Health Impact Assessment (HIA): A comparative case study of Sri Lanka and Wales. What can a developing country learn from the Welsh HIA system

Introduction

Health Impact Assessment [HIA] is a systematic process used to evaluate the potential health effects of a policy, programme or a project on people, especially marginal and vulnerable groups[1]. It is a useful aid to make recommendations on, how best to reduce the potential negative health impacts and enhance positive effects of a proposal or a project.

The widely used definition for the process of HIA, which has been adopted by World Health Organization [WHO][2], emanates from the European Centre for Health Policy; Gothenburg Consensus[3],

'A combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population'.

However, as the process of HIA evolved over time, many different individuals and organizations have developed other definitions[4-6], most of which are similar, differing only by the emphasis given to various components of the HIA approach[2].

The nature of health effects of a project or a policy, can be context specific and depend on the perception of 'Health' in different communities[7]. However, HIA provides a framework for a diverse collection of evidence to be triangulated, analysed, presented and aid decision making. The experts reviewing HIA related literature have identified the elements or activities carried out in the HIA process to be consistent in many situations, however, they have also emphasized that the grouping of these

elements may vary in different systems[6]. Nonetheless, a six-step process provides a clear and reasonable categorization of these elements, namely; screening, scoping, assessment of evidence, recommendations, reporting and monitoring/evaluation[6] (figure 1). It is considered most useful and effective, when this process is iterative rather than linear[8].

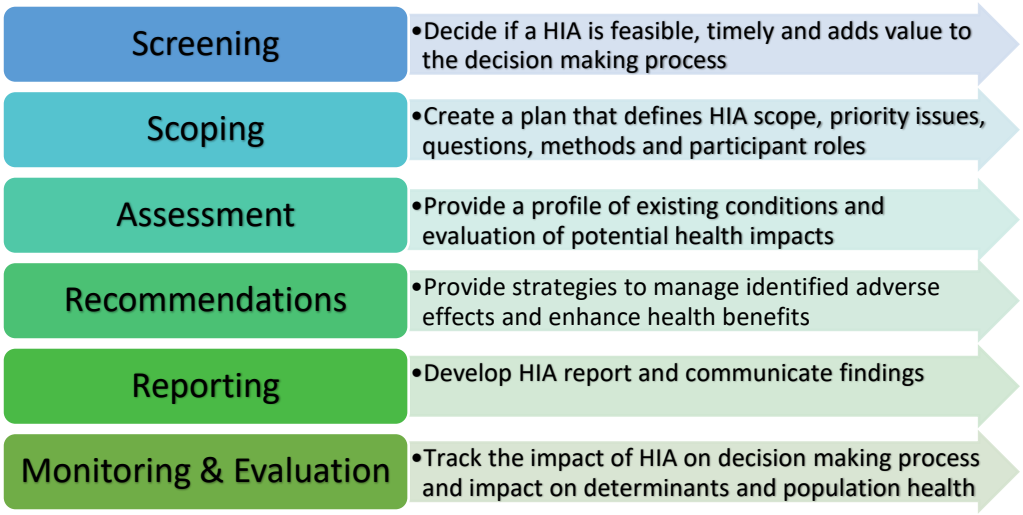

Figure 1: The process of Health Impact Assessment (HIA) *(Source: National Research Council (US) Committee on Health Impact Assessment. Improving Health in the United States- The Role of Health Impact Assessment, Washington (DC): National Academies Press (US). 2011. Pg47)*

Why is HIA important?

The role of 'social determinants' in influencing the health of people has been widely appraised across the world with clear examples of how actions and policy from outside of the health sector can have a major impact on population health and well-being, for example, air quality, access to services and employment[9,10]. In the global

assessment of the burden of disease from environmental risks conducted by WHO[11], it was estimated that, in 2016, 13.7 million deaths globally, were attributable to the environment. This represented 24.3% of all deaths. In this assessment, environmental risks to health were defined, as "all the physical, chemical and biological factors external to a person, and all related behaviours"[11], addressing these wider social determinants. When accounting for both death and disability, the fraction of the global burden of disease due to the environment was reported as 23%. In children under five years, up to 28.1% of all deaths could have been prevented, if environmental risks were removed[11].

The WHO- Regional Office for South-East Asia [SEARO] report on 'Ecology & Health: Health Impact Assessment' stated, diseases that could be linked with development projects, including respiratory diseases, road traffic accidents, behaviour related diseases (eg: transport sector linked STD), diarrhoea (associated with urban slums) and vector-borne diseases such as malaria and dengue (associated with water-development projects) are on the increase in South East Asia and stressed on the importance of bringing HIA into action[1]. Sri Lanka [SL] which is a developing country in this region, with a total population of 21.4 million and a high population density of 342 persons per square kilo meter[12], is no exception. As per the WHO estimates, environmental disease burden per year in SL, is 25% of the total disease burden[13].

As most of the above estimates are only based on the tangible physical effects from the environment, the situation could be worse if the non-tangible impacts on mental health or social health and well-being were also to be reflected in above statistics.

In this backdrop, HIA has already been identified as a potential good governance tool to appraise these wider determinants and reduce social inequalities in health internationally[7,14]. Whilst WHO has taken several initiatives to incorporate HIA into the health systems in the South-East Asia region[1,15,16], it is yet to be widely researched and implemented in most of the countries in the region, including SL. Therefore, this case study was designed to explore the key evaluating question (KEQ) of what are the barriers and opportunities for implementing HIA in SL under four main thematic areas and compare it with the HIA process in Wales, United Kingdom with the objective of identifying the best practices that would be applicable to overcome barriers and capitalize on opportunities in a developing country setting.

Methodology

Welsh system was purposefully selected for comparison, as it is a global leader in HIA[17], with an established HIA process within the health system. Further, Wales is on its way to be the first country in the world to have a country-wide, social determinants of health and inequality focussed statutory HIAs[18,19]. The authors' contacts with both countries facilitated a close understanding of operations too.

A mixed methodology of concurrent triangulation, which combined document analysis, interviews and observations were used to collect relevant information. For both countries, any articles, reports or documents published on HIA were collected using Google scholar and PubMed search engines. In addition to that, targeted searches were conducted on selected websites from both countries for any additional documents which included websites of Ministry of Health and Ministry of Environment in Sri Lanka and Public health Wales and Welsh government web sites in

Wales. The information was also gathered through unstructured interviews of members of the Welsh Health Impact Assessment Support Unit [WHIASU] and via observations by taking part in monthly team meetings and workshops of WHIASU for 7 months. Similarly, remote interviews were conducted with 8 purposefully selected participants from Sri Lanka including officials of the Ministry of Health, Central Environmental Authority, WHO collaborating centre for occupational health & safety and public health consultants and academia.

The organization and evaluation of information was an iterative process. In the literature it has been stated that, barriers and opportunities in implementing HIA in developing countries could mainly be grouped under four themes namely, policy framework, institutional infrastructure, capacity building and inter-sectoral collaboration[16]. Therefore, the information gathered by above methods were triangulated to categorize, evaluate and compare across cases under these four main thematic areas.

Results and discussion

HIA in South-Asian context

Following the 'Earth Summit' held in Rio-de-Janeiro, Brazil in June 1992 [World Summit of the United Nations Conference on Environment and Development], which created 'Agenda 21 on Sustainable development', each WHO region developed its own framework for implementing HIA[1]. The WHO-SEARO also initiated its activities on HIA with a multidisciplinary regional inter-country consultation in 1999[15]. Yet, conducting HIAs of development projects in the region has not gained momentum, a

systematic situation analysis in nine out of ten countries in SEARO [Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka and Thailand] was undertaken in the year 2002 to explore the factors that could be impeding the implementation of HIA[16]. This review has identified several barriers in implementing HIA in the region, in areas of policy framework, institutional infrastructure, capacity building and inter-sectoral collaboration[16]. The review made the following recommendations to strengthen the process of HIA (Box 1). It further stressed that "There is an urgent need for explicit HIA policy in all member countries"[16].

Box 1: Recommendations made by the WHO consultancy team to strengthen HIA process in SEARO member countries in 2002

- Developing at the country level healthy public policy that explicitly focuses on HIA as a tool to develop a more integrated approach to policies and programmes.
- Developing simplified tools and guidelines at the regional level for conducting HIA to facilitate the implementation of HIA at the country level.
- Developing regional databases for site-specific diseases associated with development projects for use by local researchers and policymakers.
- Building capacity within each Member State to provide a critical mass of skilled people for undertaking research in HIA and promoting HIA in all sectors.
- Creating within the region and within Member States, an enabling environment for enhancing inter-sectoral collaboration of researchers, practitioners and policymakers for the successful implementation of HIA.

Source: Caussy, D., Kumar, P. & Sein, U.T. (2003). Health impact assessment needs in south-east Asian countries. Bulletin of the World Health Organization 2003,

However, even after two decades of these recommendations were made, they remain valid, as HIA is yet to be incorporated to health strategic plans at National level in SL[20]. This contrasts with some regional countries like Thailand and India, where HIA is increasingly incorporated into health systems[21-23] despite the resource limitations. It has been observed that, Environmental Impact Assessment [EIA], which is backed by an established policy and legislative framework[24] is largely being used to substitute for HIA in SL[25,26]. However, a comprehensive wider determinant and equity focussed health impact assessment is not being carried out in EIAs which primarily focus on environmental determinants and biophysical health risk and is by no means recommended to substitute a broad HIA[1]. Further, EIA is limited to project level and does not assess policy, plan or programme impact. The following sections highlight the current situation of affairs in SL, in each of the thematic areas studied and a comparison with the Welsh system under the same themes.

1) Existing policy framework and procedures.

a. Sri Lankan situation

The existence of a firm policy provides the backbone for a sustainable HIA process in a country. This ideally encompasses legislation, standards and guidelines, action plan and monitoring and implementation mechanisms[1]. While some countries in the region like India, Indonesia and Thailand have a National plan of action or specially designated Departments to carry out or advocate for HIA within relevant Ministries[16, 21-23], SL is lacking such a mechanism.

However, EIA has been mandatory for all government and private sector development projects since 1984 as per a cabinet decision[27] in SL. The broader legal framework for the EIA process in SL was laid down by the amendments made to the National Environmental Act [NEA] in 1988 through NEA [Amendment] No. 56 of 1988[28]. This was complemented by the National Environmental Regulations No. 1 of 1993 of the NEA. According to this, the EIA process is mandatory for any development in designated environmentally sensitive areas and for other 52 prescribed projects such as mine and mineral extraction[28]. There is a dedicated unit in the Central Environmental Authority for the implementation of EIA. Existing Legal provision for EIA in the North Western Province [NWP] is given by the NWP Environmental Statute No. 12 of 1990, but only came into effect in 1995[24]. Under this legislation, the Provincial Environmental Authority of the NWP is the lead agency responsible for overseeing the EIA process in that province. Further, the Coast Conservation Act No. 57 of 1981 and the Coast Conservation (Amendment) Act No. 64 of 1988 makes provision for the EIA process in the coastal zone[24]. The Asian Development Bank procedures for EIA are also in operation in SL and are described in the ADB's Environmental Policy and Operational Procedures, which form part of the Bank's Operations Manual[24]. However, none of these EIA processes have a mandatory HIA process embedded in them, but mainly focus on environmental issues only. The legislation, guidelines and methods designed for EIA, are too broad or non-specific to address health related impacts.

The National Strategic Framework for Development of Health Services from 2016 – 2025, developed by Ministry of Health, SL has recommended to re-establish the

National Health Council and broad basing with other stakeholders under the theme "Health in all Policies (HiAP)"[20]. This could be considered a positive move towards the development of the essential policy framework to bring HIA on-board, as it is well recognized as a good governance tool for this purpose.

b. Welsh system

Only a few countries in the world have mandatory HIA legislations[29,30]. With the upcoming new public health law, the Public Health (Wales) Act 2017[19], Wales will lead the world by having statutory HIA requirements that are broad in focus and consider health and well-being impacts and inequalities through the lens of the wider determinants of health and not only environmental health determinants[18].

In 2004, Welsh Government committed to HIA through the provision of funding for WHIASU to support key policies and products such as 'Better Health, Better Wales' [31]. Subsequent policies reinforced this requirement[32].

This financial and political support has evolved since then and HIAs have been mandated through Welsh Government strategic documents and processes such as Welsh Transport Appraisal Guidance (WelTAG), NHS Wales Infrastructure Guidance for capital funding and community regeneration processes[33-35]. The Wellbeing of the Future Generations (Wales) Act (WFGA) 2015[36] has also provided an enabling environment for HIA and it promotes sustainable development and HiAP approaches via seven prescribed Wellbeing Goals[36]. HIA is a key practical tool and driver for HiAP in health and the traditionally described 'non-health' sector. The WFGA does not include an explicit statutory requirement for HIA but this was subsequently provided

in the Public Health (Wales) Act 2017[19]. The WFGA states that 'A Healthier Wales' is a required policy goal for all public bodies in Wales. The PH Act requires Welsh Government Ministers to make regulations about the circumstances in which public bodies in Wales must carry out HIAs[19]. This will make HIA statutory for public bodies in specific circumstances such as national and local land use development plans.

2) Institutional infrastructure.

a. Sri Lankan situation

It is very important that policy is backed by enabling infrastructure for successful implementation of HIA. Sri Lanka has an established strong network of preventive sector institutions which could well be mobilized for this purpose. The entire country is divided into 341 operational areas in preventive health named as "Medical Officer of Health [MOH]" areas[37] which are administered by qualified Medical Officers in preventive health and supported by a well-trained field staff[38]. These units already carry out disease surveillance and environmental and biological monitoring activities as well as outbreak investigations through Public Health Inspectors [PHIs][38]. The MOH units are monitored and data flow is maintained through regional and central institutions[39]. 'Health protection' being one of the main mandates of MOH system, there is much potential to incorporate HIA[39]. Since the National Strategic Plan for Health In SL for 2016- 2025 urges to expand the services of Environment and occupational health directorate at Ministry of Health[20], it would be an ideal opportunity to re-structure this unit to take the leading role at central level as a dedicated unit for implementation of HiAP in Sri Lanka. However, development of human resource capacity within these institutions remains a challenge.

b. ***Welsh system***

The WHIASU provides a central focus for HIA activity, expert knowledge and practically experienced advice, guidance, resources and training. It is based in the public health institute for Wales, Public Health Wales (PHW), but the team works across public bodies such as local authorities, the third sector and also has an external international focus as part of PHW's WHO Collaborating Centre on 'Investment for Health and well-being'[40].

WHIASU provides consistency and uniformity in how HIA is carried out in the nation and this is focussed on the broad WHO definition and interpretation of health and wellbeing with an emphasis on inequalities and participation[41]. This has been advantageous in promoting both a holistic view of health (physical, social and mental) and wellbeing and ensuring that populations and the communities and the people who will be affected by proposed policies, plans and projects are explicitly included in an assessment.

3) Capacity-building to undertake HIA

a. Sri Lankan situation

It has also been observed that, though the HIA process has not being followed, certain interested researchers have looked at the health impact of some government policies such as introduction of unleaded petrol[42] and the impact on child health by the 'Samurdhi' welfare scheme[43], indicating the availability of potential resource personnel in scaling up the HIA process. There is much to be done on capacity building at ground level as a bottom up approach is important for the sustainability of the

process. On the other hand, top down capacity building is important to ensure 'buy in' environment which comes through supportive policies[18]. There is a need for the HIA process to be incorporated to the curriculum of Master's and Doctoral degrees in public health conducted by the Postgraduate Institute of Medicine, as it is the main stream of development of specialists in public health in Sri Lanka, where the teaching is based on wider determinants of health aiming to address health inequalities[44]. Further, the MOH training programme and PHI training curriculum conducted by National Institute of Health Sciences, Kalutara, Masters and diploma programmes in Occupational Health conducted by University of Colombo are other potential avenues of incorporating the knowledge of HIA, all of which have a universal coverage. There are examples from elsewhere in the world where model curriculums were developed to incorporate HIA into University courses[45]. However, Byambaa et al have stated that when scaling up capacity for HIA in low and middle income countries, knowing the audiences' roles when determining training design and content, be culturally sensitive and promoting elements of "system-wide capacity building" are key areas to consider[29]. Therefore, to identify and develop appropriate training materials for this purpose is a priority.

b. Welsh system

The WHIASU publishes HIA guidance and other core HIA and HiAP resources[7]. This includes the broad focus Quality Assurance review framework for HIA[8] which can be applied to policies, plans and projects, a HIA website (www.whiasu.wales.nhs.uk), and an introductory eLearning HIA course which is free and open to all across the world. This is also supported by both formal and informal training (including mentoring and

secondment opportunities into the Unit) that is endorsed by a professional body (Chartered Institute for Environmental Health and Public Health Wales) and encapsulated in a Training and Capacity Building Framework for HIA[18]. The latter breaks down the skills and knowledge that HIA practitioners and / or teams should have and be able to exhibit in practice and sets out the provision and direction of travel for HIA training over several years[18]. These resources support capacity building within the health and non-health systems and highlights the need to consider health, wellbeing and inequalities and sustainable development which can support the implementation of the United Nations Sustainable Development Goals in practice[41]. This unique and comprehensive capacity building approach had been instrumental in bringing HIA into the forefront of Welsh policies today. It further works on building collaborations with Universities to enhance this process.

4) Inter-sectoral collaboration for successful HIA implementation

a. Sri Lankan situation

The situational analysis carried out in 2002 by WHO has then stated that there was high potential for inter-sectoral collaboration in SL for the implementation of HIA[16]. However, the National Strategic Framework for Development of Health Services from 2016 – 2025, developed by Ministry of Health, SL[20] has identified the poor coordination between health-related other sectors to achieve the common goals, is still a problem. There are prior success stories in this regard such as the Presidential Council on Nutrition established through a decree by the head of government for multisectoral collaboration and coordination for improvement in nutrition in Sri Lanka[46]. There are other examples especially in prevention of NCD, where MoH is

working collaboratively with Ministry of Education, Ministry of Youth affairs and Ministry of Agriculture and similarly, Water board working in collaboration with MoH for water quality surveillance[46].

However, Bandara et al, in their report on "Inter-sectoral actions for the health in addressing social determinants of health through public policies in SL: Health in all policies" stated that, inter-sectoral action for health through public policies is a relatively new idea in SL[14]. This report as well as the National Strategic Framework 2016 – 2025, identifies the importance of utilizing the existing structures including National and Provincial Health Ministers' fora, the Consultative Committee on Health in the Parliament, National Health Council and National Health Development Committee for this purpose[20]. However, the performance of such committees needs re-evaluation and re-activation as necessary. Thailand is another example of the region where the establishment of "National Health Commission" through the National Health Act has led to incorporation of HiAP, then leading to successful implementation of HIA[23]. Bandara et al also describe in the report where an extensive effort has been made to "explore the extent to which selected key ministries in SL use the concept of 'Health in all policies' in their policy formulation process" and concludes that HIA could be the most appropriate governance tool in SL to incorporate HiAP as an inter-sectoral strategy, quoting the example of other countries who successfully implement HIA, especially in the European region[14].

b. Welsh system

The ‘learning by doing’ approach that WHIASU takes and the shadowing and facilitation of HIAs has allowed the creation of practitioners to gain knowledge and the ability to implement HIA across sectors[18]. The top down / bottom up approach has allowed for strategic advocates to be created for the process at a national and local level. Key examples include work on regeneration plans and projects such as the Project Brand HIA[47] and national key plans such as the Welsh Government Night-time Economy Framework[48]. The support of professional organisations such as the British Medical Association Cymru and the Charted Institute in Wales were also key in advocating for HIA to be included in the Public Health (Wales) Bill when a window of opportunity became available in 2015/6 further illustrating the value of collaboration.

Whilst WHIASU has core structure, work plans and resource, it is interesting to note that it is a small team of 3 full time equivalent officers. Yet, it’s role in advocacy for health and well-being, adding value to policies and planning such as Brexit, HIA[49] and creating new advocates for HIA and solidifying existing ones[50] in Wales is remarkable thanks to successful intersectoral collaboration.

Conclusion and way forward

The journey from voluntary to statutory HIA has been achieved in a relatively short time in Wales with the vision and some resources in place. This could be replicated in a similar nation state such as Sri Lanka or any other developing country for that matter, if the right political / enabling environment, context and supporting structures or systems were in place. The current experience on successful implementation of EIA in SL would be a great guidance in this regard.

The main pillars of the HIA system in Wales include the government commitment through supportive policy environment to incorporate HiAP, legislation with a dedicated small unit (WHIASU) within PHW providing a central focus on HIA and providing capacity building, training and successful inter-sectoral collaboration with 'learn by doing' approach. The WHO also has identified these elements as three cornerstones in the promotion and strengthening of HIA systems in developing countries[30]. The current SL case indicate that there is emerging government commitment in building supportive policies to incorporate HIA in the new development projects and policy planning. Further advocacy is required to elicit the importance of HIA as the most appropriate governance tool to incorporate HiAP. The role of an active "National Health Council' in this process is vital, in view of establishing successful inter-sectoral collaboration.

Furthermore, there is much potential in the current health systems to establish a centrally committed team or unit to implement the HIA process within the preventive arm of Health Ministry in SL. Such a unit can take the lead role in capacity building and ensuring the uniformity of HIA process within the country. WHIASU sets a good example in this regard as to how the mainstreaming of a nationwide HIA process was done with minimal resources within the unit but mobilised by efficient multi-sectoral collaboration under the leadership of this central structure. It is of much importance that country specific tools are also made available to promote uniformity in the HIA process in SL and which could be spearheaded by the proposed central structure. It is high time that SL tap the 'untapped' potential of HIA and incorporate it into its sustainability agenda!

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