1. Introduction

This paper is written as a background document to inform the Nuffield Trust project on Health Impact Assessment of Foreign and Security Policy. There has been little or no health impact assessment (HIA) of foreign policy carried out in the UK, Europe or Worldwide. This paper sets the scene for the project case studies by giving an overview of the key concepts of health impact assessment, including values, methods and applications to other policy sectors. It considers the key strengths and limitations of the approach for assessing the health impacts of foreign policy.

**What is health impact assessment?**

There are two broad definitions of health impact assessment (HIA). It has been defined as ‘the estimation of the overall effects of a specified action on the health of the population’ (Scott Samuel, 1998). It has also been defined as the assessment of the change in health risk reasonably attributed to a policy, programme or project. The most comprehensive and often quoted definition of HIA was developed at a consensus conference of the World Health Organisation (WHO):

> HIA is combination of procedures, methods, and tools by which a policy, programme, or plan may be judged as to its potential effects on the health of population and the distribution of those effects within the population (European Centre for Health Policy and World Health Organisation Regional Office for Europe, 1999).

All definitions highlight that HIA is concerned with the health of populations and attempts to predict the future consequences of health decisions that have not yet been implemented.

**The aims of HIA**

HIA aims to assess the potential health impacts (both positive and negative) of projects, programmes and polices. HIA is a flexible and adaptable approach helping those developing and delivering policies. It is intended to improve the quality of decision-making so that policies, projects and programmes in all areas lead to improved public health, or minimize harm to population health (Lock 2000). HIA can influence decisions in four ways (Kemm J, 2004):
1. By raising awareness among decision-makers of the relationship between health and other factors such as the physical, social and economic environment, so that they consider health effects in planning;

2. By helping decision-makers identify and assess the potential impact of a specific proposal on population health and wellbeing, and on the distribution of those effects within the population (i.e. issues of equity by considering health inequalities or the impact on specific vulnerable groups);

3. HIA can also identify practical ways to improve and optimise the outcome of proposals, by producing a set of evidence-based recommendations that feed into the decision-making process;

4. By helping stakeholders affected by policies to participate and contribute to decision-making.

Whatever approaches or methods are used, it is important to maintain a clear focus on the ultimate purpose of HIA. This is to inform and influence subsequent decision-making. HIA is not merely a research tool, it is a political tool to aid decision-makers.

2. HIA within the context of a broad health model

The HIA approach is grounded in the broad determinants of human health. These include personal, social, cultural, economic, environmental and political factors at local, national and international levels that influence the health status of individuals and populations (see table 1).

Table 1: Determinants of Health considered in an HIA

<table>
<thead>
<tr>
<th>Determinants of Health</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-conceptual/in utero</td>
<td>maternal health, health of foetus during pregnancy</td>
</tr>
<tr>
<td>Behavioural/lifestyle</td>
<td>diet, smoking, physical activity, risk taking behaviour (for example, unsafe sex, illicit drugs)</td>
</tr>
<tr>
<td>Psycho-social environment</td>
<td>community networks, culture, religion, social inclusion</td>
</tr>
<tr>
<td>Physical environment</td>
<td>air, water, housing, noise, waste</td>
</tr>
<tr>
<td>Socio-economic status</td>
<td>employment, education, training, household income</td>
</tr>
<tr>
<td>Provision of and access to public services</td>
<td>transport, shops, leisure, health and social services</td>
</tr>
<tr>
<td>Public policy</td>
<td>economic, welfare, crime, agriculture, health policies</td>
</tr>
<tr>
<td>Trans-border and global policy issues</td>
<td>International trade, European Union policy, foreign policy, multi-national industries (for example for tobacco, food, oil)</td>
</tr>
</tbody>
</table>
By adopting a broad model of health, it becomes clear that most public or political decisions have the potential to impact on public health both positively and negatively. This obviously means that the greatest scope for improving the public’s health often lies outside the control of the health services, through interventions in economic, housing, agriculture, transport, education and other ‘non-health’ sectors including foreign and security policy. Hence, in the majority of cases HIA has been applied to ‘non-health’ sector policy and projects. In most countries the interface between the health and non-health sectors is still fairly limited, for example, to links between health care and social care, and public health and environmental health. Health is not routinely a priority for other ministries or agencies. However, the financial burden of negative health impacts of their policies often falls on the health sector, both through impacts to public health and increased demands for health care.

HIA is one concept that has emerged to identify those activities and policies likely to have major impacts on the health of a population. It is increasingly proposed as a way of bringing together stakeholders from diverse backgrounds (including those from the public, private and voluntary sectors as well as the community) to identify and address how the development and implementation of a policy or programme will affect the wider determinants of health.

Many health determinants are interrelated and there are several cross cutting issues that affect health (for example poverty). The systematic nature of HIA recommends that health impacts be considered by way of a number of categories. The categories cover a series of intermediate factors that are determinants of health, through which changes due to a policy or project can impact on people’s health. The precise categories used and their component parts may vary according to the nature of the proposed policy, programme or other development thus providing sufficient flexibility in the application of the health impact assessment concept in different circumstances. The categories of health determinants used in table 1 illustrate one example of such a classification.

3. The development and methods of HIA

**Methodological and historical background**

The basic concepts of HIA are not new and they will be familiar to those working in public health. HIA builds on and brings together many existing methods and disciplines including policy appraisal, risk assessment, stakeholder analysis, evidence-based health care, epidemiology and environmental impact assessment.

HIA has its roots in two main developments:
1) The promotion of healthy public policy; and
2) Environmental and social impact assessment.

In the 1970s and 1980s there was considerable interest in ‘healthy public policy’. This was a key component of the Ottawa charter for health promotion (World Health Organisation 1986). The concept included policies designed specifically to promote health (for example, banning cigarette advertising) and policies not dealing directly with health but acknowledged to have a health impact (for example, transport, education, economics).
The WHO Health for All programme (adopted in 1977 and launched at the Alma Ata Conference in 1978) and the WHO's healthy cities programme (launched in 1988) stimulated interest in the important part local government and communities can play in improving health, including urban planning and regeneration, transport and other strategies looking at the physical and social environment. More recently this has been updated as the WHO global health policy “Health for All for the 21st Century” which includes a recommendation to undertake HIA (World Health Organisation, 2004).

Sustainable development plans by national and local authorities have further added to wider policy initiatives, which have implications for improving population health. These initiatives have been strengthened by increased public awareness of social and environmental effects on health. The open debate of these issues at international, national, and local levels has dramatically increased between the mainly environmental focus of the UN Earth summit in Rio de Janeiro (in 1992), and the recent World Summit on Sustainable Development in Johannesburg (in 2002) whose agenda had a much greater focus on poverty and human health issues (United Nations, 2003).

The principles of HIA are similar to social impact assessment and environmental impact assessment (EIA), and there are often many overlaps with the types of impacts considered in each. Initially HIA developed as a natural extension of these methods. Many countries, including the European Union and the USA have a legal requirement to carry out EIA. In Europe, Impact assessment methodologies are applied at both the level of the EU and individual member states. The first European directive on Environmental Impact Assessment (EIA) was adopted in 1985 (1985). There is also experience with sustainability assessment and integrated impact assessment. The last of these has been developed in the context of the complex challenge of identifying the implications of long-range trans-border pollution and involves the integration of many diverse sources of data. A legal basis for assessing policy health impacts emerged in Article 129 of the Maastrict Treaty (1993) and remained in article 152 of the Amsterdam Treaty (1997). Article 129 on public health stated that ‘health protection shall form a constituent part of the Community’s other policies’. However as article 129 precluded harmonising legislation it had little influence on policy within Member States (McKee et al., 1996). It also did little to foster an inter sectoral approach to policy at a European level (Mossialos and Mckee, 2000) as despite the intentions of article 129 the means to carry it out are lacking. Article 152 of the Amsterdam treaty (ratified in 1999), stated that ‘a high level of human health protection shall be ensured in the definition and implementation of all community policies and activities’. This strengthened the case for EU action, creating an opportunity to develop HIA as a means to achieve assessment of policy health impacts. There is currently no statutory duty in law in any European country to undertake HIA.

It remains unclear who should be responsible for initiating HIA in the EU (the Commission, the European parliament or member state governments). While there has been much discussion about integrating public health into other policies, the only examples of progress have been pilot HIA projects funded through Directorate General (DG) Sanco, as part of the EU Health Strategy 2000, and the current public health programme 2003-2008 (2002). An initial guide to assessing policy health impacts was published by DG Sanco (European
In practice, HIA is a voluntary process which has been addressed and applied differently by countries across Europe. The methods developed and their application to policy will be explored in the subsequent sections.

**Overview of HIA methods**

HIA is a multidisciplinary, inter sectoral process within which a range of evidence about the health effects of a proposal is considered in a structured framework. It takes into account the opinions and expectations of those who may be affected by a proposed policy. Evidence for the potential health impacts of a proposal are analysed and recommendations for improving health are fed into the decision making process (Lock, 2000).

As can be seen from the following section on discussing what HIA has been used for, numerous different methods of HIA have been developed. This is reflected in the WHO definition which explains that HIA is ‘a combination of procedures, methods and tools’ (European Centre for Health Policy and World Health Organisation Regional Office for Europe, 1999). HIA methods vary depending on the intended audience (decision-makers versus community based), the issue being assessed (projects versus policies) and resources (both time and money available). The methods used also tend to reflect the disciplines of those planning or conducting the HIA. There are many different toolkits and methods that have been developed and used (many of which can be accessed via the weblinks given in the references). However, the large number of different approaches is not as important as it seems as all methods have similarities. The basic steps remain consistent features in all descriptions of HIA methods (see figure 1). This serves to highlight the inherent flexibility of HIA, and the ability to adapt the process to the requirements of the particular circumstances.
Core stages of the HIA process

There is a general consensus about the core stages of HIA that are summarised in Figure 1. These stages are briefly described below. Further details can be found in various methodological guides available (see the list of additional resources given in the references). It should be noted that not every HIA necessarily has to follow this framework rigidly. HIA can be adapted to the specific context.

**Screening:** Systematic screening of policies and programme proposals provides a quick preliminary assessment of the relevance to health of the proposals. It is an important first stage of the health impact assessment and can be done with or without the assistance of screening tools and checklists. It enables any significant issues relating to health to be identified and a decision to be made on whether or not there is a need for more detailed assessment to take place.

**Scoping:** If there is felt to be a need for further consideration of the health impacts or potential impacts, the scoping stage identifies the questions that need to be addressed in the assessment process, and the scope of the HIA for example, the geographical area, the population and the timescales to be covered.

**Appraisal:** The appraisal stage itself also has in-built flexibility. It can take the form of a rapid appraisal, which might be done over the course of a few days, or an in-depth appraisal, which may require a period of weeks or several months. The appraisal may include quantitative and/or qualitative assessments that cover both risks and hazards to health, and opportunities to help people to improve their health by adjusting elements of the proposals or by integrating new elements within it.

**Reporting recommendations to decision-makers:** The conclusions of the appraisal and assessment are reported to those responsible for the decision-making and should meet political timeframes. The report should make any recommendations necessary to remove or to mitigate any negative impacts on the health of a population or on specific groups within a population. Similarly, the report should identify ways on which the proposal could be enhanced in order to positively encourage and support people to improve their health and well being.
4. Policy Applications of HIA worldwide

HIA has been used in many countries in the world, for various types of policies and programmes in a wide range of policy sectors. The main applications are summarised in Table 2.

The following sections will look at how HIA has been applied at a policy level in various regions of the world. Most experience of HIA comes from the European Union including both countries of the old EU-15 and new EU member states which are mostly from central and eastern Europe. Countries that have applied HIA vary widely in levels of economic development (from the UK to parts of Sub-Saharan Africa) and many have gone through recent periods of rapid economic, social and health transitions (including Central and Eastern Europe and South East Asia). The application of HIA to policy will be explored in more depth by using an example from the Republic of Slovenia.

Table 2: What are the main applications of HIA to decision-making?

<table>
<thead>
<tr>
<th>Application</th>
<th>Example</th>
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</thead>
</table>
**Political lobbying**
Input of a rapid HIA to the Public Inquiry into the Manchester Airport Second Runway expansion.

**National Policy Appraisal**
Examples can be found in the Canada, the Netherlands, Thailand and Wales.

**Sub-National/ Regional/ Local Policy Appraisal**
Mayor of London Strategies (economic development, spatial development, waste, air quality, culture etc)
Swedish County Councils

**Environmental HIA (EHIA)**
Examples can be found in New Zealand, Australia, Central and Eastern Europe (through WHO National Environmental Health Action Plans) and South America. This usually covers issues such as waste disposal, air quality and transport, water pollution.

**Developing country policy and programme appraisal**
This has mainly been used to appraise donor aid projects (for example, World Bank, Asian Development Bank, UN Food and Agriculture Organisation). Examples include agricultural, water and sanitation policies, the World Commission on Dams, Oil pipelines (e.g. Chad), Mining

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**HIA in Europe**

Although HIA is not a legal requirement in the EU, 12 governments recognise its potential to improve decision-making (Welsh Assembly Government and Eurohealthnet, 2003). Several of the pre-2004 member states already have considerable experience at applying HIA at local, regional and national level including Germany, Ireland, UK, the Netherlands and Sweden. An overview of HIA applications in EU countries is given in Table 3.

**Table 3:** Selected examples of how HIA has been applied at a policy level in EU member states

<table>
<thead>
<tr>
<th>Country</th>
<th>Administrative level at which HIA conducted (national, regional, local)</th>
<th>Examples of Policy sectors to which HIA has been applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>Health impact screening of national policy (Varela Put et al., 2001)</td>
<td>Housing policy (IIUE, 1999 (English translation 2001)), employment (Van Putten, 1999), environmental energy tax (Varela Put et al., 2001), national budget (NSPH, 2000)</td>
</tr>
<tr>
<td>Country</td>
<td>Administrative level at which HIA conducted (national, regional, local)</td>
<td>Examples of Policy sectors to which HIA has been applied</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>England</td>
<td>National</td>
<td>Burglary reduction initiative (Hirschfield et al., 2001), National alcohol strategy (Kemm, 2004), Health assessment of Foot and Mouth Disease Control Policy (national and local)</td>
</tr>
<tr>
<td>Wales</td>
<td>National (Breeze, 2004)</td>
<td>Home energy efficiency scheme, EU Objective 1 funding programme (Breeze and Kemm, 2000),</td>
</tr>
<tr>
<td>Sweden</td>
<td>National</td>
<td>EU Common Agriculture Policy (Dahlgren et al., 1996), Alcohol policy</td>
</tr>
<tr>
<td></td>
<td>Local county council level (Berensson, 2004)</td>
<td>Various</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Regional</td>
<td>Health risk assessment (National Institute of Public Health, Prague) Health Impact Assessment in the Hygiene Service (Volf and Janout, 2001) Development of regional plan-strategic health plan (planned)</td>
</tr>
<tr>
<td>Estonia</td>
<td>Regional</td>
<td>Guidelines for health impact assessment of municipality policies (Estonian Centre for Health Promotion 2002)</td>
</tr>
<tr>
<td>Slovenia</td>
<td>National</td>
<td>HIA of national food and agriculture policy- the effects of adoption of the EU CAP into national policy (Lock, Gabrejelcic et al 2004)</td>
</tr>
</tbody>
</table>

Most of the ex-communist countries of Europe (many of which joined the EU in May 2004) have some tradition of assessing health impacts of policies. For example, in 1966 the public hygiene service in the former Czechoslovakia was given legal powers to assess health impacts, although in practice it had little influence on decisions (Gullis, 2004). However, this formal ‘environmental health’ role was narrow, focusing on adherence to technical standards rather than assessment of policy decisions. It contrasts with the emergence of broader public health approaches, creating a legacy of ambiguity about the concept of HIA and how it can be used.

Many of the new EU member states have already developed (or are in the process of developing) more broadly based models of HIA, adopting multi-sectoral approaches to public health. Some countries have been developing methods for HIA, supported by a range of capacity building activities e.g. Slovakia (Gullis, 2004) and Slovenia. Various approaches have been developed, influenced by HIA methods from elsewhere in Europe, particularly UK, Sweden and the Netherlands. Such HIA ‘toolkits’ are widely available on the internet and there are many methodological similarities between national models and application (Lock, 2000a), although none have applied to any foreign or security policy issues. A second approach, environmental health impact assessment (EHIA), is more specifically focused on the narrower environmental health perspective and tends to be applied more to specific projects than policy. Examples can be found in Poland, Hungary, Lithuania, Czech Republic, Slovakia and Estonia, being applied to projects such as air pollution and waste management (Cherp, 2002). Although it would be easy to dismiss this approach as not being applicable to Foreign Policy, recent discussions in the European Commission (Directorate General Public Health, 2001) and at National Government level on the threats of bioterrorism suggest that the more focused environmental health perspective may be applicable to certain security policy when the issues are tightly circumscribed, such as those related to specific biological and chemical threats.

HIA as part of EU accession in the Republic of Slovenia

As none of the EU countries have conducted HIA of foreign policies, the example of HIA of agricultural policy in Slovenia will be used to illustrate how HIA methods can be applied to a complex non-health sector policy process.

HIA was undertaken by the Ministry of Health in Slovenia as an appropriate approach to investigate how adopting aspects of the Common Agricultural Policy (CAP) funding and policy as part of EU accession requirements would impact on population health. This was important as public health was not a directly negotiated factor within the CAP. The public health aspects within EU agricultural and food production policies are limited mostly to food safety, animal welfare and environmental protection.

HIA methodology is flexible depending on the context and is still being tested and improved, particularly at a national policy level. The HIA approach used is summarised in table 4.

The first, and most difficult task, was to clarify which policies and instruments of CAP should be considered, and what affect they would have when implemented nationally. It became clear that this could not be done with certainty, partly because there were ongoing negotiations
Table 4: Summary of the HIA methodology used in Slovenia

| Screening and analysis of policies and instruments of CAP |
| Rapid appraisal workshops with stakeholders |
| Review of research evidence on health impacts |
| Analysis of Slovenian health and related indicators |
| Prioritisation of evidence and formation of policy recommendations for Slovenian Government |
| Presentation of findings to Parliament (November 2003) |

with the EU about the amount of CAP subsidies that Slovenia would be allocated on accession, and also because of the different way each country applies the regulations and funding. At the beginning of the HIA there was insufficient detail on how Slovenia proposed to implement certain aspects of the CAP including rural development policies. To assist the analysis agricultural experts from the University of Ljubljana modelled and interpreted potential policy scenarios which would be likely when integrating CAP requirements in Slovenia.

The steering group agreed that due to the constraints it was proposed that the HIA focus on three agricultural regimes; dairy, fruit and vegetables and the wine, which were analysed in greater detail due to their importance in agriculture and their potentially significant health impacts. It was also felt that the HIA must recognise that there are other drivers of health and policy change in the agricultural sector, including issues of rural development, socio-economic and cultural change which must be taken into account as part of the HIA process. The HIA considered how some aspects of the proposed EU rural Development funding could be used to benefit the health and well-being of rural populations.

After identifying some of the key instruments that would be used to implement CAP in Slovenia, the HIA identified and collected information about possible health impacts that a policy might create. The HIA took a participatory approach, which is less usual in the application of HIA to national policy. In this example it involved collecting information from national and regional stakeholders in a series of meetings. In total, 66 people participated, including representatives of farmers, food processors, consumer organisations, schools, public health, Non Governmental organisations, development agencies, and officials from government ministries. These included Ministries of Agriculture, Economic Development, Education, Tourism, and Health. During the workshops participants considered the core agricultural policy issues and identified potential health issues and other concerns. These concerns were grouped under various headings outlined in table 2.

The next stage in the HIA process was to compare stakeholders’ concerns with the existing evidence in the scientific literature. It was planned that literature reviews would be used in combination with the existing data in Slovenia to support or refute the health concerns put forward by the stakeholders. Various new reviews were planned including: Environmentally friendly farming; Mental health and rural restructuring; Socio-economic factors & social
Table 5: Key concerns about agricultural policy development after accession in Slovenia

Source: Outcomes of stakeholder HIA workshops, Slovenia 2002

<table>
<thead>
<tr>
<th>Concern</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of income, employment, housing and social capital in rural communities</td>
<td>Occupational health; Nutrition and public health. Not all reviews were completed due to lack of funds, so some of the potential impacts had less extensive evidence than others to support them due to practical constraints rather than simply poor evidence.</td>
</tr>
<tr>
<td>Increased food imports and impact on exports</td>
<td>Indicators of how policies may affect the current situation in Slovenia were based on existing nationally and regionally collected data on. This included, for example, the level of food production (e.g. milk and vegetables and fruit); methods of food production (e.g. intensive versus organic); levels of food imports and exports; food processing including on farm processing; access of consumers to food – retail outlets &amp; prices; patterns of food consumption; food-borne disease statistics; environmental pollution; occupational health; and socio-economic factors including correlation between high unemployment, inequalities and prevalence of disease.</td>
</tr>
<tr>
<td>Nutritional value of food and food safety</td>
<td>The final HIA report was completed by the Ministry of Health in October 2003. This presented the results and recommendations for the government of Slovenia on a range of agricultural issues that were likely to occur after accession to the EU, with adoption of the CAP. It was presented to the parliamentary inter-governmental committee on health on November 19th 2003.</td>
</tr>
<tr>
<td>Environmental issues: e.g. intensification of farming</td>
<td>The HIA in Slovenia was a pilot project to estimate the likely impact on health of a complex policy sector such as agriculture. It was acknowledged at the start that there would be a need to continue to develop the methodology and that, given the complexity of policies, the analysis would not be as comprehensive as desired. An important part of this process is the lessons that are learned regarding the implementation of HIA and agriculture policy in Slovenia and other countries. There were many limitations to the methods used, including lack of data, time and resources. It has been difficult to evaluate the specific effect that the HIA may have on population health, mainly due to the complexity of the policy process in the EU and Slovenia, but also because health benefits would likely accrue in decades rather than immediately.</td>
</tr>
<tr>
<td>Potential benefits of organic production</td>
<td></td>
</tr>
<tr>
<td>Barriers to small and medium sized enterprises</td>
<td></td>
</tr>
<tr>
<td>Occupational health</td>
<td></td>
</tr>
<tr>
<td>Capacity of local services (employment, education, health &amp; social) to adapt to any changes post-accession</td>
<td></td>
</tr>
</tbody>
</table>
than a few years. However, the HIA proved to be a useful method for improving inter-sectoral collaboration between sectors, in this case, ministries of health, agriculture and regional development agencies. It has had benefits for work on future food, nutrition and health policies, including the National Food and Nutrition Action Plan.

**HIA in less developed countries**

In the 1990s, following Agenda 21, many international donor organisations and international agencies accepted the need for a clearer policy for assessing health impacts and some produced guidance or guidelines on HIA or health in environmental assessment. These included the UK Department for International Development (Birley 1995), Asian Development Bank (Birley and Peralta 1992) and World Bank (Birley, Gomes et al. 1997). Other organisations which have also considered assessing health impacts as part of their work include the World Commission on Dams (World Commission on Dams 2000), and various WHO regional offices. However, in reality none of these organisations have adopted HIA into routine policy or practice, but have mainly applied the approach to specific development projects.

Most of the HIA work conducted in Africa has been on large development projects, such as dams and oil pipelines, often as part of environmental assessments. It has also mainly occurred at the implementation stage rather than the decision-making stage of projects. For example, the World Bank funded a thorough environmental and health impact assessment for the US$3.5 billion Chad Oil Export project (Jobin 2003) involving Chad, Cameroon and oil companies. This was carried out by a panel of overseas environment and health experts. The key health issues raised were management of malaria risk and spread of HIV/AIDS with increased movement of construction workers along the route. The HIA led to intensive measures for the environmental management and treatment of malaria, for reduction of road traffic accidents and construction accidents. It also had provision for new sources of drinking water, and sewage treatment. The HIA also highlighted AIDS prevention as something that was often neglected in such projects, and led to extra measures to minimise HIV transmission along the project, although stronger measures for HIV prevention were not implemented. An evaluation of the impact of the EIA and HIA showed that the mitigation measures introduced following the HIA had reduced the expected number of deaths from malaria, road traffic accidents and construction accidents, occurrence of sexually transmitted and gastrointestinal diseases particularly among those involved in the project (Jobin 2003). However, many of the panel recommendations concerning wider environmental, health and social equity considerations for the people living in the region were largely ignored in the final execution of the project.

There has been very little development or use of HIA in countries of Latin America and the Caribbean. Most of the examples of HIA have focused on mining and again have taken a project-based approach as part of environmental assessments. For example, the World Bank assessed the health effects of the rapid expansion of the informal gold-mining sector in Ecuador as part of an environmental impact assessment (World Bank 1997).

What are the reasons for a lack of development of HIA of policy in less-developed regions? In 1999, the WHO regional office for South East Asia (WHO SEARO) discussed the need to
develop and apply tools such as HIA as part of a multi-disciplinary regional inter-country consultation. Despite this, by 2003 the number of HIAs conducted had not increased in the region and so a situation analysis was conducted in 9 of the 10 member states (Caussy, Kumar et al. 2003). The SEARO countries, Bangladesh, Bhutan, Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka and Thailand, have very diverse levels of economic and social development, and it was decided to analyse the political and institutional issues that may have supported or prevented HIA development. The countries were assessed using 4 key indicator variables;

- policy framework and procedures for HIA
- existing infrastructure required to support HIA
- the capacity for undertaking HIA
- the potential for inter sectoral collaboration

The analysis showed that environmental assessment was used implicitly as a substitute for HIA. HIA itself was not explicitly or routinely conducted except in Thailand. Only Thailand, Indonesia and Sri Lanka have some policy procedures or frameworks to support HIA. Thailand is the only country that has been successful at explicitly introducing HIA as part of its recent health sector reforms. HIA is now required as part of the new National Health Act 2002. The Thai government have made a commitment to funding a HIA research unit which conducts national HIA directed by an autonomous board under the leadership of the Minister of Public Health. It has now conducted national and regional HIAs in a range of policy sectors. Many of these have been focused on infrastructure or development projects, and seek to balance the health of local communities with the other policy pressures. For example, the HIA of Pak Mon Hydro Power Dam showed that the local villages had suffered due to a reduction in fishery resources which had a negative impact on local income, and socio-economic status. The HIA has led to the needs of the local villages being taken into account and mitigation measures initiated which improve rural livelihoods by changing the Dam opening frequency to aid a return of the fishing industry. However, they have also developed HIA at a national policy level, for example looking at the health and economic effects of sustainable agriculture. The Thai example shows that it is possible in a short timescale to implement a strong and effective system of HIA of policy if there is government commitment, the presence of a policy framework and sufficient resources. It is not clear whether the Thailand HIA process will be expanded to foreign policy, as this is currently not on the targeted list which includes agriculture, industrial development, environment and energy policy.

5. The strengths and limitations of HIA of Policy

It is now clear that there are many examples of projects and programmes that have been subjected to HIA, but much less experience of applying HIA to national policy, and none of applying it to issues of foreign or security policy. Despite the limited application to policy process evaluation has shown that policy HIA leads to many benefits for ‘healthy decision making’. Many of these are focused on how HIA demonstrates the effectiveness of inter-sectoral working for complex policy issues. The systematic approach of an HIA is seen as
creating a structured approach for demonstrating the broad health agenda to other agencies and policy sectors (Francis and Elliot, 2005, Roscam Abbing, 2004). Secondary to this, HIA is also seen as providing a clear mechanism for health to inform decision-making, most usually in the non-health sector (Roscam Abbing, 2004). If a participatory approach to HIA is taken, evaluation has shown in many cases that HIA encourages and empowers public participation in decision making (although this is often more applicable at sub-national policy level) (Ison, 2004).

There are now a few countries that have institutional structures for routine HIA of policy. Ultimately, if HIA is to contribute to policy-making in a routine way, it must be integrated with administrative processes, in a similar way to EIAs. At a national level in Canada HIA has been incorporated into the legislative framework through Environmental Health Impact Assessment (Ministry of Health, 2004). Despite considerable experience over several years in Europe, only the Netherlands and Wales have established national resourced HIA units operating as part of government (Varela Put et al., 2001), (Breeze, 2004) (Francis and Elliot, 2005). In the Netherlands, the government considered how health consequences of policies could be assessed, and developed procedures involving health screening of parliamentary documents and policies by a dedicated resourced HIA unit based in the Netherlands School of Public Health (Varela Put et al., 2001). In the UK there has been differing experiences of HIA of national policy, and the extent of its use has varied widely amongst the devolved administrations. In England, despite a number of policy documents highlighting the potential importance of HIA for public health, there has been no national policy development of its use. Although HIA has previously been the subject of interdepartmental government working group it no longer appears to be a current political theme. In Scotland, HIA has also been conducted in an ad-hoc way. Although there have been a number of nationally funded pilot projects (including those on transport, urban renewal, and housing projects) there is a feeling that HIA has not really taken off in the devolved Scottish administration (Douglas and Muirie, 2004). This is in contrast to development of HIA in Wales, which has been an integral part of government working since the National Assembly for Wales was established in 1999. There have been a large number of HIA projects covering a diverse range of policies including EU Objective 1 funding, the National Skills and Employment Action Plan, Housing strategy and Home Energy Efficiency Scheme (Breeze and Hall, 2001). HIA development continues to be supported by a nationally-funded HIA unit which works to support government. The most comprehensive development of HIA currently in any country has been the development of HIA in Thailand as part of their health systems reform process (Healthy Public Policy and Health Impact Assessment Program, 2004). In other countries HIA’s have been conducted on an ad hoc basis, but some have had a clear mechanism to feed into government strategy making. Such approaches have included joint ministerial committees or interdepartmental working groups, e.g. UK, Slovenia (Lock, 2004a), although the public health benefit of these mechanisms has not been proven.

A failure to embed HIA in the organizational structure of decision-making bodies reduces the benefits that can accrue for inter-sectoral working. This was the case in British Columbia, Canada, where, following political changes, HIA fell off the policy agenda having previously been located within the cabinet (Banken, 2001). In Lithuania a more systematic approach
has been piloted to embed HIA in administrative processes and structures (den Broeder et al., 2004). The project applied the policy arrangement model to analyse the political and administrative circumstances to understand the opportunities and barriers for HIA implementation. However, despite some insights gained through this approach it was also found to have limitations both in designing practical recommendations and in giving insufficient recognition to the influence of different actors on the process. It is likely that difficulties in institutionalisation of HIA and inter-sectoral public health will be similar for all countries whatever approach is taken. Experience in Wales has shown that the use of HIA by governments at a national level alone is not sufficient, and need to be reinforced by efforts to support take-up locally and regionally (Francis and Elliot, 2005).

Apart from the organisation and capacity issues that have limited the application of policy-level HIA, there also continue to be several issues in the methodology of HIA that are unresolved (Parry and Stevens A, 2001a). Although there is increasing agreement about the wide variety of factors that influence health, the comparative importance of these varies across professional and public views. At present, different models of HIA measure health impacts in different ways. Most use some checklist procedure, which uses the perceived determinants of health as markers for changes in health risks for example, using employment levels as a marker for the status of community health. The difficulty with this is that causal pathways are so complex that it is not often possible to say if an outcome will definitely be good or bad for the health of a population. It is important to realise that such health indicators can potentially measure the direction and progress towards possible health improvement but this is not necessarily equivalent to a specific measure of health impact. It is important to note that despite the limitations this can prove a useful finding and is similar to that often used in EIA (Lock and McKee, 2005).

HIA aims to influence the decision making process in an open, structured way. To do this it has to acknowledge that assessing and ranking evidence is not a wholly objective process and involves a series of value judgments. There are currently no evaluated methods for prioritising evidence from different sources to make recommendations, and political imperatives are likely to affect the outcome, each HIA has developed its own framework. The balance between objective evidence and subjective opinion should be explicitly recognised in reports of HIA.

The findings of a HIA are often limited by financial and time costs. There is a need for a balance between rigorous methods that require specialist skills and high levels of resources and those that can be used more easily and cheaply by non public health specialists. The two approaches are not mutually exclusive and can be combined in a continuum of options for assessment, which includes preliminary project screening, rapid appraisal, and in-depth assessment. The decision of which method to use may relate to whatever will have most weight in influencing the decision making process in a timely way. Ultimately there will have to be a trade-off between costs and quality particularly with policy HIA (Lock, 2000b).

To date, few HIAs of policy have demonstrated the effect they have had on health outcomes. This is not surprising as it is methodologically difficult, and has been further restricted by the lack of funding for longer term monitoring and evaluation. However, here have been some
HIA's that have demonstrated that the HIA recommendations influenced changes that led to reductions in likely disease occurrence (Jobin, 2003).

Finally, even if HIA was implemented more widely it is not clear how it would be integrated into the policymaking process more effectively. Health is only one consideration of governments and other issues may prevail, such as security issues, economic, environmental, employment, export and other considerations. The balance between these issues is political but the aim of HIA is to ensure that possible health consequences are not overlooked. In this way, any negative impacts on health can be removed or mitigated. However, this requires that HIA is seen as a political not research tool to enable that health considerations influence policy.

This can create a tension between the political use of HIA and the need to base the findings on the most rigorous evidence available. Evidence for actual or potential impacts can come from many sources including epidemiological evidence, local routine data sources from health and other sectors, and qualitative sources of data collection (some of which may be gathered specifically for the HIA). Due to the nature of the broad determinants of health, the evidence base available to support the HIA process is often criticised. It may be of poor quality, detailed but still inconclusive, incomplete or difficult to locate (Mindell et al., 2001). Unfortunately epidemiology and related health sciences, which could contribute to HIA, are currently limited in their ability to explore outcomes other than death or disease incidence, and are unable to quantify causal pathways and the multiple interactions between risk factors. This emphasis on health determinants means that HIA's will confront considerable uncertainty in making definitive conclusions about potential health impacts. For many policies, especially those implemented at a national level where even the immediate effects are often unclear, the causal pathways are very complex, with the current evidence base patchy and often irrelevant to concrete policy options. This is particularly true in the field of foreign and security policy, except for a few discreet issues such as bioterrorism. For this reason HIA practitioners have to acknowledge the constraints of only being able to make recommendations based on the "best available" evidence given the time and other resource limitations.

There is much debate about what is the 'best available' evidence. Many scientists argue that quantified estimates are more influential but it should be remembered that not everything that can be quantified is important, that things should not be quantified if not done robustly, and that not everything that is important can be quantified. So in HIA it is accepted that evidence from a variety of sources is necessary. However, this creates its own problems. Prioritising and making recommendations using evidence from different sources and methodologies is fraught with difficulty. HIA also has to be aware that the evidence can be mixed, contradictory or limited, and so an important part of the process is involving key stakeholders to ensure that any recommendations are based on a clear understanding of their different perspectives, and are reached by consensus.

However, one of the major criticisms of HIA is that the methods of collecting and analysing evidence are not sufficiently rigorous to withstand scrutiny and challenge. The current evidence base for many health determinants is inadequate for accurately informing a process
of assessment. In completed studies the principal sources of evidence have come from literature reviews and qualitative methods. However, often the most useful information is not being routinely collected. Seldom is there going to be the time or money available for collection of primary data. Although it may be preferable for decision makers to have a quantitative measure of health impact, the limitations of qualitative estimates may have to be accepted as the best evidence available. This may limit the strength of the recommendations an assessment can make both in terms of the certainty and size of an impact (Parry and Stevens A, 2001b).

6. Conclusions

HIA is a developing process worldwide, at local, regional and national levels. It can be usefully used by public health departments, policy makers, community groups, non-governmental organisations and individuals working in a range of settings to push public health issues up the political agenda. Its flexibility often means that it can be easy to integrate into existing processes. However, there are still several issues that are unresolved about its utility for policy-making. Many HIA practitioners, supported by strategies of national and local governments, have devised HIA to engage and influence decision-makers. The other main approach presents HIA as a tool for use by decision-makers to help then gain better insight into the health agenda, including balancing health against other policy considerations. In this way HIA is often more acceptable as it is presented as a means of dealing with some of the challenging aspects of decision-making. Another HIA approach with strong support, and driven by the public participation agenda, emphasizes the ability of HIA to bring a range of different stakeholders into the process in order to make policymaking more transparent and inclusive. These different approaches of HIA are not incompatible but have been applied in various combinations depending on the context.

There remain considerable obstacles to implementing inter-sectoral policy approaches such as HIA. These include identification of the most appropriate methods to be used, institutionalisation of the process, development of mechanisms for inter-sectoral participation, and building public health capacity. While HIA is not the only way to ensure that health is on the broader policy agenda, it does offer one approach to embed public health in sectors in which it is currently marginalised. Its strengths include the combination of a structured approach with flexibility of methods, as well as involvement of a wide range of stakeholders (WHO, 1999, Lock, 2000a). HIA can add value to inter-sectoral policy-making by complementing other approaches such as inter-ministerial working groups that have not necessarily been that successful.

One of the major requirements for success is the existence of an explicit policy for HIA development and application, such as legislation or routine HIA procedures in the policy process both nationally and within international agencies. Other factors that are important to consider to implement HIA successfully include the development of simple tools and guidelines that can be easily adapted to different settings and contexts; Shared databases across countries for the evidence of health effects associated with specific types of development projects or policies; and capacity development within organisations not only on methods for conducting HIA, but also to improve skills for working inter-sectorally. This
training must be targeted at public health practitioners and decision-makers in both health and non-health sectors who will be responsible for policy development. To date, there has been little or no intersectoral public health work on the health impacts of foreign and security policy, and health impact assessment has yet to be introduced in this sector. HIA research and development needs to be continued to improve both methods and the evidence base to assess health impacts of complex policy areas such as foreign policy.

Weblinks for further reading

Gateway Websites

HIA gateway at Public Health Excellence Centre at National Institute of Clinical Excellence: http://www.publichealth.nice.org.uk/page.aspx?o=HIAGateway (last visited 21 November 2005) [This site is the easiest and most comprehensive place to start, although mostly focused on UK examples.]

Health Impact Assessment Database, Netherlands School of Public Health: https://webcollect.rivm.nl/hiadatabase/ (last visited 21 November 2005).


Websites showing applications of HIA

HIA in central Government in Wales: http://www.cmo.wales.gov.uk/content/work/health-impact/index-e.htm (last visited 21 November 2005). [This site includes The National Assembly for Wales's definitive guide to the use of HIA in central Government. Plus examples of completed HIAs on the website including the use of EU structural funds.]

Health Canada: Environmental Health Impact Assessment as a tool for population health promotion and public policy: This is the weblink to the handbook, and also will link to examples of its application http://www.hc-sc.gc.ca/ewh-semt/pubs/eval/handbook-guide/vol_1/chap_7_e.html (last visited 21 November 2005).

References


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