gardening and harvesting the food		Sense of achievement both for the students and staff
	Horticultural and social skills, and sense of achievement for people with learning disabilities		Receiving college certificate for horticultural training		
			Social aspect and being in a safe environment		Social impact and sense of independence/safety
			Satisfaction of seeing something put into action		job satisfaction for the staff members
			Personal preference and skills for the place		Therapeutic benefits
	"Good quality fresh fruits and vegetables for the local residents and visitors"				Fresh food sold at the garden's shop and served at the tea room/café
GLYNDWR	Doing something in the local community to fight the problems caused by the climate change and protect the environment		Learning about organic horticulture/ permaculture and gaining experience		Learning about the ecological principles and how to grow organically
			Coping with personal difficulties/ therapy		Social aspect and meeting people
			Starting own business		Taking home vegetables grown by themselves
			Doing outdoor work		Physical and mental health
			Supporting the project		Contributing to the ecological sustainability
AFON	Providing the tenants with outdoor space where they can grow their food and eat healthier and overcome the social isolation		Spending time outdoors/ out of the flat		Being able to spend time outdoors
			Doing physical exercise		Physical exercise
			Gardening as a hobby to spend their time		Having a hobby
			Socialising with other people to overcome the isolation/ feeling part of the gardeing community		Social interaction with other people/ only some members feel part of the community
			Grow and harvest vegetables and crops from their country of origin		Growing their own food, including from their country of origin, and satisfaction of seeing something grow and develop
			Save money and meet needs for fresh food from the garden		Learning

Table 6.1. Satisfaction of needs in the case of community gardens

For example, at Coldwell Gardens people reported getting therapeutic benefits, which have not been articulated as a need. Likewise, people at Glyndwr Garden feel proud of taking home vegetables grown by themselves, while learning at Afon Garden is reported as a benefit but not as a need.

However, what makes innovation social is the social outcomes that benefit the society as a whole, rather than private outcomes (Baker and Mehmood 2013). Accordingly, matching the community needs with the personal benefits and the gardens' current state demonstrate that they benefit people not only at personal level but at societal level too. They all achieved the goals that triggered their emergence and have been developing since. For example, Dinas Garden has been running for more than 10 years, engaging with local schools and attracting large number of volunteers from various backgrounds. It has received awards for best community growing project and recycling innovation. Afon Garden is a well-established garden that provides access to a free plot in an accessible and safe area with the necessary facilities. It also provides free training to people in the whole area and opportunity for growing food to various community groups. Glyndwr has been preserving wildlife and producing food for members, customers and the local grocery since 2007, also fostering an environment for learning and transfer of skills. And finally, Coldwell has been successfully providing work experience and training to people with learning disabilities since 1980s. Additionally, the garden is becoming more self-sufficient by providing sustainably produced fresh food and catering.

In the case of the CSA initiatives, in a similar way **Table 6.2.** presents the results of the community needs, personal motives and benefits. Comparing the community needs and personal motives/expectations against the benefits that people get from the CSA projects clearly demonstrate that the need for local and organic food supply is the major drive for establishing the CSA projects. It is also the main benefit that people get from their involvement, and it was one of the recurring themes in participants' narratives, which they described as *"nice food"*, "*the best part of it"*, *"properly grown food"*, "*nice vegetables"*, "*decent food"*, *"healthy and cheap vegetables"*, *"quality organic veg"*, and *"fantastic food"*. This is one of the differences between the community gardens and the CSA cases, since food is not the most articulated benefit in the community gardens. A second community and personal need that was articulated in all four cases and at the same time reported as a benefit, was being part of a community, and social contacts. For some participants, it was even more important than getting quality food. Learning

was yet another major need and benefit except for one of the cases. An additional personal motive in three of the cases was the desire to support an ethical business or to contribute toward a sustainable cause, but it was reported as a benefit only in Bont and Tyddewi. Moreover, although mental and physical health was stated neither as a community need nor a personal motive, it was among the benefits in all the CSA cases.

	COMMUNITY NEEDS		PERSONAL MOTIVES/ EXPECTATIONS		PERSONAL BENEFITS
BONT	Supply of organic vegetables		Having free time due to retirement or unemployment/ Desire to help		Fresh organic food
	Transferring knowledge and skills about growing food		Learning with the aim to set up own horticultural business		Learning
	Creating employment		Doing something different from their usual job/ Gardening as a hobby		Earning modest wage
	Contributing to the environmental sustainability		Attracted to the ethical aspects of the project		Supporting organic food growing
			Meeting other people		Social contacts
					Fresh air and being outdoors/ Staying fit
TYDDEWI	Need for local and organic produce in the area		Local and organic vegetables		Good food, vegetable share
	Reconnecting people to the source of their food without the food miles involved		Growing food together in a community		Sense of community, social environment
	Having people care about the farm		Provide livelihood for the farmer		Contributing towards sustainability
			Learning about sustainable, organic agriculture		Learning, sense of achievement
			Working outdoors in a farm		Therapeutic benefits, being in a beautiful environment, access to a real farm
					Accommodation and work
CLWYD	Need for local and organic vegetables in the area		Need for local and organic vegetables		Good quality, fresh vegetables
	Growing food in a community		Growing own food, knowing how the food was grown		Cheap, properly grown, nice food
			Learning about growing and about different vegetables		Learning
			Socialising, being in the community		Being in a community/ Teamwork
					Physical and mental health
OFFA	Need for a good quality local and organic food producer in the area		Supporting the values of growing local and organic food, helping a good cause		Good quality, fresh organic food
	Using horticultural experience and skills to make a living from growing food		Social side, growing food as part of the community		Meeting others in the community
			Nice place to spend time		Physical and psychological wellbeing/ Fresh air and physical activity
					Sense of fulfilment of doing something positive and productive
					Sense of achievement/ Seeing the results of the labour

Table 6.2. Satisfaction of needs in the CSA cases

Regarding the societal outcomes, the CSA initiatives have been providing sustainably produced food to the local community and, to a certain degree, livelihood for the growers for 4-5 years. These projects are still relatively new compared to many CSA projects in England and in the world. Therefore, they need time to attract more members, to become more financially sustainable, and to make a greater impact.

In sum, the CGs and the CSA cases are successful not only in providing fresh local food but also being a medium for learning life skills, bringing people together and supporting their wellbeing. Moreover, they have ecological benefits by creating environmentally sustainable areas where wildlife and biodiversity are preserved, and by demonstrating how food can be grown in an ecologically sound way. Their essential influence, though, is their socially inclusive role in embracing people from different economic and ethnic backgrounds, especially unemployed and retired people, as well as people with disabilities. This is in par with the arguments about the role of community-led social innovations as socially inclusive places, suggested in the social innovation literature (Moulaert et al. 2005; González et al. 2010).

2. Mobilization of resources

The outcomes evaluated comparatively in this section relate to land, funding, leadership, intermediary organisations, and human capital.

Land

The land in the two urban CGs, Dinas and Afon, was acquired from the city council, and these were established within allotment sites. Glyndwr was given the land for free by the landlady with an agreement to look after the property. As to Coldwell, the charity that set up the garden leased the land from the National Trust some 30 years ago with a long-term agreement. In the case of the CSAs, two of the initiatives, Tyddewi and Offa, own their land, which is a great advantage for the initiatives. Bont rents the land from the nearby farm, while Clwyd has three sites to be used for growing food, one of them entirely consisting of polytunnels, all given for free with an agreement either by local landlords or the local university.

Funding and self-financing

All CGs received funding from the Welsh Government and small grants from other bodies, such as the Big Lottery Fund and Keep Wales Tidy, usually used to finance the staff salaries and facilities on the sites. The government funding was from the EU via the Rural Development Plan (or Rural Development Programme), except in Coldwell, which was funded by the Education Department for providing training to people with learning disabilities. Only the rural CGs, Glyndwr and Coldwell, sell their produce to sustain the initiatives. The first has a few customers in the form of box delivery, and sells some small amount to the local Spar shop in the village. The latter sells the produce in their on-site shop and uses some of it in their café. In the case of the CSA, all initiatives used some funding via the Rural Development Plan, Organic Centre Wales or other funding organisations, mainly in the form of small grants to finance the equipment, polytunnels, or wage for the growers. In three of the CSA cases, Bont, Tyddewi and Offa, the produce is either sold at farmer's market or via box scheme, or supplied against an upfront membership payment. The same initiatives also have paid staff. Only at Clwyd members can have an option to 'pay' with their voluntary work instead of money.

Leadership

All CGs have strong leaders. Three of them, Dinas, Coldwell, and Afon have institutional founders and individual managers, who are especially strong in Coldwell and Dinas. Only at Glyndwr the leader of the garden is at the same time its founder, manager and grower, which results in a strong leadership. In the case of the CSA, the leadership is strong at Bont and Offa. The first is managed by a board of directors, and the second, by the couple of growers who are the owners of the garden. At Tyddewi, the founding farmer is a strong leader but the management is left to a core group of members. There is a group management at Clwyd too.

Intermediary organisations

All four CGs are members of the FCFCG, and some of them used its travel bursary to visit other gardens. All CSA cases are members of the Soil Association. All except Offa Market Garden are members of the FCFCG and the CSA UK Network.

Human capital

All CG cases except Afon rely on volunteers to keep the work going but the need is more pressing in the rural gardens, Glyndwr and Coldwell where access to the initiatives is more difficult. Afon does not need volunteers because it is predominantly based on individual plots. Dinas has large number of volunteers and is popular for visits. Members and volunteers are the main human capital in all CSA cases. At Bont members are also shareholders, and they have volunteers occasionally. At Tyddewi, in addition to the members, international volunteers from WWOOF and UNA Exchange provide significant support. At Offa, there is not membership but there is a community of supporters who help with regular volunteering. Clwyd relies heavily on members since they are the main capital that keeps the CSA together.

3. Processes of the social initiative

In the case of CGs, only at Dinas and Glyndwr people expressed higher visions for the initiatives apart from keeping it functioning and making it self-sufficient. In the first case, this higher aim was to make the garden an example of "best practice" and "positive-ness", and in the second case the higher vision was the "ecological preservation" and "saving the planet". Managers' expectations in all cases were to keep the projects functioning and search for new ways to make these financially sustainable, which was already achieved at Afon Garden. Personal expectations were mainly socializing, doing gardening/growing food, and learning various skills. The visions at the CSA initiatives were rather related to the projects and making them sustainable.

The sense of community and belonging in case of CGs is strongest in the case of Coldwell Gardens, where people feel as part of a family, and Dinas Garden. It is less articulated at Glyndwr and particularly in Afon but people think relations are friendly. Time might be a possible factor as Coldwell has been the longest-running project (for over 30 years), while the shortest-running has been Afon (for only 4 years at the time of the data collection). In the case of the CSA, strong sense of community and belonging was reported in the three of the cases, namely Tyddewi, Clwyd and Offa. Especially at Tyddewi and Offa, the growers who provided the land to the CSA managed to create cohesive communities around their families. Sense of community was less articulated at Bont where most of the work is done by a main grower and an assistant grower, both part-time paid staff.

Second-order learning (Seyfang and Haxeltine 2012; Marsden 2013) about ecological and sustainability matters in the CGs was reported only at Glyndwr and Afon gardens. People in each of the cases learn mainly practical growing skills and communication/social skills. At Glyndwr, they also learn advanced organic horticulture and permaculture. The leader at Glyndwr teaches other community food growing initiatives as well, thus transferring important skills. As to the CSA, second-order learning was reported at Bont and Clwyd. At Bont people additionally learn how to manage small horticultural business. Differently from the CGs where only in one case people learn advanced horticultural skills such as organic gardening or permaculture, this was reported in all CSA initiatives.

4. Potential for making change

This section evaluates participants' awareness about the situation of the main food economy and their perceptions of the position of community food growing against the main food economy. It also summarises the findings about the challenges and barriers encountered by the initiatives, and their networking and collaborations with other community food growing projects and different types of community initiatives.

Awareness about the food systems

People involved in growing food at the CGs are great deal aware of many problems of the main food system. The main problems that they articulated can be summarised as (1) profit-driven economy disconnecting people from their food; (2) farmers not being paid a fair price and their conditions deteriorating; (3) waste of food due to cosmetic reasons (perfect shape and size); (4) cheap food resulting in discouraging people from growing their own food, overconsumption and waste; and (5) shipping food from long distances to provide all varieties in all seasons, resulting in increased 'food miles'. In the case of the CSA, the current food system is regarded as inefficient by the participants in all cases. The main problems, e.g. supermarkets selling cheap and convenient food that is produced with intensive farming methods and use of chemicals, the disconnection of people from the source of their food, and the loss of food growing skills are, in fact, interconnected and originate from the commodification of the food for making profit.

Perceptions of the position of community food growing against the main system

Regarding the position of community food growing against the main system, participants in the CGs interpreted the word 'alternative' in its meaning of 'substitute', 'different option' to the main system rather that 'different way of doing things'. Accordingly, most of them suggested that community food growing is not an alternative because it is very small and not strong enough. However, they all agreed that community food growing has different, 'alternative' values from the main food system, mainly because it is ecologically sound, organic and non-GM. The predominant perception among the participants in the CSA cases is that community food growing is a small part of the main system and it is growing. There is also a consensus in the opinions about the alternative values of community food growing compared to the main system, and these values are commitment to the organic principle and poly-culture, environmental sensitivity, bringing value to the food, cooperation rather than competition, and community versus profit.

Challenges and barriers to community gardening and the CSA

At the CGs, main difficulties in two of the cases, Glyndwr and Coldwell, are the need for more volunteers and not being self-sustainable, both interconnected. Afon had more practical problems, such as organisational matters but also, lack of interest from the tenants. Community gardens being regarded as 'fringe' or 'weird' is another problem reported by Dinas Garden. And an additional problem in the case of Coldwell was the remote location of the garden. At the CSA cases, difficult-to-access location of the initiatives is major barrier for Bont and Clwyd. Related to this, the insufficient number of volunteers is another problem for these initiatives. In addition, Tyddewi and Offa have insufficient number of members/voucher-buyers that is needed to finance a full-time grower. Similarly, Bont needs more shareholders to finance new machinery and additional polytunnels. Finally, the hard and time-consuming work, and overworking is yet another difficulty in all CSA cases and at Glyndwr Garden.

Networking

Networking of community gardens happens mainly in the form of visits to different initiatives and the gatherings organised by the Federation. Occasionally, there are small forms of

collaboration with different community initiatives but these are individual cases. Dinas had visits to/ from other gardens and seed swaps. The project manager is involved personally with various community projects. Glyndwr Garden hosted an annual gathering of community gardens organised by the Federation (FCFGC). The garden also has collaboration with another local organic farm in exchange of volunteers. Coldwell networks with similar projects and is part of a network of day service providers in the area for people with learning disabilities.

The CSA cases are members of representative organisations and do networking through these. Bont, Tyddewi and Clwyd are members of the FCFCG and the CSA UK Network. They visit other initiatives and gatherings. Tyddewi and Clwyd additionally hosted gatherings. The leaders of Bont Garden have personal links with various types of community projects and take part in the local food council. Tyddewi and Clwyd have some sort of collaboration with local projects but this is not on a big scale. Perceptions in all CSA cases is that the community food growing is gathering momentum but at a very slow pace. Participants think it can play an important role in addressing the unemployment and farmers' problems, and reconnecting people to their food. Community food growing is considered as one of the solutions for more sustainable food systems with the condition that it needs more publicity, change in people's attitudes toward food, and government support at a practical level and as an overarching policy.

II. Discussion

This part addresses the two main questions by discussing the results in connection to the social innovation theory. Furthermore, it discusses the theoretical implications by reflecting on the literature on alternative food networks and making connections between different approaches and concepts. The part includes policy recommendations and areas for further research, and concludes with the limitations of the study and the encountered difficulties.

1. What is the socially innovative role of community gardening and the CSA in Wales?

As discussed earlier, there is considerable amount of evidence in the literature on the various benefits of community gardens and the CSA. However, there is little evidence on what is their wider role. The societal approach of the social innovation theory provides a useful framework

for answering this question (Moulaert et al. 2005; González et al. 2010). The evaluation of the initiatives according to the three main dimensions of social innovation – satisfaction of needs, empowerment, and change in social relations – provides an answer to the first research question. Mobilization of resources is added as an additional dimension to this evaluation, because it interacts with the other dimensions and shows not only how these initiatives emerge to satisfy needs but also, how they empower communities by enabling them to build their capacities.

a. Satisfaction of 'alienated' needs

One of the dimensions in the framework is the satisfaction of 'alienated' human needs that emerged through deprivation and exclusion dynamics. MacCallum et al. (2009) argue that meeting human needs and changing social relations are common in all social innovation approaches. According to Moulaert (2005), these are the needs that are 'not yet' or 'no longer' perceived as important and thus, not satisfied by the mainstream actors. The 'alienated' needs in the case of the community food growing initiatives have been identified based on the community needs that triggered the establishment of the initiatives and the personal needs reported by the actors involved in these. There are some important points about the identified needs. Firstly, although in most of the food growing cases food takes central part, the 'alienated' needs are more complex and include needs for socialising, being part of a community, doing a meaningful work, staying healthy, and learning. All these various needs are clustered around the food growing as a practice. Second point is that the need for food is not just any food because in neither of the cases there is no food deprivation per se. The 'alienated' need is specifically for locally grown, sustainably grown, ecologically sound and possibly organic food. And third, many of the needs are not urgent, pressing and tangible needs but subtler and difficult to measure, 'incommensurable' (Schmelzkopf 2002).

But these might become urgent in the case of a crisis, specifically due to peak oil as articulated recurrently by the participants, and people will need to grow their own food and possess the skills necessary for doing it. Crisis is regarded as the second most important driver of social innovation apart from unsatisfied needs (Baker and Mehmood 2013). Therefore, the exclusion dynamics behind the unsatisfied needs in community food growing initiatives are more complex.

For example, many of the participants in these projects are people with environmental concerns, therefore, they are deprived of their choice and skills for sustainably produced food because of a corporation-dominated agri-food system and the commodification of food. Also, people are deprived from knowing where their food comes from, having access to outdoors and being part of a community. These are complex dynamics causing complex needs, which is in accordance with Seyfang's (2009, pp. 72-74) argument that ideology is another driver of the social innovation, and that community initiatives can satisfy needs that mainstream actors cannot, because these initiatives can work on 'fringe' issues.

Matching both community and personal needs with the benefits that people get from participating to community food growing, as presented in the results, clearly demonstrate that the community gardens and the CSA initiatives are the means for satisfying these personal and societal needs by providing the necessary resources and services, and thus, they address the first dimension of the social innovation (Miquel et al. 2013). Accordingly, satisfying the needs of these groups reverses their social exclusion from not having access to sustainably grown food, good community, learning, and all the additional benefits, therefore creating inclusive environment. However, while on the one hand these initiatives are open to anybody who wants to take part and thus satisfy important needs, in some instances they unintentionally exclude certain groups of people. This is particularly the case with some CSA initiatives where the access to local and organic food is only possible via becoming a member and subscribing, or buying vouchers, i.e. paying an upfront monetary sum.

Alternative payment system is one of the suggested solution (Farmer et al. 2014). Clwyd addressed this problem by giving their members the opportunity to 'pay with their time', by volunteering. Another CSA, Tyddewi, was considering a different system of payment where every member offers the sum that they can afford to pay, and if the sums do not add up to the budget, the procedure is repeated until the total sum matches the budget. This alternative payment method is considered fairer than imposing the same subscription fee for everybody regardless of their ability to pay. Currently, although Tyddewi did not officially adopted this system, many members only pay as much as they can afford instead of the full price. In addition, the share prices are kept to the minimum and barely provide livelihood to the farmer.

At the same time, some community gardens had arrangements to create more inclusive environment for different groups. For example, Coldwell's specific target group was adults with learning disabilities, while Afon provided inclusive environment for disabled groups and was planning to open the garden to a homeless people's group. However, exclusion is caused not only by the payment requirements at the CSA projects. The difficulty of accessing the places due to their remote location is another factor that unintentionally makes the participation to the initiatives inaccessible to certain groups. Therefore, the question is, how does social innovation theory interpret conflicting situations where satisfying certain needs inadvertently excludes other groups. Do these initiatives still count as socially innovative?

b. Mobilization of resources

The main resources that were mobilized to address the needs and create the community food growing initiatives were land, funding, leadership, intermediary organisations, and human resources. Undoubtedly, land is the most crucial of these resources as it provides the base for the activity. At the same time, it is the most problematic in terms of obtaining and is the biggest challenge for the communities (Armstrong 2000; Henderson and Hartsfield 2009). The Welsh community gardens and CSA initiatives used various strategies to find a land. The urban gardens used the allotment sites provided by the city council. Coldwell Gardens and Bont Market Garden leased their land. In all other cases land provision was based on collaborations between the landlord and the communities with various types of agreement, a way of accessing land also discussed by Franklin and Morgan (2014). In the cases of Clwyd and Glyndwr, the land was not even a part of a farm but a place full of bracken that needed cleaning before starting the gardening practice. This demonstrates that places not previously considered suitable for food growing can be turned into vegetable plots with the dedication and creativity of the communities. In the final two cases, Tyddewi and Offa, there was a real collaboration between the owner of the initiative and the community in the form of community-producer partnership CSA and producer-led CSA, respectively. Another aspect relating to land was that it affects the accessibility to the initiatives and consequently, their human capital. For this reason, it was reported by the participants as an important challenge and policy recommendation, as explained in the results.

Funding and intermediary organisations are other resources that play a significant role in nearly all the cases. These are closely related to the institutional dynamics of civil society and its relationship with the state, also discussed by Moulaert (2005). In the case of community food growing, funding plays a vital role for some of these, particularly for the community gardens. While on the one hand the initiatives need funding, on the other hand, they are also trying to keep their alternative and grassroots character. Moreover, they put huge effort to meet the targets required for securing the funding. This was interpreted by some volunteers as "millstone around the neck of the garden". The funding provided by the government under the Pillar 2 of the Common Agricultural Policy (implemented by the Rural Development Plan 2007-2013 and the Rural Development Programme 2014-2020) (WG 2016a) is usually used to finance specific parts in the project, e.g. building a polytunnel, or other facilities, and in a few of the cases, the wage for a grower.

One question that arises is how Brexit will affect the prospects for the community initiatives, particularly those dependent on the funding. There are, of course, other organisations providing grants such as Big Lottery Fund or Keep Wales Tidy, and other charitable funds as well. But losing an important source of funding due to Brexit may either impede the initiatives' development or force them to become more creative in finding new financial or self-sustaining possibilities, thus turning it into an opportunity. Intermediary organisations play an important role in supporting the projects in many ways. They provide technical assistance, legal expertise, training and networking opportunities. But they also help with access to various sources of funding. Therefore, community food growing initiatives emerge from bottom up but organisations and support from the government is essential for their institutionalisation. Intermediary organisations might play even more important role for community food growing in a post-Brexit economy.

Leadership and human capital are the other resources crucial for starting the initiative and sustaining it. In all the community garden and CSA cases, it was the leader's dedication, expertise and hard work that made these successful. In many cases, the leaders were overworked or 'self-exploited' to keep the initiative going (Hinrichs 2000). Firstly, leaders are the key people in setting up the initiatives mobilizing the other types of resources. For example, at Glyndwr Garden, members describe the project as the leader's "*baby"* and "*her"* project. And at Clwyd

members expressed that the initiative would not exist if it was not for the dedication and persistence of its founder, and they described her dedication as "*it was going to happen no matter what*". Another example is Tyddewi, where the farm owner's vision to open the farm to community participation and providing sustainably produced, local and organic food to the local community made the CSA possible.

The second point about the leaders is that they are the key people in learning and decision processes as well. On the one hand, they transfer their skills to the volunteers and members while on the other, they enable the daily running of the garden and do the planning and organisation of the activities. In many cases and specifically on non-volunteering days, they are the only people keeping the garden functioning. And finally, they play the vital role in networking too; they either share their skills with other initiatives, or take part in regional and national gatherings. In some cases, the leaders are the people who have connections to a larger network of different types of community projects, as is the case with the Bont's founding director, and Dinas' manager. However, the role of the leaders is not examined enough neither in the social innovation theory, nor in the community food growing literature. And even though Pesch et al. (2017) makes a step toward closing this gap by examining the role of individuals in community projects by using SNM framework, particularly leadership in community food growing projects remains an area yet to be studied.

Findings in all cases suggest that human capital, especially members and volunteers, is crucial for sustaining the initiatives but they are scarce. Some existing barriers like remote location is one of the reasons. However, participants' accounts reveal more complex reasons than the practical difficulties. Firstly, community food growing initiatives are not popular enough to attract more people, and the public does not know much about these places. The idea of community supported agriculture is also not well promoted. Therefore, one of the suggestions made by many interviewees was the need for promoting these initiatives. Another reason for the scarcity of human capital is the lack of interest from people, specifically young people, in growing food. Participants suggested that it is much easier for people to buy everything from the supermarket rather than making effort to grow it. Other participants linked it to lack of awareness about the food problems and a potential crisis. Many of the people involved in community food growing regard themselves as 'converted' in the sense that they are aware of

the ecological and food problems, and they care about it. For this reason, participants believe that the potential of community food growing to make change depends, among other factors, on people's behaviour change.

c. Empowerment

Moulaert et al. (2005, p. 1976, emphasis original) defines the empowerment dimension as "*increasing the socio-political capability and access to resources* needed to enhance rights to satisfaction of human needs and participation". In a similar way, Martinelli (2010, p. 42) talks about the "empowerment of marginalised social groups, through the enhancement of capabilities and the (re)creation of identity, thereby increasing their visibility, recognition, access or voice rights". Following from these definitions, different levels of empowerment can be distinguished in the case of community food growing initiatives in Wales. At micro-level, it is about increasing the capabilities of individuals and groups within the initiatives. At a higher level, it is about increasing the capabilities of food growing communities in general. Since all dimensions of social innovation are in interaction with each other (Moulaert et al. 2005), the ability of the gardens/farms to satisfy the needs of the people involved in these initiatives is one way of empowering them. Learning and decision-making are two other processes that empower people. Renting et al. (2012, p. 302) suggest that "citizens' engagement in food growing" is a way of empowerment, and it "is not necessarily related to self-sufficiency in food production". They add that community gardens give such an empowerment by providing access to healthy food in a socially inclusive way.

Findings have revealed, as presented earlier, that people learn wide range of skills, e.g. gardening, social skills, advanced horticultural skills, and management. These increase the capacity of people not only to produce their own food but also, to overcome their social isolation and connect to other like-minded people. Additionally, these capabilities make people more resilient and prepare them to cope in the event of a crisis or disruptive change. Moreover, learning within the initiatives equips individuals with skills that can make them economically powerful by either acquiring a job, or setting up their own food growing enterprises. There are examples about the latter in the case studies. For example, the head grower at Bont founded his own horticultural organic enterprise, and its assistant grower acquired a job for setting up a

new CSA. In the same way, one of the members at Glyndwr Garden was learning with the aim to set his own business. Another example is a member of Tyddewi who founded his own CSA initiative. These are all examples of how learning in community food growing projects empowers people by providing vital skills and enhancing their employability.

Decision-making is the other way of empowering people at individual level. Having their say in the processes and management of the social initiatives empowers them by enhancing their "voice rights". This varies in the different community food growing projects. In the most democratically governed cases, people have the right to take part in the management of the gardens/farms by being involved in core groups or board of directors, as it is in Clwyd or Tyddewi, and to vote at the AGM. Some projects have mechanisms to make the voice of their participants heard, such as a complaint procedure in Coldwell Gardens or feedback meetings at Dinas. But participants in all garden and farm cases feel that they take part by voicing their opinions about the projects and making suggestions informally. They also feel that their suggestions are taken into consideration, which is also a way of empowering individuals. Meanwhile, Defourny and Nyssens (2013) highlight the recent trend of diversification on the actors in social enterprises working on the same project, where even users and suppliers work and manage together. This form of democratic governance at a micro level is the case with the CSA initiatives, and is another way of empowering both the users and suppliers.

At a mid- level, increasing the socio-political capabilities happens via the membership of the community food growing initiatives in umbrella organisations like the Federation of City Farms and Community Gardens or Soil Association. These organisations and the CSA UK Network provide the link between the micro-level projects and the state at the macro-level, and create the opportunity for these projects to access resources. For example, they provide technical advice to the initiatives on different ways of obtaining funding. Another way are the programmes such as Community Land Advisory Service that helps the communities with access to land, or the newly launched programme Tyfu Fyny (Growing Up), which aims to provide mentoring and networking opportunities to the community initiatives, increase their self-sustainability, and promote the community food growing in general. These are all ways of empowering the communities, and address the second dimension of the social innovation.

d. Change in social relations

This is the final dimension of the social innovation in answering the question about the role of community food growing initiatives in Wales. Called also 'process' dimension, it refers to the change of social relations between individuals and groups, respectively, micro and macro relations (Moulaert et al. 2013). Therefore, it includes not only the change in social relations within the community but also the relations between external actors, e.g. the state, civil society and the market (González et al. 2010). The micro level change in social relations is about community building. Regarding the relations within the community food growing initiatives, people in all cases reported strong sense of community and belonging. Via sharing common practices and responsibilities, learning together, communicating and collaborating, people became part of the communities, which was a primary motive for many participants. They overcame social isolation, family problems as in the case with members of Glyndwr Garden, loneliness due to retirement or unemployment, and other problems by becoming part of the communities thus resulting in change in social relations within the groups. Multicultural exchange as in the cases of Tyddewi and Glyndwr was another aspect of this dimension.

In some of the cases, for example Afon Garden and Dinas Garden, people solve the problems in their relations arising from the collective use of space by communicating and with the help of the community. In addition, most of the cases reported insufficient interest and low participation level to the events, which demonstrated that community building is ongoing and happen at the same time with capacity building (empowerment). This can be attributed to the fact that the initiatives are relatively new, some of them only 4 years old during the time of data collection. However, change in social relations at a higher level, in a way that the power relations between the market economy and the social economy are reordered, is the ultimate target of the social innovation (Moulaert et al. 2005). The macro-level of this dimension and governance issues in the community food growing initiatives are discussed further in the section relating to the second research question about the potential of the initiatives for making change.

2. What is the potential of community gardens and community supported agriculture for making a societal change toward food sustainability?

To find an answer to this question, this section examines how the community food growing cases address three of the dimensions of social innovation. The first two are the empowerment and change in governance relations at a macro level, examined together, and the third dimension is path dependence and territorial specificity. Understanding the potential of the initiatives for making change can also reveal their wider societal impact as part of the social economy. The section also establishes links between the community food growing initiatives and the food sustainability.

a. Macro level empowerment and change in governance relations

The role of community gardens and CSA initiatives in empowering people and groups was discussed earlier. However, the participants in the case studies do not feel empowered enough at a policy level, as they think the policies and strategies adopted by the government do not include enough arrangements to promote and support community food growing in Wales. For example, they find the Food Strategy for Wales (WAG 2010b) insufficient in addressing community food growing. In addition, these community groups cannot participate in the decision-making processes relating to food. Only Offa Market Garden reported taking part in meetings about reshaping the CAP and the place of organic framework within that, and in talks of the Welsh organic growers' group with the Welsh minister for agriculture. But the garden's leader also added that these are generally 'closed doors'. In addition, the leaders of Bont and Dinas gardens take part in the local food council where they can indirectly influence the food policies.

However, it is not only the lack of policy about community food growing that limits the capacity of the groups. Sometimes it can be the insufficient participation of communities in the policy-making either due to lack of interest, lack of information about ongoing consultations on community food growing matters, or lack of time. For example, the Welsh Government published a Green Paper on improving the availability of allotments and community gardens, and opened a consultation in 2014 (Orford 2014; WG 2014a). Although it only focused on making

land available for allotments and community gardens, and did not include measures for fostering the CSA, it was nevertheless an important step toward making community food growing available to the larger society. However, although 3,250 people viewed the consultation website, there were only 69 responses to the consultation document (Senedd 2015). This demonstrates that the mechanisms for empowering people and making their voices heard cannot be used efficiently and reflects the argument of Miquel et al. (2013) that if citizens' political capacity is strong, they can influence institutions in their policy decisions; but if they are not mobilized enough, their objectives remain modest, and their influence remain within the boundaries of their community. In the case of the CGs, the problem was due to barriers like time constraint and lack of mobilization, and perhaps issues with access to information. On the one hand, they need policies that will affect their initiatives, such as an overarching strategy or action plan for community food growing, provision of land, and promotion of the idea of community food growing. On the other hand, they do not have the ability for an active mobilization due to time constraint and struggling to survive and be self-sufficient.

This issue affects not only their empowerment but also the governance relations at macro level as well, because reordering the domains of state, market and civil society requires the impact of community actors in decision-making at a government level, i.e. participatory governance. This type of governance, also named 'reflexive governance' (Marsden 2013) require non-state actors to take active part in the policy and decision-making processes, and in designing and implementing urban policies (Wiskerke 2009; Miquel et al. 2013; Matacena 2016). The involvement of various stakeholders is also a key to developing relations and trust, and obtaining variety of resources (Parra 2013). Therefore, taking part in the policy and decision-making processes is crucial for the success of community food growing initiatives because it can address all three dimensions of social innovation and enable their access to resources, their empowerment, and a change in the position of the social economy. The importance of the governance for achieving food sustainability is also emphasized by Parra (2013, p. 150):

> The claim [of alternative food networks] for bringing the food economy back home […] is socially innovative not because it makes agriculture more eco-friendly, but for the governance and value transformation that both underlies and results from the collective imagining and struggling for alternative production and consumption models.

In order to have a greater societal impact and transform the power relations that produce social exclusion, community gardens and the CSA must transform the governance mechanisms and utilise the existing ways to participate in policy and decision-making at a higher level. How this can happen is discussed further in relation to territoriality, and different ways are suggested for increasing the potential of community food growing initiatives to make a societal change.

b. Path dependence and territorial specificity

'Path dependence' refers to the influence of the past on the ability of the social innovation to make a change (Moulaert et al. 2005). It can either create 'lock-in' where the past can block the change, or 'path paving' when the past creates supportive circumstances for change, and 'path-breaking' when it results in a sudden change (González et al. 2010). Path dependence in the case of community food growing affects their ability to make a bigger societal impact. In the current circumstances, we have the dominant food system with the big corporations that commodified food and created environmental and social 'externalities' with all the problems articulated by the participants, e.g. profit-driven economy providing cheap food leading to massive food waste, disconnection of people from the source of their food, 'food miles', intensive monocrop agriculture relying on chemicals, and low prices to farmers. These are all the 'lock-ins' of the landscape resulting from path dependence, and these are both historical and structural. Path dependence also creates the difficulties and barriers that the initiatives encounter, for example, insufficient human capital because people find it easier to buy food from the supermarket rather than growing their own, difficulty in finding suitable and accessible land, and financial sustainability problems. However, the tensions in the relations between the market actors and community food growing initiatives is more articulated than tensions between the state and the initiatives. The state has a supportive role to a certain degree while the evidence of support from the private sector to the community projects is minimal.

Therefore, community food growing needs to break this path dependence and the dominance of the unsustainable food economy by becoming more powerful as a social economy. One way of challenging the dominant food system is through their alternative practices. And the other way for is through scaling up the community initiatives. Here, the territorial specificity has a significant effect. It is identified as the characteristics of a territory that determine the particular

space of the social initiatives within a broader economic space (Moulaert et al. 2005); therefore, one of the questions with regard to the socially innovative initiative is how wide it is spatially (González et al. 2010). Community food growing projects, and many other community type projects, differ from the organisational social innovation in the way they replicate. They do not replicate in a relatively uniform way such as branches managed from a central organisation. Even though all of the community garden and CSA cases are members of the Federation of the City Farms and Community Gardens (FCFCG), they do not originate from this organisation, as is the case with the Citizens Advice Bureaux, for example (Mulgan et al. 2007).

Community initiatives are separate local innovations initiated from bottom up by the communities operating within specific territorial boundaries, and these vary to great extent in terms of social purpose, size, ways of management, and the like. Therefore, they cannot diffuse in the way the organisational social innovations diffuse. They replicate in a horizontal way similar to the rhizomes, with underground network of roots with linkages to each other, as metaphorically suggested by Deleuze (Scott-Cato and Hillier 2010). Therefore, each community food initiative is locally embedded. In addition, commitment to the value of local is part of their worldview, and scaling up territorially would mean compromising their core values, as discussed in the literature review related to the social economy (Sonnino and Griggs-Trevarthen 2013). For that reason, they cannot challenge the dominant system, according to Sonnino and Griggs-Trevarthen.

One of the scaling possibilities examined in this project, was the potential collaboration of community food growing initiatives with other community projects and networks. The purpose was to evaluate the idea that community food growing initiatives can overcome the territorial barriers to their diffusion by scaling up not within the food growing movement but by collaborating with other types of community innovations that can transform to a bigger, mezzo-level social innovation. For example, they can join forces with the Transition Towns or Citta Slow movements, community energy projects, time banks and/or local currencies, or can become parts of larger-scale cooperatives. By creating new synergies and organising as bigger initiatives, they can also address some challenges and difficulties, e.g. time banks can help with human capital, or they can find joint ways for achieving financial sustainability. This can additionally raise their profile and promote the initiatives.

The interviews and observation at the case studies revealed that at present there are only attempts for collaboration. For example, Tyddewi has food exchange with a local Transition Town initiative. Clwyd has some links with the local Citta Slow movement and its members have some personal links with local community energy schemes. In addition, the leaders of Bont and Dinas have personal links with many of these projects and wider networks. In general, people involved in community food growing are aware of other types of community initiatives in their locality, and they come together at events and exchange materials. However, at present these remain as little steps rather than transforming to a real collaboration that will bring the initiatives to a higher level of social innovation. This is partially due to time constraint, since the community gardens and CSA projects put all their time and effort in sustaining the initiatives, i.e. in surviving. Another reason is that such collaboration at a higher level requires the involvement of intermediary organisations, e.g. the FCFCG, Transition Network, and other umbrella organisations. Such way of transformation to a mezzo-level social innovation will inevitably impact the power relations and will enable the initiatives to take more active part in decision-making and policy processes at macro level, which means ultimate change in the relations between the external actors.

Alternatively, a comparison between the community gardens and CSA cases demonstrates that the CSA initiatives have a better potential for both scaling up and make a societal impact. Firstly, they are income-generating enterprises and have better prospects for becoming financially sustainable. Particularly in the case of the producer-led type of CSA, Offa Market Garden, the initiative was successful in opening an outlet for its produce and providing livelihood to the grower's family. Moreover, the CSA initiatives launched their own network in the UK and became a part of the CSA European and international network, which demonstrates that they are growing as a movement in contrast to community gardens, which are only connected under the representation of the FCFCG, and their networking attempts are fragmented and 'ad hoc'.

Seyfang and Haxeltine (2012) suggest that grassroots community initiatives should network with mainstream actors as well. Some participants shared a similar idea for the diffusion of the CSA. They suggested that there should be a collaboration with the farmer unions to promote the concept of community supported agriculture to the farmers and explaining them the benefits of collaborating with local communities who will share the risks related to production. Participants

believe that this will help the struggling farms and at the same time will provide employment opportunities. The question arising from this idea is whether involving the commercial agriculture would undermine the alternative character of the CSA or on the contrary, will spread the alternativeness to these enterprises by involving the community. In both suggested ways for scaling up the community food growing initiatives, the role of the state at macro-level is essential for achieving the reordering of the governance relations; more robust strategies and dialogue with the initiatives is essential.

3. Theoretical implications

a. Reflecting on the transformative power of alternative food networks (AFNs)

A few questions arise from the literature on AFNs with regard to the transformative potential of CGs and CSA initiatives. One question is: are community food growing initiatives weak or strong alternatives? The criteria is whether these are engaged or subordinated by the conventional networks (Watts et al. 2005), and whether they use the conventions of the market economy or the moral economy (Follett 2009). The empirical data demonstrates that currently both CGs and CSA initiatives in Wales can be identified as strong alternatives. Firstly, they are not engaged with conventional networks, neither they are subordinated. Although their members articulated possibilities to engage with other farms or transferring the idea to the mainstream (in the case of CSA), they aim at transferring their alternative character rather than adopting the characteristics of the conventional networks. Secondly, they are part of the moral economy as they use the conventions of human and animal welfare, community-building, supporting small scale farmers, ecological sustainability, and trust and transparency in relations.

Another, more complicated question is: are CGs and CSA initiatives 'significantly oppositional' to the dominant system or 'primarily alternative' (Morgan et al. 2006, p. 188)? If we assume that 'oppositional' means politicised and mobilized against the dominant system, then community food growing is far from being 'significantly oppositional'. The perceptions of participants from the case studies about the position of community food growing against the main economy were predominantly centred around the argument that community initiatives are a small part of the

main economy and cannot be a substitute because their scale is not big enough. However, as Eizenberg (2012) argues, although the community initiatives' practices seem not to challenge the structures causing inequality, these practices in fact challenge the dominant system through alternative mechanisms for justice. In a similar way, Kneafsey et al. (2016) suggest that challenging the 'corporatist logic' of the food regime in community food growing can happen via building knowledge and skills and awareness raising that can lead to behavioural change and gradual transformation, which they call 'quiet sustainability'. Participants demonstrated consensus about the alternative, different values of the community gardens and the CSA projects from the main system, e.g. ecological soundness, organic and non-GM growing, valuing the food, and community and collaboration centeredness.

A final question related to the transition pathways is whether these initiatives are 'novelties' or 'niches' (Brunori et al. 2010). We should distinguish between community gardening and community supported agriculture as two different networks. Although there are differences between initiatives, community gardening in Wales is an older phenomenon compared to the CSA. It is relatively stable and replicates horizontally. However, it is not mobilized as a movement. On the contrary, the CSA is new in Wales, and emerged in the last decade, which is quite late compared to the rest of the world, e.g. US, Japan, continental Europe, and even the UK. But even though it is more recent, the CSA in Wales managed to mobilize as a network, and formed a separate Welsh group within the CSA UK Network. It is too early, though, to evaluate whether it can grow and how long it will take to consolidate and make an impact in the food system. The initiatives need to overcome their major barriers. Specifically, achieving long-term economic viability is crucial for their future (Blay-Palmer et al. 2013).

A final point that needs reflection is the argument that AFNs need to be a part of combined alternative food geographies in combination with urban food strategies, food policy councils, and public procurement (Wiskerke 2009; Matacena 2016). The Welsh context plays an important role here, as the country is predominantly rural. Urban food strategies and food policy council are usually present in cities. At present the only Welsh city with urban food strategy and food council is Cardiff. Therefore, regional food governance, and scaling up to a mid-level seems more difficult for Wales. Perhaps the Cardiff model should be replicated at regional level in other

cities and towns in Wales, which can certainly have a huge impact on the transformative power of the community food growing initiatives.

Brunori et al. (2010, p. 29) argue that even though AFNs cannot make great impact in short term, "they can have a tremendous impact on minds and hearts, as they suggest different ways of looking at things, different innovation pathways, and different rules and norms ", in other words, in 'converting' people to sustainable food. Again, the difficulty is in attracting more people into social learning (Matacena 2016). The number of 'converted' in Wales is not very big, and one of the greatest barriers articulated by the participants is the low popularity of these initiatives and particularly, the difficulty of involving young people. Therefore, community food growing in Wales need more publicity to attract wider populations.

b. Links between community food growing and food sustainability

Food sustainability was discussed as the ultimate target in social innovation and societal transformation, and was identified in the literature review chapter as a type of sustainability where "the core goal is to feed everyone sustainably, equitably and healthily; which addresses needs for availability, affordability and accessibility; which is diverse, ecologically-sound and resilient; and which builds the capabilities and skills necessary for future generations" (SDC 2009; Lang and Barling 2012). Democratic multi-level governance and transparency was added to this definition as an additional aspect. In a similar vein, Mehmood and Parra (2013, pp. 60-61) argue that socially innovative initiatives should address all the dimensions of sustainability, i.e. should waste minimum resources while aiming to be economically sustainable, should "strive to find a balance between the natural habitat and human inhabitants", and should include social groups that "tend to be left out of policy, planning and decision making".

Reflecting on the community food growing cases suggests that the practices of these initiatives fit all the aspects of the food sustainability identified above. Producing food in an ecologically sound way, making food available for everybody, and specifically building capabilities and skills are at the core of the community gardens and CSA initiatives. Moreover, they address the health dimension of food sustainability by providing fresh and sustainably grown food, means for physical activity, and therapeutic environment for participants. Therefore, making these

practices available to the wider society requires multi-scalar changes in a way that includes the community food growing groups in the processes of governance. From the social justice point of view, social inclusion is essential for food sustainability, although there is no direct link between the two concepts. First connection is the social pillar of sustainability, which means that sustainability is achieved when there is social justice, coupled with economic and environmental sustainability. The second link is that sustainable food systems requires food availability and accessibility for all people, which is a position of social inclusion.

c. Links between different approaches of social innovation

One theoretical implication is that there are similarities between the societal approach of social innovation (Moulaert et al. 2013) and the socio-technical transitions approach based on New Economics thought as suggested by Seyfang (2009). Although these are not mutually exclusive, bringing the two schools of thought together can contribute to a more overarching theory of social innovation. Firstly, both approaches regard social economy as the driving force of the social/ grassroots innovation, and emphasize the common idea that the aim of social economy is benefitting the community rather than being motivated by profit. Community food growing is a good example demonstrating benefits for the larger society. Another common aspect relates to the importance of keeping the alternative character of the social/grassroots innovation.

According to the societal approach, the socially innovative initiatives need to preserve their critical stance towards the dominant governance mechanisms while institutionalising, otherwise they risk being incorporated into the mainstream system (Moulaert et al. 2005; Miquel et al. 2013). In a similar way, the New Economics approach (Seyfang 2009, p. 81) draws attention to the possibility of the alternative activities being appropriated by the regime in the event of sustainability pressures, interpreted as one of the challenges of diffusion. This is one of the dilemmas for the community food growing projects. In search of ways to become financially sustainable, one of the options is the commercialisation or collaboration with market actors. The initiatives should be careful about preserving their alternative character. The guiding principle must be the aim to benefit the society rather than making profit. And a final connection is that both approaches aim at a wider societal change and social transformation rather than a quick fix or organisational change. For example, Seyfang (2009) regards the grassroots

innovations as ‘seeds of change’. Similarly, Jessop et al. (2013) points out that social innovation aims at social change and human development, and fostering social inclusion including transformative social practices.

d. Evaluating ALMOLIN as analytical tool

ALMOLIN proved a very useful analytical tool for the purposes of this research by enabling the detailed examination of various dynamics and processes of innovation. More importantly, it provided a framework for scrutinizing the role of community food growing. Nevertheless, there are a few problematic aspects arising from this study of community food growing in Wales that may need further refining and developing. One of these aspects is the meaning of deprivation and social exclusion, presented in the model as a drive for social innovation. According to the model, ‘alienated’ or ‘unsatisfied’ needs create exclusionary dynamics, which then lead to mobilizing resources and creating the social economy initiative. In the case of community food growing initiatives, we discussed in detail that there was a complex of unsatisfied needs that motivated the emergence of the initiatives, namely, sustainably and ethically produced fresh food, community building, transfer of skills, and tackling social isolation.

On the one hand, referring to the meaning of social exclusion as discussed in the AFN literature reveals that it is centred around inability to access or participate to certain rights (Shortall 2008), which fits in with the situation in the community food growing initiatives. On the other hand, the social innovation literature interprets social exclusion in a broader sense, from the social justice perspective, and posits that social innovation is about countering conservative forces that strengthen or preserve social exclusion (Moulaert et al. 2013). This is relevant to the way social exclusion is interpreted in the AFN literature. My critic here is that unsatisfied needs do not necessarily create social exclusion as it is presented in the model. The case of community food growing in Wales demonstrates that, indeed, there are community needs as driver for setting up initiatives. However, these needs do not create exclusionary situation. Therefore, one recommendation is that either the ‘needs’ or ‘exclusionary dynamics’ need to be refined and developed in the model.

Other aspects that can be further developed in the model are summarised in a few bullet points.

- Barriers and difficulties encountered by the community initiatives do not directly take part in the model. Although these are explained in the theory under path dependence, they could be more explicit as they have a crucial impact on the transformative potential of the networks.
- Different levels of governance can be incorporated within the change of social relations dimension.
- In the same way, AFN literature offers various transition pathways, which do not fit within ALMOLIN. Again, these can be incorporated within 'change in social relations'.
- The final point is about benefits and learning, which do not explicitly take part in any part of the model. In the case study analysis, the benefits were analysed under the 'satisfaction of needs' but these are not completely equivalent. In a similar way, learning was analysed under the 'empowerment' dimension but its importance exceeds far the empowerment.

4. Policy recommendations

There are also several policy recommendations that this research generated. One of these is related to the need for raising the profile of community gardening and the CSA by promoting the idea of sustainably grown food. Participants suggested that this is not only the responsibility of individual growers but also the government to inform the masses about the benefits of community food growing and eating locally, and to promote the idea of community supported agriculture. They think there should be more TV programmes about community food growing that can attract particularly young people's interest. In addition to its promotion, the government should recognise the role of the CSA in providing long-term sustainable rural livelihoods that also support the health of communities.

Another policy-related recommendation is about the need for more horticultural training. Participants suggested that the colleges do not have enough programmes on horticultural training and that the government should ensure that these include more training on food growing in order to enhance food growing skills especially among the young people, thus tackling the unemployment problem as well. Other recommendations include adoption of a

nation-wide strategy of community food growing, support packages particularly at the initial stage of the CSA projects, more school gardens to raise awareness about the sustainably grown food and fairer payment to the farmers, i.e. better value for the produce that will indirectly attract more people into growing food as a job.

And finally, several recommendations arising from this research relate specifically to the CSA initiatives. One of these is about the way of institutionalisation. CSA initiatives must think of the best form of institutionalising to avoid vulnerabilities due to loss of social capital or members. These vulnerabilities seem more likely to happen in a purely community-led model but they can happen in all different models. Therefore, CSA initiatives must develop better structures and mechanisms to preserve their social capital. Another recommendation is about the payment options for the members of some CSA projects that may be a barrier for social inclusiveness, as discussed in relation to satisfaction of needs. These initiatives can develop alternative payment mechanisms that work for all segments of society, and particularly for lower-income groups.

5. Limitations

The limitations of this research are mainly related to methodological issues. The major limitation is that the study is based predominantly on the perceptions of actors in community food growing initiatives coupled with the author's observations, conversations with actors from intermediary organisations, and information from their social media and websites. Additional data from intermediary organisations, food policy council, regional government and policy-makers can complement the study. Another limitation is that even though this study discusses community food growing in general, the empirical evidence is only based on two types of community food growing, namely community gardens and community supported agriculture. Community food growing encompasses various types of initiatives, e.g. community orchards, school gardens, and even allotments according to the Community Grown Food Action Plan (WAG 2010a). Community gardens and CSA projects were chosen as the two most popular types of community food growing for the purposes of better focus in the research.

Third limitation is that the research is based on qualitative methods of eight case studies, and even though the number of cases is high and these were selected to represent diverse criteria,

results cannot be generalised and attributed to the entire community food growing phenomenon. Further research based on quantitative methods is needed in two ways: (1) to study a wider sample of community food growing projects, and (2) to extend the research to people who do not do gardening to make comparisons and understand why more people do not participate in community food growing. This is also a recommendation for further research.

And a final limitation is about the type of methodology used in this research. Social innovation literature, specifically the societal approach, highlights the importance of transdisciplinary research based on participatory techniques or knowledge alliances for making a societal impact (Novy et al. 2013). A transdisciplinary reflexive research requires determining the research problems/aims by a transdisciplinary research group where all stakeholders take part and address not only the problems of human development but also practical aspects like the stages of the research and every party's role (Jessop et al. 2013). Therefore, the researcher has an active role as an agent of change. And although the suitability of case studies and qualitative methods for this research were discussed in the methodology, ideally, research on social innovation that leads to a societal change is possible in a transdisciplinary way.

III. Conclusion

This thesis emerged from the idea that community gardens and community supported agriculture can play a much wider role in the society than merely providing some benefits to a small group of people who love gardening. In contrast, they are regarded as part of the social economy with a potential to make a greater societal impact. The main argument is that the dominant food system has reached its limits and its inefficiency causes irreversible ecological, health, and financial complications on a global scale; therefore, transition to more sustainable food systems is urgently needed, and community food growing initiatives can play an important role in such transition. Social innovation provided a useful framework in answering the two main research questions, namely, (1) what is the socially innovative role of community gardens and community supported agriculture? and (2) what is their potential for making a societal change toward food sustainability? The geographical focus of this research was Wales, where there was a huge interest to community food growing and a rapid increase in the number of initiatives and support programmes, while the scholarly interest remained low. Qualitative data from four

community gardens and four community supported agriculture initiatives in different regions of Wales was analysed by using the Alternative Model for Local Innovations (ALMOLIN).

Regarding the first question about the role of community food growing in Wales, results demonstrated that the studied community gardens and the CSA cases play an important role in satisfying 'alienated' needs that the market actors failed to address, particularly sustainably produced food, being part of a community, learning, and physical and mental health. Another major role of these initiatives is their empowering of individuals and communities via learning and decision-making opportunities and networking. Finally, they contribute to the of change social relations at micro level, within the initiatives, and improve people's communications and collaboration. Therefore, through practicing food growing together, these initiatives become the means of addressing social exclusion, building individual and group capacities, and building communities.

As to the second research question about the potential of community gardens and community supported agriculture for making change toward food sustainability, results showed that on the one hand, community gardens and CSA projects are currently locked in path dependent and territorially embedded systems that cause a range of challenges and barriers for these initiatives and impedes their potential for real change, while on the other hand, they possess the potential to make a longer-term change and challenge the dominant system in two ways: (1) by preserving their alternative values and practicing 'quiet' sustainability, which is possible with their replication and growing as a movement, and (2) by scaling up in collaborating and making coalitions with different community movements or including mainstream actors. Intermediary organisations need to play more active role in facilitating such a process while at the same time collaborate and create synergies between each other, thus scaling community initiatives to a mezzo-level. At macro-level, the government should promote community food growing to the wider public, recognize its importance for food sustainability, and include it in a more visible way in policy documents, thus ensuring the participation of community food growing groups to decision-making and policy processes.

A significant finding is that on the one hand, community food growing initiatives are markedly creative in mobilizing resources, for example, they use their relations with landlords to find plots

and when necessary, they turn places that are not appropriate for growing food into plots by clearing them. On the other hand, the lack of time and human resources prevents them from taking more active part in networking and policy-formulations. Another finding is that the success of the initiatives depends largely on a strong and dedicated leadership having vision for sustainable living and alternative values, possessing relevant skills and expertise, and being connected to a large network of alternative practices; however, leaders in almost all cases make sacrifices by being over-worked and under-paid. Yet another finding shows that while addressing exclusion by satisfying important needs of certain groups, many of the cases inadvertently exclude other groups of people, e.g. due to difficult to access locations or, in the case of community supported agriculture, due to the requirement of a set upfront payment. In addition, results demonstrate that community food growing initiatives are relatively new and their average age is just above five years compared to other social innovation cases existing for much longer period. Especially the CSA cases are 4-5 years old. Therefore, they need time to become institutionalised, to replicate and possibly scale up.

Following from the findings, one of the theoretical implications is that making connections with some approaches and concepts can contribute toward a more encompassing theory of social innovation. For example, in the case of community food growing initiatives there are links between the societal-territorial approach of social innovation and New Economics approach, specifically about the not-for-profit character of the social economy, improvement of human wellbeing, and the importance of preserving the alternative values of the initiatives. Also, there are connections between social innovation and food justice concepts, e.g. regarding the transformation of the current food system and decommodification of food. Policy recommendations include raising the public profile of community food growing and the recognition of its role for food sustainability, a nation-wide strategy for community food growing providing the participation of the communities in policy-making, more formal horticultural training, support packages for starting up new initiatives, fairer payments to the farmers, and more school gardens for awareness-raising about growing food.

One of the recommendations for further research is the role of leadership in mobilization of resources in socially innovative initiatives. Perhaps a comparison can be made between the leaderships of different types of initiatives. The second recommendation is about a

transdisciplinary research on testing different ways of scaling up either by creating coalitions between different types of community initiatives or between community initiatives and private actors. In the case of community food growing initiatives, possible coalitions can include Transition Towns, community currencies or time banks, community energy and cooperatives. Another concrete recommendation for collaboration emanating from the results is creating new community supported agriculture initiatives by cooperating with private farms. Both recommendations for scaling up studies require a transdisciplinary strategy, either through action research or participatory research, with the involvement of all parties at every stage. A final recommendation is about extending the research with quantitative methods to all community food growing initiatives in the UK to allow comparisons between the different countries. In addition, including people who are not involved in food growing will enable to understand the motives of people for not participating. In addition, longitudinal type of research.

The overall contribution of this research is to demonstrate the wider societal role of community gardens and community supported agriculture and their potential for making a social change toward more sustainable food systems. The contribution of the thesis is threefold. It contributes to the literature of community gardens and community supported agriculture by examining these initiatives from the social innovation perspective and by using ALMOLIN as an innovative analytical tool that has not been applied to community food growing initiatives. Along the theoretical implications about making connections with the New Economics approach and food justice concept, it further contributes to the social innovation literature with the specific case study of community food growing. A final contribution is addressing the geographical gap of the phenomena by focusing on Wales as an under-researched area regarding community food growing by using large number of case studies to allow a comparison between its different regions and the types of initiatives.

BIBLIOGRAPHY

Aiking, H. and de Boer, J. 2004. Food sustainability: Diverging interpretations. *British Food Journal* 106(5), pp. pp. 359-365.

Alaimo, K. et al. 2010. Community gardening, neighborhood meeting, and social capital. *Journal of Community Psychology* 38(4), doi: 10.1002/jcop.20378

Allen IV, J. E. et al. 2017. Do Community Supported Agriculture programmes encourage change to food lifestyle behaviours and health outcomes? New evidence from shareholders. *International Journal of Agricultural Sustainability* 15(1), pp. 70-82.

Aptekar, S. 2015. Visions of Public Space: Reproducing and Resisting Social Hierarchies in a Community Garden. *Sociological Forum* 30(1), pp. 209-227.

Armstrong, D. 2000. A survey of community gardens in upstate New York: Implications for health promotion and community development. *Health & Place* 6(4), pp. 319-327. doi: 10.1016/s1353-8292(00)00013-7

Baker, S. and Mehmood, A. 2013. Social innovation and the governance of sustainable places. *Local Environment: The International Journal of Justice and Sustainability*, doi: http://dx.doi.org/10.1080/13549839.2013.842964

Barron, J. 2016. Community gardening: cultivating subjectivities, space, and justice. *Local Environment*, pp. 1-17.

Beilin, R. and Hunter, A. 2011. Co-constructing the sustainable city: how indicators help us "grow" more than just food in community gardens. *Local Environment: The International Journal of Justice and Sustainability* 16(6), pp. 523-538.

Belz, F.-M. 2004. A transition towards sustainability in the Swiss agri-food chain (1970–2000): using and improving the multi-level perspective. In: Elzen, B. et al. eds. *System innovation and the transition to sustainability: theory, evidence and policy*. Cheltenham/UK - Northampton/MA/USA: Edward Elgar.

BEPA. 2011. *Empowering people, driving change: Social innovation in the European Union*. Luxembourg: Publications Office of the European Union.

Berger, R. 2015. Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research* 15(2), pp. 219–234.

Bergman, N. et al. 2010. Bottom-up, social innovation for addressing climate change. *Energy transitions in an interdependent world: what and where are the future social science research agendas?* Brighton, East Sussex, 25-26 February. Sussex Energy Group, The University of Sussex.

Blay-Palmer, A. et al. 2013. Constructing resilient, transformative communities through sustainable “food hubs”. *Local Environment* 18(5), pp. 521–528.

Blay-Palmer, A. et al. 2016. A food politics of the possible? Growing sustainable food systems through networks of knowledge. *Agriculture and Human Values* 33, pp. 27–43. doi: 10.1007/s10460-015-9592-0

Brunori, G. 2007. Local food and alternative food networks: a communication perspective. *Anthropology of Food* (S2), pp. 1-20.

Brunori, G. et al. 2010. Co-producing Transition: Innovation Processes in Farms Adhering to Solidarity-based Purchase Groups (GAS) in Tuscany, Italy. *International Journal of Sociology of Agriculture and Food* 18(1), pp. 28–53.

Calvário, R. and Kallis, G. 2017. Alternative Food Economies and Transformative Politics in Times of Crisis: Insights from the Basque Country and Greece. *Antipode* 49(3), pp. 597–616.

Caraher, M. and Dowler, E. 2014. Food for Poorer People: Conventional and "Alternative" Transgressions. In: M., G. and Sage, C. eds. *Food Transgressions: Making Sense of Contemporary Food Politics*. Farnham, Surrey: Ashgate, pp. 227-246.

Castro, D. C. et al. 2013. Growing Healthy Kids: A Community Garden–Based Obesity Prevention Program. *American Journal of Preventive Medicine* 44, pp. 193-199.

Chang, R.-d. et al. 2017. Approaches for Transitions Towards Sustainable Development: Status Quo and Challenges. *Sustainable Development*, doi: 10.1002/sd.1661

Chapin, F. S., III et al. 2011. Earth stewardship: a strategy for social–ecological transformation to reverse planetary degradation. *Journal of Environmental Studies and Sciences* 1, pp. 44-53. doi: 10.1007/s13412-011-0010-7

CLAS. no date. *About CLAS Cymru: Community Land Advisory Service in Wales (CLAS Cymru)*. Available at: https://wl.communitylandadvice.org.uk/ [Accessed: 24.03.2017].

Clifford, N. et al. eds. 2010. *Key Methods in Geography.* 2nd ed. Sage.

Cloke, P. et al. 2004. *Practising Human Geography*. Sage.

Cohen, J. N. et al. 2012. Community Supported Agriculture: A Commitment to a Healthier Diet. *Journal of Hunger & Environmental Nutrition* 7, pp. 20–37.

Cohen, N. and Ilieva, R. T. 2015. Transitioning the food system: A strategic practice management approach for cities. *Environmental Innovation and Societal Transitions* 17, pp. 199–217.

Cook, I. 2005. Participant Observation. In: Flowerdew, R. and Martin, D. eds. *Methods in Human Geography: A guide for students doing a research project*. 2nd ed. Pearson.

Cooley , J. P. and Lass, D. A. 1998. Consumer Benefits from Community Supported Agriculture Membership. *Review of Agricultural Economics* 20(1), pp. 227-237.

Corrigan, M. P. 2011. Growing what you eat: Developing community gardens in Baltimore, Maryland. *Applied Geography* 31(4), pp. 1232-1241. doi: 10.1016/j.apgeog.2011.01.017

Cox, R. et al. 2008. Common ground? Motivations for participation in a community-supported agriculture scheme. *Local Environment: The International Journal of Justice and Sustainability* 13(3), pp. 203-218.

Cox, R. et al. 2014. Greater Than the Sum of the Parts?: Unpacking Ethics of Care Within a Community Supported Agriculture Scheme. In: Goodman, M.K. and Sage, C. eds. *Food Transgressions: Making sense of Contemporary Food Politics*. London and New York: Routledge, pp. 61-82.

Crang, M. 2005. Analysing qualitative materials. In: Flowerdew, R. and Martin, D. eds. *Methods in Human Geography: A guide for students doing a research project*. 2nd ed. Pearson, pp. 218-232.

CSA_Europe. 2016. *Overview of Community Supported Agriculture in Europe*.

CSA_UK. no date-a. *Find a CSA*. Available at: https://communitysupportedagriculture.org.uk/find-csa/ [Accessed: 24.03.2017].

CSA_UK. no date-b. *Our history*. Community Supported Agriculture UK. Available at: https://communitysupportedagriculture.org.uk/about/history/ [Accessed: 13.03.2017].

da Costa, A. 2006. *The Stern Review: The Science of Climate Change.* The Ecologist.

Dahlberg, K. A. 1994. A Transition from Agriculture to Regenerative Food System. *Futures* 26(2), pp. 170-179. doi: 10.1016/0016-3287(94)90106-6

DBS. no date. *Disclosure & Barring Service: About us*. UK Government Disclosure and Barring Service. Available at: https://www.gov.uk/government/organisations/disclosure-and-barring-service/about [Accessed: 22.03.2017].

Defourny, J. and Nyssens, M. 2013. Social innovation, social economy and social enterprise: what can the European debate tell us? In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 40-52.

Drewnowski, A. 2009. Obesity, diets, and social inequalities. *Nutrition Reviews* 67(5), pp. S36-S39. doi: 10.1111/j.1753-4887.2009.00157.x

Duncan, J. and Pascucci, S. 2017. Mapping the Organisational Forms of Networks of Alternative Food Networks: Implications for Transition. *Sociologia Ruralis* 57, pp. 316–339.

EC. 2017. *Growth: Regional Innovation Monitor Plus: Wales*. European Commission. Available at: https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/wales [Accessed: 24.03.2017].

Eisenhardt, K. M. 1989. Building theories from case-study research. *Academy of Management Review* 14(4), pp. 532-550. doi: 10.2307/258557

Eizenberg, E. 2012. Actually Existing Commons: Three Moments of Space of Community Gardens in New York City. *Antipode* 44(3), doi: 10.1111/j.1467-8330.2011.00892.x

Elgot, J. 2014. *The Secret Gardens Of Syria's Refugee Camps*. The Huffington Post: Available at: http://www.huffingtonpost.co.uk/2014/10/29/secret-gardens-of-syrias-refugee-camps_n_6068550.html [Accessed: 15.03.2017].

Emmett, R. 2011. Community Gardens, Ghetto Pastoral, and Environmental Justice. *Isle-Interdisciplinary Studies in Literature and Environment* 18(1), doi: 10.1093/isle/isq127

Evers, A. and Hodgson, N. L. 2011. Food choices and local food access among Perth's community gardeners. *Local Environment: The International Journal of Justice and Sustainability* 16:6, pp. 585-602. doi: http://dx.doi.org/10.1080/13549839.2011.575354

FAO et al. 2015. *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome:

Farmer, J. R. et al. 2014. Agrileisure: Farmers' Markets, CSAs, and the Privilege in Eating Local. *Journal of Leisure Research* 46(3), pp. 313–328.

Farnsworth, R. L. et al. 1996. Community Supported Agriculture: Filling a Niche Market. *Journal of Food Distribution Research* (February), pp. 90-98.

FCFCG. no date-a. *A bit of history*. Federation of City Farms and Community Gardens. Available at: https://www.farmgarden.org.uk/bit-history [Accessed: 12/03/2017].

FCFCG. no date-b. *Tyfu Fyny - a new programme to support community growing in Wales*. FCFCG. Available at: https://www.farmgarden.org.uk/tyfu-fyny [Accessed: 24.03.2017].

FCFCG. no date-c. *Wales*. Federation of City Farms and Community Gardens. Available at: https://www.farmgarden.org.uk/your-area/wales [Accessed: 22.03.2017].

Feenstra, G. 2002. Creating Space for Sustainable Food Systems: Lessons from the Field. *Agriculture and Human Values* 19(2), pp. 99–106.

Feola, G. and Butt, A. 2017. The diffusion of grassroots innovations for sustainability in Italy and Great Britain: an exploratory spatial data analysis. *The Geographical Journal* 183(1), pp. 16–33.

Feola, G. and Nunes, R. 2014. Success and failure of Grassroots Innovations for addressing climate change: the case of the Transition Movement. *Global Environmental Chang* 24, pp. 232-250.

Ferris, J. et al. 2001. People, land and sustainability: Community gardens and the social dimension of sustainable development. *Social Policy & Administration* 35(5), doi: 10.1111/1467-9515.t01-1-00253

Firth, C. et al. 2011. Developing "community" in community gardens. *Local Environment: The International Journal of Justice and Sustainability* 16(6), pp. 555-568.

Flora, C. B. and Bregendahl, C. 2012. Collaborative Community-supported Agriculture: Balancing Community Capitals for Producers and Consumers. *International Journal of Sociology of Agriculture & Food* 19(3), pp. 329–346.

Flowerdew, R. and Martin, D. eds. 2005. *Methods in Human Geography: A guide for students doing a research project.* 2nd ed. Pearson.

Flyvbjerg, B. 2006. Five misunderstandings about case-study research. *Qualitative Inquiry* 12(2), pp. 219-245. doi: 10.1177/1077800405284363

Follett, J. R. 2009. Choosing a Food Future: Differentiating Among Alternative Food Options. *Journal of Agricultural Environmental Ethics* 22, pp. 31–51. doi: 10.1007/s10806-008-9125-6

Fougère, M. et al. 2017. A critical reading of the European Union's social innovation policy discourse: (Re)legitimizing neoliberalism. *Organization*, pp. 1-25.

Franklin, A. and Blyton, P. eds. 2011. *Researching Sustainability: A Guide to Social Science Methods, Practice and Engagement.* Earthscan.

Franklin, A. and Morgan, S. 2014. Exploring the new rural–urban interface: community food practice, land access and farmer entrepreneurialism. In: Marsden, T. and Morley, A. eds. *Sustainable Food Systems: Building a new paradigm*. Routledge, pp. 166-185.

Freedman, M. R. and King, J. K. 2016. Examining a New "Pay-as-You-Go" Community-Supported Agriculture (CSA) Model: A Case Study. *Journal of Hunger & Environmental Nutrition* 11, pp. 122–145.

Galt, R. E. 2013. The moral economy is a double-edged sword: explaining farmer earnings and self-exploitation in Communityn Supported Agriculture. *Eonomic Geography* 89(4), pp. Pages 341–365.

Galt, R. E. et al. 2016. What difference does income make for Community Supported Agriculture (CSA) members in California? Comparing lower-income and higher-income households. *Agriculture and Human Values* 34(2), pp. 435-452.

Garnett, T. 1996. *Growing Food in Cities: A report to highlight and promote the benefits of urban agriculture in the UK*. Alliance, N.F.A.a.S.

Garnett, T. 2013. Food sustainability: problems, perspectives and solutions. *Proceedings of the Nutrition Society* 72, pp. 29-39.

Geels, F. W. 2011. The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions* 1, pp. 24–40.

Geels, F. W. and Schot, J. 2007. Typology of sociotechnical transition pathways. *Research Policy* 36(3), pp. 399-417. doi: 10.1016/j.respol.2007.01.003

Ghose, R. and Pettygrove, M. 2014. Urban Community Gardens as Spaces of Citizenship. *Antipode* 46(4), pp. 1092–1112.

Ghosh, S. 2010. Sustainability potential of suburban gardens: review and new directions. *Australasian Journal of Environmental Management* 17(3), pp. 165-175.

Gibson-Graham, J. K. 2006. *A Postcapitalist Politics*. Minneapolis-London: University of Minnesota Press.

Giddings, B. et al. 2002. Environment, economy and society: Fitting them together into sustainable development. *Sustainable Development* 10(4), pp. 187-196. doi: 10.1002/sd.199

Gill, S. E. et al. 2007. Adapting Cities for Climate Change: The Role of the Green Infrastructure. *Built Environment* 33(1), pp. 115-133.

Glover, T. D. 2004. Social capital in the lived experiences of community gardeners. *Leisure Sciences* 26(2), pp. 143-162. doi: 10.1080/01490400490432064

Glover, T. D. et al. 2005. Building relationships, accessing resources: Mobilizing social capital in community garden contexts. *Journal of Leisure Research* 37(4), pp. 450-474.

Goland, C. 2002. Community Supported Agriculture, Food Consumption Patterns, and Member Commitment. *Culture & Agriculture* 24(1), pp. 14–25.

Gomez, B. and Jones, J. P. I. eds. 2010. *Research Methods in Geography: A Critical Introduction.* Wiley-Blackwell.

González, S. et al. 2010. ALMOLIN: How to analyse social innovation at the local level? In: Moulaert, F. et al. eds. *Can Neighbourhoods Save the City?: Community development and social innovation*. London and New York: Routledge, pp. 49-67.

Goodman, D. 2004. Rural Europe redux? Reflections on alternative agro-food networks and paradigm change. *Sociologia Ruralis* 44(1), pp. 3–16.

Goodman, D. E. et al. 2011. *Alternative Food Networks: Knowledge, practice, and politics*. London and New York: Routledge.

Gottlieb, R. and Joshi, A. 2010. *Food Justice*. MIT Press.

Grewal, S. S. and Grewal, P. S. 2012. Can cities become self-reliant in food? *Cities* 29(1), doi: 10.1016/j.cities.2011.06.003

Groves, J. 2015a. *FCFCG Community Supported Agriculture Scoping Study moves into Phase Two*. Available at: http://www.tyfupobl.org.uk/fcfcg-community-supported-agriculture-scoping-study-moves-phase-two/ [Accessed: 24.03.2017].

Groves, J. 2015b. *FCFCG Wales commissions community supported agriculture scoping study*. Available at: http://www.tyfupobl.org.uk/community-supported-agriculture-scoping-study/ [Accessed.

Growing_Together. no date. *About Us*. Available at: https://www.growingtogether.community/content/about-us [Accessed: 24.03.2017].

Guitart, D. et al. 2012. Past results and future directions in urban community gardens research. *Urban Forestry & Urban Greening* 11(4), pp. 364-373. doi: 10.1016/j.ufug.2012.06.007

Guthman, J. 2008. Bringing Good Food to Others: Investigating the Subjects of Alternative Food Practice. *Cultural Geographies* 15(4), pp. 431-447.

Hale, J. et al. 2011. Connecting food environments and health through the relational nature of aesthetics: Gaining insight through the community gardening experience. *Social Science & Medicine* 72(11), pp. 1853-1863. doi: 10.1016/j.socscimed.2011.03.044

Hamdouch, A. 2013. Introduction: 'reality' a a guide for SI research methods? In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 259-263.

Hancock, D. R. and Algozzine, B. 2006. *Doing case study research: a practical guide for beginning researchers*. New York and London: Teachers College Press, Columbia University.

Hargreaves, T. 2011. Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change. *Journal of Consumer Culture* 11(1), pp. 79–99.

Hargreaves, T. et al. 2013a. Grassroots innovations in community energy: The role of intermediaries in niche development. *Global Environmental Change* 23(5), pp. 868–880.

Hargreaves, T. et al. 2013b. Up, down, round and round: connecting regimes and practices in innovation for sustainability. *Environment and Planning A* 45, pp. 402-420.

Harvey, D. 2012. *Rebel cities : from the right to the city to the urban revolution*. London, New York: Verso.

Hayden, J. and Buck, D. 2012. Doing community supported agriculture: Tactile space, affect and effects of membership. *Geoforum* 43(2), pp. 332-341. doi: 10.1016/j.geoforum.2011.08.003

Henderson, B. R. and Hartsfield, K. 2009. Is Getting into the Community Garden Business a Good Way to Engage Citizens in Local Government? *National Civic Review* Winter.

Henley, J. 2010. *Green valleys: sustainable food in Wales*. The Guardian: Available at: http://www.theguardian.com/lifeandstyle/2010/oct/21/green-valleys-sustainable-food-wales [Accessed: 3 October].

Hinchliffe, S. et al. 2007. Ecologies and economies of action - sustainability, calculations, and other things. *Environment and Planning A* 39(2), pp. 260-282. doi: 10.1068/a38110

Hinrichs, C. and Kremer, K. S. 2002. Social Inclusion in a Midwest Local Food System Project. *Journal of Poverty* 6(1), pp. 65-90.

Hinrichs, C. C. 2000. Embeddedness and local food systems: notes on two types of direct agricultural market. *Journal of Rural Studies* 16, pp. 295-303.

Hinton, L. 2016. *Home In The Garden: A Case Study of the Lhotsampa Refugee Community's Use Of A Community Garden In Halifax, Nova Scotia.* Dalhousie University, Halifax, Nova Scotia.

Hitchings, R. 2013. *Key factors determining the long term success of CSA projects in Wales*.

Hoggart, K. et al. 2002. *Researching Human Geography*. London: Arnold.

Holland, L. 2004. Diversity and connections in community gardens: a contribution to local sustainability. *Local Environment: The International Journal of Justice and Sustainability* 9(3), pp. 285-305. doi: http://dx.doi.org/10.1080/1354983042000219388

Hopwood, B. et al. 2005. Sustainable development: Mapping different approaches. *Sustainable Development* 13(1), pp. 38-52. doi: 10.1002/sd.244

Horticulture_Wales. *Horticulture_Wales*. Available at: http://www.horticulturewales.co.uk/default.aspx [Accessed: 13.06.2016].

Howaldt, J. et al. 2014. *Theoretical Approaches to Social Innovation - A Critical Literature Review*. Dortmund:: Sozialforschungsstelle.

Howaldt, J. and Schwarz, M. 2017. Social Innovation and Human Development—How the Capabilities Approach and Social Innovation Theory Mutually Support Each Other. *Journal of Human Development and Capabilities*, pp. 1-18.

Hynes, H. P. and Howe, G. 2004. Urban horticulture in the contemporary united states: Personal and community benefits. *Proceedings of the International Conference on Urban Horticulture* (643), pp. 171-181.

Jamison, M. S. 1985. The Joys of Gardening: Collectivist and Bureaucratic Cultures in Conflict. *Sociological Quarterly* 26(4), pp. 473-490. doi: 10.1111/j.1533-8525.1985.tb00239.x

Janssen, B. 2010. Local Food, Local Engagement: Community-Supported Agriculture in Eastern Iowa. *Culture & Agriculture* 32(1), pp. 4–16. doi: 10.1111/j.1556-486X.2010.01031.x.

Jermé, E. S. and Wakefield, S. 2013. Growing a just garden: environmental justice and the development of a community garden policy for Hamilton, Ontario. *Planning Theory & Practice* 14(3), pp. 295-314.

Jessop, B. et al. 2013. Social innovation research: a new stage in innovation analysis? In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 110-130.

Jørgensen, U. 2012. Mapping and navigating transitions—The multi-level perspective compared with arenas of development. *Research Policy* 41, pp. 996– 1010.

Karvonen, A. 2013. Towards systemic domestic retrofit: a social practices approach. *Building Research and Information* 41(5), pp. 563---574.

Kemp, R. et al. 1998. Regime shifts to sustainability through processes of niche formation: The approach of strategic niche management. *Technology Analysis & Strategic Management* 10(2), pp. 175-195. doi: 10.1080/09537329808524310

King, C. A. 2008. Community resilience and contemporary agri-ecological systems: Reconnecting people and food, and people with people. *Systems Research and Behavioral Science* 25(1), pp. 111-124. doi: 10.1002/sres.854

Kitchin, R. and Tate, N. J. 2000. *Conducting Research in Human Geography: Theory, Methodology and Practice*. Routledge.

Klein, J.-L. 2013. Introduction: social innovation at the crossrods between science, economy and society. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 9-12.

Kloppenburg, J. et al. 2000. Tasting food tasting sustainability: Defining the attributes of an alternative food system with competent, ordinary people. *Human Organization* 59(2), pp. 177-186.

Kneafsey, M. et al. 2016. Capacity building for food justice in England: the contribution of charity-led community food initiatives. *Local Environment* 22(5), pp. 621-634.

Kurtz, H. 2001. Differentiating multiple meanings of garden and community. *Urban Geography* 22(7), pp. 656-670.

Lang, T. and Barling, D. 2012. Food security and food sustainability: reformulating the debate. *Geographical Journal* 178, pp. 313-326. doi: 10.1111/j.1475-4959.2012.00480.x

Lang, T. and Heasman, M. 2004. *Food Wars: The Global Battle for Mouths, Minds and Markets*. 1st ed. London, Sterling VA: Earthscan.

Larson, J. T. 2006. A comparative study of community garden systems in Germany and the United States and their role in creating sustainable communities. *Arboricultural Journal* 29(2), pp. 121-141.

Laurier, E. 2010. Participant observation. In: Clifford, N. et al. eds. *Key Methods in Geography*. 2nd ed. Sage.

Lawrence, G. et al. eds. 2010. *Food Security, Nutrition and Sustainability.* London, Sterling VA: Earthscan.

Lawson, L. J. 2005. *City Bountiful: A Century of Community Gardening in America*. Berkeley, Los Angeles, London: University of California Press.

Lefebvre, H. 1991. *The Production of Space*. Blackwell Publishing.

Liedtke, C. et al. 2015. User-integrated innovation in Sustainable LivingLabs: an experimental infrastructure for researching and developing sustainable product service systems. *Journal of Cleaner Production* 97, pp. 106-116.

Liverman, D. and Kapadia, K. 2010. Food Systems and the Global Environment: An Overview. In: Ingram, J. et al. eds. *Food Security and Global Environmental Change*. London, Washington DC: Earthscan, pp. 3-24.

Longhurst, R. 2010. Semi-structured interviews and focus groups. In: Clifford, N. et al. eds. *Key Methods in Geography*. 2nd ed. Sage.

Lovell, H. 2007. The governance of innovation in socio-technical systems: the difficulties of strategic niche management in practice. *Science and Public Policy* 34(1), pp. 35–44. doi: 10.3152/030234207X190540

MacCallum, D. et al. eds. 2009. *Social Innovation and Territorial Development.* Ashgate.

MacMillan Uribe, A. L. et al. 2012. Community supported agriculture membership in Arizona. An exploratory study of food and sustainability behaviours. *Appetite* 59, pp. 431–436.

Marsden, T. 2013. From post-productionism to reflexive governance: Contested transitions in securing more sustainable food futures. *Journal of Rural Studies* 29, pp. 123-134. doi: 10.1016/j.jrurstud.2011.10.001

Marsden, T. and Franklin, A. 2013. Replacing neoliberalism: theoretical implications of the rise of local food movements. *Local Environment: The International Journal of Justice and Sustainability* 18(5), pp. 636-641.

Marsden, T. and Morley, A. 2014. Current food questions and their scholarly challenges: creating and framing a sustainable food paradigm. In: Marsden, T. and Morley, A. eds. *Sustainable Food Systems: Building a new paradigm*. Routledge, pp. 1-29.

Marsden, T. and Smith, E. 2005. Ecological entrepreneurship: sustainable development in local communities through quality food production and local branding. *Geoforum* 36(4), pp. 441–451.

Martin, R. and Marsden, T. 1999. Food for urban spaces: The development of urban food production in England and Wales. *International Planning Studies* 4:3, pp. 389-412. doi: http://dx.doi.org/10.1080/13563479908721749

Martinelli, F. et al. 2010. Creatively designing urban futures: A transversal analysis of socially innovative initiatives. In: Moulaert, F. et al. eds. *Can Neighbourhoods Save the City?: Community development and social innovation*. London and New York: Routledge, pp. 198-218.

Martínez-Alier, J. et al. 2010. Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm. *Ecological Economics* 69, pp. 1741-1747.

Matacena, R. 2016. Linking alternative food networks and urban food policy: a step forward in the transition towards a sustainable and equitable food system? *International Review of Social Research* 6(1), pp. 49–58.

May, T. 2011. *Social Research: Issues, methods and process*. 4th ed. Open University Press.

May, T. and Perry, B. 2011. Case study research. In: May, T. ed. *Social Research: Issues, methods and process*. 4th ed. Open University Press, pp. 219-242.

Mehmood, A. and Parra, C. 2013. Social innovation in an unsustainable world. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 53-66.

Milbourne, P. 2011. Everyday (in)justices and ordinary environmentalisms: community gardening in disadvantaged urban neighbourhoods. *Local Environment: The International Journal of Justice and Sustainability*, pp. 1-15. doi: 10.1080/13549839.2011.607158

Miquel, M. P. et al. 2013. Theorizing multi-level governance in social innovation dynamics. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 155-168.

Montgomery, R. et al. 2016. Bottom-up Governance after a Natural Disaster: A Temporary Post-Earthquake Community Garden in Central Christchurch, New Zealand. *Nordic Journal of Architectural Research* 28(3), pp. 143-173.

Morgan, K. et al. 2006. *Worlds of Food: Place, Power, and Provenance in the Food Chain*. OUP.

Morgan, K. and Sonnino, R. 2010. The urban foodscape: world cities and the new food equation. *Cambridge Journal of Regions Economy and Society* 3(2), pp. 209-224. doi: 10.1093/cjres/rsq007

Moulaert, F. 2009. Social Innovation: Institutionally Embedded, Territorially (Re)Produced. In: MacCallum, D. et al. eds. *Social Innovation and Territorial Development*. Ashgate, pp. 11-24.

Moulaert, F. et al. 2013. Social innovation: intuition, percept, concept, theory and practice. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 13-24.

Moulaert, F. et al. 2005. Towards alternative model(s) of local innovation. *Urban Studies* 42(11), pp. 1969-1990. doi: 10.1080/00420980500279893

Moulaert, F. et al. eds. 2010. *Can Neighbourhoods Save the City?: Community development and social innovation.* London and New York: Routledge.

Mount, P. et al. 2013. Barriers to the local food movement: Ontario's community food projects and the capacity for convergence. *Local Environment* 18(5), pp. 592–605.

Mulgan, G. 2006. The Process of Social Innovation. *Innovations* (Spring),

Mulgan, G. et al. 2007. *Social innovation: what it is, why it matters and how it can be accelerated*. Foundation, T.Y.

Mumford, M. D. 2002. Social Innovation: Ten Cases From Benjamin Franklin. *Creativity Research Journal* 14(2), pp. 253-266.

Murdoch, J. and Miele, M. 1999. 'Back to nature': Changing 'worlds of production' in the food sector. *Sociologia Ruralis* 39(4), pp. 465-+. doi: 10.1111/1467-9523.00119

Murray, R. et al. 2010. The open book of social innovation. The Young Foundation, NESTA.

NHS-Wales. 2013. *Cardiff selected as founding member of UK sustainable food network*. NHS Wales. Available at: http://www.wales.nhs.uk/sitesplus/888/news/28369 [Accessed: 3 October].

Novy, A. et al. 2013. Innovative forms of knowledge production: transdisciplinarity and knowledge alliances. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 430-441.

OCW. no date. *News fromt he centre: Community growing with Tyfu Pobl*. Organic Centre Wales. Available at: http://www.organiccentrewales.org.uk/news-item.php?id=254 [Accessed: 24.03.2017].

OECD. 2014. Obesity Update.

Okvat, H. A. and Zautra, A. J. 2011. Community Gardening: A Parsimonious Path to Individual, Community, and Environmental Resilience. *American Journal of Community Psychology* 47(3-4), pp. 374-387. doi: 10.1007/s10464-010-9404-z

Orford, K. 2014. *Grow your own: allotments and community food grown in Wales*. Assembly in Brief. Available at: https://assemblyinbrief.wordpress.com/2014/09/24/grow-your-own-allotments-and-community-food-grown-in-wales/ [Accessed: 30.03.2017].

Parra, C. 2013. Social sustainability: a competing concept to social innovation? In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 142-154.

Pesch, U. et al. 2017. Niche entrepreneurs in urban systems integration: On the role of individuals in niche formation. *Environment and Planning A*, doi: p.0308518X17705383

Pol, E. and Ville, S. 2009. Social innovation: buzz word or enduring term? *The Journal of Socio-Economics* 38(6), pp. 878-885.

Pothukuchi, K. and Kaufman, J. L. 1999. The food system - A stranger to the planning field. *Journal of the American Planning Association* 66(2), pp. 113-124. doi: 10.1080/01944360008976093

Power, E. M. 1999. Combining Social Justice and Sustainability for Food Security. In: Koc, M. et al. eds. *For Hunger-proof cities: Sustainable Urban Food Systems*. Ottawa, Canada: International Development Research Centre, pp. 30-37.

Pudup, M. B. 2008. It takes a garden: Cultivating citizen-subjects in organized garden projects. *Geoforum* 39(3), pp. 1228-1240. doi: 10.1016/j.geoforum.2007.06.012

Raja, S. 2000. *Preserving Community Gardens In a Growing Community: A Report on the Community Gardens Planning Process in Madison, Wisconsin*. Wisconsin - Madison:

Reckwitz, A. 2002. Toward a Theory of Social Practices: A Development in Culturalist Theorizing. *European Journal of Social Theory* 5(2), pp. 243-263.

Redclift, M. 2005. Sustainable development (1987-2005): An oxymoron comes of age. *Sustainable Development* 13(4), pp. 212-227. doi: 10.1002/sd.281

Red_Cross_NZ. no date. *Healing through gardens*. Red Cross New Zealand. Available at: https://www.redcross.org.nz/stories/new-zealand/healing-through-gardens/ [Accessed: 15.03.2017].

Renting, H. et al. 2012. Building Food Democracy: Exploring Civic Food Networks and Newly Emerging Forms of Food Citizenship. *International Journal of Sociology of Agriculture and Food* 19(3), pp. 289–307.

Ritchie, J. 2003. The Applications of Qualitative Methods to Social Research. In: Ritchie, J. and Lewis, J. eds. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London-Thousand Oaks-New Delhi: Sage.

Saldivar-Tanaka, L. and Krasny, M. E. 2004. Culturing community development, neighborhood open space, and civic agriculture: The case of Latino community gardens in New York City. *Agriculture and Human Values* 21(4), doi: 10.1023/B:AHUM.0000047207.57128.a5

Saltmarsh, N. et al. 2011. *The impact of community supported agriculture*. Association, S.

Schmelzkopf, K. 1995. Urban community gardens as contested space. *Geographical Review* 85(3), pp. 364-381. doi: 10.2307/215279

Schmelzkopf, K. 2002. Incommensurability, land use, and the right to space: Community gardens in New York City. *Urban Geography* 23(4), pp. 323-343. doi: 10.2747/0272-3638.23.4.323

Schnell, S. M. 2007. Food with a farmer's face: Community-supported agriculture in the United States. *Geographical Review* 97(4), pp. 550-564.

Schot, J. and Geels, F. W. 2008. Strategic niche management and sustainable innovation journeys: theory, findings, research agenda, and policy. *Technology Analysis & Strategic Management* 20(5), pp. 537-554. doi: 10.1080/09537320802292651

Scott-Cato, M. and Hillier, J. 2010. How could we study climate-related social innovation? Applying Deleuzean philosophy to Transition Towns. *Environmental Politics* 19(6), pp. 869-887. doi: 10.1080/09644016.2010.518677

SDC. 2009. *Food security and sustainability: the perfect fit*.

Selfa, T. and Qazi, J. 2005. Place, taste, or face-to-face? Understanding producer–consumer networks in ‘‘local’’ food systems in Washington State. *Agriculture and Human Values* 22, pp. 451–464.

Senedd. 2015. *4. Statement: Improving the Availability of Allotments and Community Gardens*. Your Senedd. Available at: https://yoursenedd.wales/debates/2015-01-27-4-statement-improving-the-availability-of-allotments-and-community-gardens#299901 [Accessed: 30.03.2017].

Seyfang, G. 2004. Working outside the box: Community currencies, time banks and social inclusion. *Journal of Social Policy* 33, pp. 49-71. doi: 10.1017/s0047279403007232

Seyfang, G. 2009. *The New Economics of Sustainable Consumption: Seeds of Change*. Palgrave Macmillan.

Seyfang, G. 2010. Comunity action for sustainable housing: Building a low-carbon future. *Energy Policy* 38, pp. 7624–7633.

Seyfang, G. and Haxeltine, A. 2012. Growing grassroots innovations: exploring the role of community-based initiatives in governing sustainable energy transitions. *Environment and Planning C-Government and Policy* 30(3), pp. 381-400. doi: 10.1068/c10222

Seyfang, G. and Longhurst, N. 2016. What influences the diffusion of grassroots innovations for sustainability? Investigating community currency niches. *Technology Analysis & Strategic Management* 28(1), pp. 1-23.

Seyfang, G. et al. 2013. A thousand flowers blooming? An examination of community energy in the UK. *Energy Policy* 61, pp. 977–989.

Seyfang, G. and Smith, A. 2007. Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental Politics* 16(4), pp. 584-603.

Shortall, S. 2008. Are rural development programmes socially inclusive? Social inclusion, civic engagement, participation, and social capital: Exploring the differences. *Journal of Rural Studies* 24, pp. 450–457.

Smith, A. 2007. Translating sustainabilities between green niches and socio-technical regimes. *Technology Analysis & Strategic Management* 19(4), pp. 427-450. doi: 10.1080/09537320701403334

Smith, A. et al. 2010. Innovation studies and sustainability transitions: The allure of the multi-level perspective and its challenges. *Research Policy* 39(4), pp. 435-448.

Sonnino, R. and Griggs-Trevarthen, C. 2013. A resilient social economy? Insights from the community food sector in the UK. *Entrepreneurship & Regional Development* 25(3-4), pp. 272-292.

Sonnino, R. and Marsden, T. 2006. Beyond the divide: rethinking relationships between alternative and conventional food networks in Europe. *Journal of Economic Geography* 6, pp. 181–199.

Space_Saviours. no date. *Tyfu Pobl*. Available at: http://spacesaviours.co.uk/resources/tyfu-pobl/ [Accessed.

Spencer, L. et al. 2003. Analysis: Practices, Principles and Processes. In: Ritchie, J. and Lewis, J. eds. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London-Thousand Oaks-New Delhi: Sage, pp. 199-218.

Stern, N. 2006. Stern Review: the Economics of Climate Change. In: HM_Treasury ed.

Teig, E. et al. 2009. Collective efficacy in Denver, Colorado: Strengthening neighborhoods and health through community gardens. *Health & Place* 15(4), pp. 1115-1122. doi: 10.1016/j.healthplace.2009.06.003

Tesch, R. 1990. *Qualitative Research: Analysis Types and Software*. Routledge.

Tidball, K. G. and Krasny, M. E. 2014. Introduction: Greening in the Red Zone. In: Tidball, K.G. and Krasny, M.E. eds. *Greening in the Red Zone: Disaster, Resilience and Community Greening*. Springer, pp. 3-24.

Tidball, K. G. et al. 2014. Synthesis and Conclusion: Applying Greening in Red Zones. In: Tidball, K.G. and Krasny, M.E. eds. *Greening in the Red Zone: Disaster, Resilience and Community Greening*. Springer, pp. 451-488.

ToiletTwinning.org. *What is toilet twinning*. Available at: http://www.toilettwinning.org/what-is-toilet-twinning/ [Accessed.

Trainer, T. 2012. De-growth: Do you realise what it means? *Futures* 44(6), pp. 590-599. doi: 10.1016/j.futures.2012.03.020

Turner, B. 2011. Embodied connections: sustainability, food systems and community gardens. *Local Environment: The International Journal of Justice and Sustainability* 16:6, pp. 509-522.

Tyfu_Pobl. no date. *Meet the team*. Available at: http://www.tyfupobl.org.uk/about-us/meet-the-team/ [Accessed: 26.03.2017].

UNA_Exchange. *Why volunteer with UNA Exchange?* Available at: http://www.unaexchange.org/why-vol-una-exchange.html [Accessed: 23.07.2015].

UNHCR. no date. *Grey Water Gardens: Greening Jordan's Za'atari camp with community gardens*. UNHCR Innovation. Available at: http://www.unhcr.org/innovation/labs_post/grey-water-gardens/ [Accessed: 15.03.2017].

URGENCI. no date. *Europe*. Available at: http://urgenci.net/csa-map/europe/ [Accessed: 24.03.2017].

Valentine, G. 2005. Tell me about...: using interviews as a research methodology. In: Flowerdew, R. and Martin, D. eds. *Methods in Human Geography: A guide for students doing a research project*. 2nd ed. Pearson.

Van Dyck, B. and Van den Broeck, P. 2013. Social innovation: a territorial process. In: Moulaert, F. et al. eds. *The International Handbook on Social Innovation: Collective Action, Social Learning and Transdisciplinary Research*. Cheltenham UK, Northampton MA US: Edward Elgar, pp. 131-141.

WAG. 2009a. Farming, Food and Countryside: Building a secure future - A new strategy for farming.

WAG. 2009b. Local Sourcing Action Plan: 'Food and Drink for Wales'. In: Government, W.A. ed.

WAG. 2009c. One Wales:One Planet: The Sustainable Development Scheme of the Welsh Assembly Government.

WAG. 2010a. Community Grown Food Action Plan. Cardiff: Welsh Assembly Government.

WAG. 2010b. Food for Wales, Food from Wales 2010-2020: Food Strategy for Wales.

Wakefield, S. et al. 2007. Growing urban health: Community gardening in South-East Toronto. *Health Promotion International* 22(2), pp. 92-101. doi: 10.1093/heapro/dam001

Watts, D. C. H. et al. 2005. Making reconnections in agro-food geography. *Progress in Human Geography* 29(1), pp. 22–40.

WG. 2014a. Consultation on improving the availability of allotments and community gardens. Welsh Government.

WG. 2014b. Toward Sustainable Growth: An Action Plan for the Food and Drink Industry 2014–2020. Welsh Government.

WG. 2016a. *Pillar 2 - Rural Development Programme*. Available at: http://gov.wales/topics/environmentcountryside/farmingandcountryside/cap/ruraldevelopment/?lang=en [Accessed: 26.03.2017].

WG. 2016b. Statistical Bulletin. In: Wales, S.f. ed.

Wharton, C. M. et al. 2015. Community Supported Agriculture Programs: A Novel Venue for Theory-Based Health Behavior Change Interventions. *Ecology of Food and Nutrition* 54(3), pp. 280-301.

Whatmore, S. et al. 2003. What's alternative about alternative food networks? *Environment and Planning A* 35, pp. 389-391.

WHO. 2016. *Obesity and overweight: fact sheet*. WHO. Available at: http://www.who.int/mediacentre/factsheets/fs311/en/ [Accessed: 30.03.2017].

Wiskerke, J. S. C. 2009. On Places Lost and Places Regained: Reflections on the Alternative Food Geography and Sustainable Regional Development. *International Planning Studies* 14:4, pp. 369-387. doi: http://dx.doi.org/10.1080/13563471003642803

Witkamp, M. J. et al. 2011. Strategic niche management of social innovations: the case of social entrepreneurship. *Technology Analysis & Strategic Management* 23(6), pp. 667-681. doi: 10.1080/09537325.2011.585035

WRO. 2012. *Community Grown Food in Wales*. Cardiff:

WWOOF_UK. *How WWOOF Works*. Available at: https://www.wwoof.org.uk/how_it_works [Accessed: 23.07.2015].

Yin, R. K. 2003. *Case Study Research: Design and Methods*. 3rd ed. Thousand Oaks-London-New Delhi: Sage.

APPENDIX 1

List of Interviewees

	INTERVIEWEE	CASE	POSITION IN THE INITIATIVE	AGE	GENDER	OCCUPATION	EDUCATION
1	Mei	Dinas	Volunteer	42	F	Unemployed	Higher National Diploma
2	Vince	Dinas	Volunteer	57	M	Retired	Postgraduate Degree
3	Darren	Dinas	Volunteer	55	M	Shoe Maker	Completed Primary School
4	Matt	Dinas	Garden Manager	32	M	Garden Manager Self Employed Other Projects	Medical Degree
5	Tim	Bont	Member/Volunteer	62	M	Retired	Diploma in Clinical Psychology
6	Rob	Bont	Volunteer	60	M	Unemployed	N/A
7	Ryan	Bont	Main Grower	60	M	Market Gardener	Postgraduate Diploma
8	Terry	Bont	Founding Director	n/a	M	Association Manager	Postgraduate Degree
9	William	Afon	Member	70	M	Retired	N/A
10	Warren	Afon	Member	68	M	Retired	Higher National Diploma
11	Ralph	Afon	Member	77	M	Retired	Degree
12	Zoe	Afon	Member	62	F	Pensioner	High School Degree
13	Linda	Afon	Community Investment Officer	25	F	Community Investment Officer	Degree
14	Will	Tyddewi	Member/ Core Group Member	63	M	Retired	Degree
15	Paul	Tyddewi	Member/Former Director	30	M	Development worker for South Wales at FCFCG	Degree
16	Del	Tyddewi	International Volunteer	23	F	WWOOF Volunteer	A Level
17	Carlo	Tyddewi	International Volunteer	27	M	Self-employed	Degree
18	Roger	Tyddewi	Farm Owner	66	M	Organic Farmer	Degree

19	Luke	Glyndwr	Member/Volunteer	40	M	Unemployed	Degree
20	Ethan	Glyndwr	Founder	56	M	Student	Degree
21	Owen	Glyndwr	Member/Volunteer	74	M	Retired Teacher	MA Hons
22	Eric	Glyndwr	Member/Volunteer	52	M	Occupational Therapist	BSc Degree
23	Faith	Glyndwr	Garden Manager and Founder	57	F	Garden Manager/ Dev. Officer	O Level/ PTLLS Teach. City & Guilds
24	Ruth	Clwyd	Member	64	F	Retired	Health V. Certificate
25	Connor	Clwyd	Member	48	M	Engineering Assesor/Educator	Degree
26	Trevor	Clwyd	Member/ Director	59	M	Retired	MSc in Architecture
27	Kelly	Clwyd	Founder/ Core Group Member/ Director	55	F	Horticulturalist	Higher National Diploma
28	Debbie	Clwyd	Chairperson	54	F	Structural Engineer	BSc Degree
29	Daisy	Coldwell	Volunteer/ Trustee/ Secretary of the Board	54	F	Freelance Communiy Developer	MA
30	Emma	Coldwell	Student	31	F	Participant Gardener	Entry Level
31	Adam	Coldwell	Student	24	M	Participant Gardener	Entry Level
32	Riley	Coldwell	Horticulturalist/ Trainer	31	M	Horticulturalist/ Trainer	A Level
33	Brooke	Coldwell	Garden Manager	52	F	Garden Manager	PCE
34	Hannah	Offa	Volunteer	62	F	Retired	Degree
35	Lynn	Offa	Volunteer	66	F	Retired	O Levels
36	Nora	Offa	Volunteer	66	F	Artist	BA
37	Dave	Offa	Paid Half-Time Grower	32	M	Self-employed agriculturalist	BSc Degree
38	Chris	Offa	Grower/ Owner of the Garden	48	M	Market Gardener	National Diploma