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*Edited by*

*Tapani Kauppinen, Marita Sihto, Ronald Wiman,  
Anita Lintula*

## **Human Impact Assessment**

Report on the Seminar on Human Impact Assessment  
Helsinki-Kellokoski, Finland, 24–25 January, 2002

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## Prologue

*“Human beings are at the centre of the concerns on sustainable development. They have the right to a healthy and productive life in harmony with nature.”*

(Rio Declaration para 1; United Nations Conference on Environment and Development, 1992)

Sustainable development requires from the balancing of the ecological, economic, social and cultural impacts of the activities of human beings and their organisations. Taking the human dimension of various policies, programs, projects and activities adequately into account calls for a systematic and multidimensional assessment of the potential impacts of these actions on the well-being and health of people and their communities.

In the context of efforts towards “balanced development”, there is increasing recognition of the importance of forecasting or assessing the consequences of policy, projects and programs on the social well-being and health of people. “Human Impact Assessment (HuIA)” is a way of assessing *ex ante* the potential effects of decisions, both intended and unintended.

Human Impact Assessment is a further elaboration of the traditional Social, Health and Environmental Impact Assessment approaches. In a wide and multidimensional manner, it focuses on the consequences of a current or proposed action for individuals, organisations and social macro-systems. The aim is to minimise the adverse effects – and to maximise the good effects – that are likely to follow from specific public or private agency actions. HuIA gives an opportunity to put health and social welfare on the agenda of other sectors and to ensure socially sustainable outcomes.

Many countries, including Finland, are actively developing impact assessment methodology and building capacity for its implementation. The work being developed and carried out in some of these countries helps in identifying relevant issues for the further development of the Finnish Human Impact Assessment (HuIA).

STAKES (National Research and Development Centre for Welfare and Health), in collaboration with the Ministry of Social Affairs and Health, organised a seminar on this subject that was held in Finland on 24 and 25 January 2002.

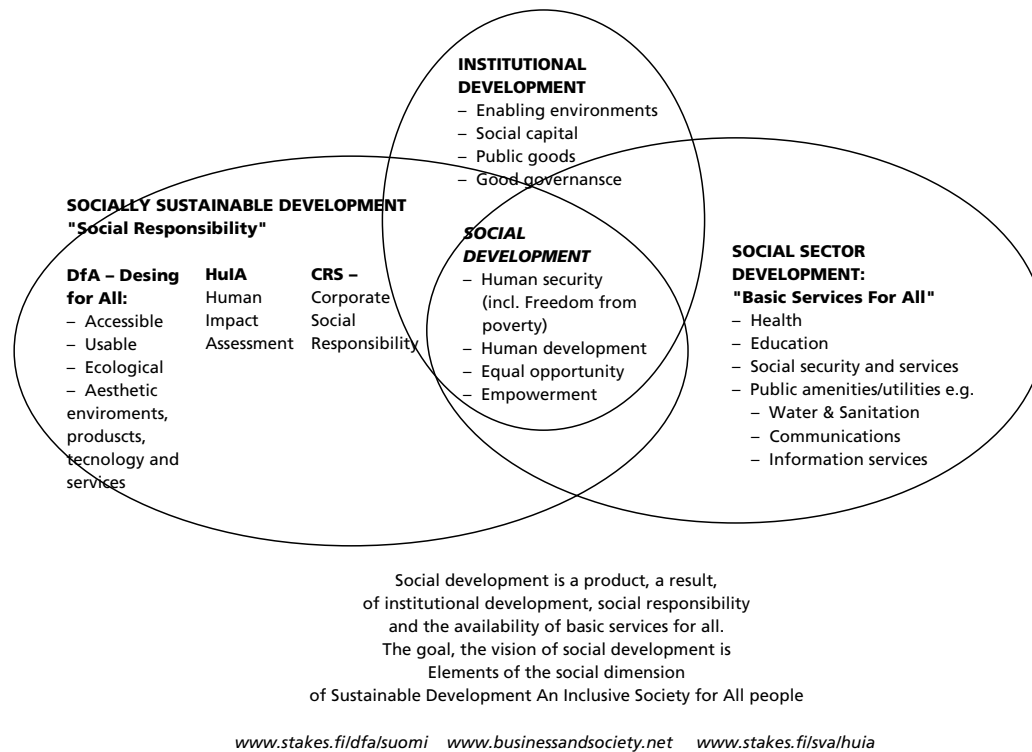


FIGURE 1. Elements of the social dimension of Sustainable Development (Ronald Wiman 2002).

The purpose of the seminar was as follows:

- To review the state-of-the-art knowledge on Human Impact Assessment in order to increase understanding of the impact assessment issues in Finland
- To facilitate the sharing of ongoing experiences of Human Impact Assessment methods
- To discuss how Human Impact Assessment could be used in practice to improve decision making at different levels of action.

This publication is based on the international workshop on Human Impact Assessment. Part A is a seminar report begins with a conceptual analysis of the subject: How are Health Impact Assessment and Social Impact Assessment defined? and What is meant by Human Impact Assessment? Part A also presents why impact assessment is an important issue and tool in the contemporary world: What are the current demands that make impact assessment necessary? Methodological and practical starting points are also described. Part A is based solely on the seminar presentations of the participants.

Part B is a collection of seminar presentations and abstracts. Summaries of the presentations of Gina Radford and Reijo Väärälä are written by Marita Sihto.

You can find the parts A and B, and also the slides that were not included in this working paper, on our website at [www.stakes.fi/sva/huia](http://www.stakes.fi/sva/huia).

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## Part A. Seminar report

### What are HIA and SIA – conceptual issues

Impact assessment that supports decision making has developed from several perspectives, including **Gender Impact Assessment**, **Economic Impacts Assessment**, etc.

**Environment Impact Assessment (EIA)** has been a starting point for HIA and SIA development in many countries. EIA has often included assessment of the ecological, economic and social and health impacts of policies, projects and programs. In Finland, EIA refers to the advance assessment of the impact of a project on health, living conditions, and amenities. (See Rantakallio's presentation on the website). The European tradition of EIA has focused less on the human impact than on the effect on the natural and built environments.

SIA and HIA have been developed to explicitly address the social and health consequences of policies, programs and projects. **Health Impact Assessment (HIA)** has been defined as “the estimation of the effects of a specified action on the health of a defined population” (Scott-Samuel). **Mental Health Impact Assessment** should be integrated as part of HIA (Jenkins).

**Social Impact Assessment (SIA)** has been characterised as “the process of analyzing and

managing the intended and unintended social consequences of development” (Vanclay) or, as it is stated in Finland, “Social impact traditionally means the effect that a decision, project or measure has on an individual, a community or society and the resultant changes in people's well-being or in the distribution of well-being” (Kauppinen). One application of SIA is **Poverty and Social Impact Assessment (PSIA)** – recently developed by the World Bank – which refers explicitly to “the distributional impacts of policy reform on the wellbeing of different stakeholder groups, with particular focus on the poor and vulnerable”.

Health impacts and social impacts overlap, particularly when ‘health’ and ‘social’ are understood in broad terms (Vanclay). **Human Impact Assessment (HuIA)** is a term that has been introduced in Finland to bridge between the environmental, health and social impact assessment approaches (Kauppinen). A Human Impact Assessment (HuIA) approach has been developed to better catch the multidimensional and holistic nature of such impacts on everyday life (Kauppinen, Rantakallio, Kosola). This concept is parallel to the concept of **Integrated Impact Assessment** used in some countries.



## Why should impacts be assessed?

There are several factors that call for increased attention to HIA and SIA:

- Globalisation and economic integration may have a significant impact on the conditions of health and welfare.
- Therefore, it is important that health, social and also environmental impacts are assessed before major decisions are made.
- Also, the principles of sustainable development require that the economic, social and environmental values can be better integrated with each other in the social policy decision making.

(Mönkäre)

In the European Union there is an emphasis on “protection” – i.e. social protection, health and safety at work. The focus on health protection has been endorsed several times since The Amsterdam Treaty. The Amsterdam Treaty raises health to the status of a priority crosscutting issue. This implies the need for an HIA of all major proposals from 2001 onwards. (Hübel.)

In Finland, social concern has long been embedded in Finnish policy making. As early as 1972 the idea of anticipating and assessing the implications for national welfare and health of decisions and actions carried out in sectors other than the health care and social sectors was brought up in social policy thinking. (Mönkäre.) Four traditions or knowledge

interests that have provided justification for impact assessment can be identified (Lehto):

- demand for participation and more democratic planning
- need for inspection and regulation
- emphasis on advocacy
- emphasis on “good public policy” and good administration/good governance.

The interest in social impact assessment in particular has grown from the following considerations (Väärälä):

- need for new methods and instruments for improving horizontal communication between experts
- need for developing new tools for making social issues more visible
- need for influencing policy making towards promotive and preventive actions and social sustainability.

In May 2001 the Government accepted the inter-sectoral public health program “Health 2015”. In this program there are commitments to the development and implementation of HIA. (Melkas, Sihto)Public Health Programme (Ministry of Social Affairs and Health 2001).

Systematic social and health impact assessment has been launched as an outgrowth of the Environmental Impact Assessment (EIA) Act (1994) and The Land Use and Building Act (renew 2000) (Rantakallio).

## How are impacts assessed?

### Methodological starting points

Dr Alex Scott-Samuel introduced the longest established UK programme of HIA at Liverpool University. The Liverpool Public Health Observatory and its successor, IMPACT (the International Health Impact Assessment Consortium), has developed and applied methods for HIA.

Dr Frank Vanclay and Dr Charlie Wolf presented different approaches of SIA. Dr Vanclay's presentation highlighted the close connection between SIA and HIA, and the prospects for and problems with integrating them as Human Impact Assessment. Dr Wolf's presentation dealt with the historical development of the SIA and IA movement and its present manifestations.

### Health impact assessment: a brief overview

Dr Alex Scott-Samuel has developed and applied systematic methods for health impact assessment. In brief, the Liverpool approach involves:

- applying a screening procedure for selecting policies or projects for assessment, agreeing the scope of the HIA in terms of depth, duration, spatial and temporal boundaries, methods, outputs, etc, and policy analysis
- profiling the areas and communities likely to be affected by the policy, and collecting qualitative and quantitative data on potential impacts from stakeholders and key informants

- using a predefined model of health impact, evaluating the importance, scale and likelihood (and, if possible, cost) of potential impacts
- searching the evidence base to validate data
- undertaking an option appraisal and developing recommendations for action
- monitoring and evaluation following implementation.

The model of health employed by practitioners is crucial to both the HIA process and its outcomes. The work in 'less developed' countries has tended to employ a medical model, focusing on the possible disease outcomes of development projects. He stated that a social model that incorporates a holistic concept of health and a broad range of social determinants is appropriate to policies and projects in developed countries.

Dr Scott-Samuel emphasised that the values used in carrying out HIA need to be explicitly stated. Equity in health is a key value, implying that HIA should not only focus on the average impact values but also on the distribution of impacts across affected population groups.

The methods used for HIA depend on the topics that are being studied and it is not, therefore, possible to prescribe an ideal method for appraising public policy or projects. He recommended the use of multi-method approaches that are both qualitative and quantitative, and multi- and inter-disciplinary approaches.

## Bringing SIA and HIA together for Human Impact Assessment

Dr Frank Vanclay presented the definition of SIA, according to which SIA is more than a technique or step, it is a philosophy about development and democracy which considers:

- the pathologies of development (i.e. harmful impacts),
- the goals of development (such as clarifying what is appropriate development, improving the quality of life, increasing social equity, enhancing access, promoting health for all), and
- the processes of development (e.g. participation, building social capital).

He described SIA as a framework that considers all the potential impacts on humans and their communities, including:

- people's way of life;
- their culture – their shared beliefs, customs, values, and language or dialect;
- their community – its cohesion, stability, character, services and facilities;
- their environment – the quality of the air and water they consume, the availability and quality of food they eat, the level of hazard or risk they are exposed to, the level of dust and noise exposure, adequacy of sanitation, physical safety, and access to and control over resources;
- their health and well-being – health is “a complete state of mental, physical and social well-being, not merely the absence of disease or infirmity”;
- their fears and aspirations – perceptions about safety, fears about the future of their community, and aspirations for their and their children's futures.

According to Vanclay, SIA has as a value system that has to be considered as follows:

- commitment to sustainability,
- openness and accountability,
- fairness and equity,
- preservation of human rights,
- empowerment of local people,
- specifically women,

- minority groups and disadvantaged,
- capacity building and
- acceptance of multiple value systems.

As a paradigm, SIA consists of a body of knowledge, techniques and professional values. As a methodology or instrument, SIA is the process (series of steps) that SIA professionals follow in order to assess and manage social impacts. That process requires substantial interaction with interested and affected people. Only in its narrowest meaning does SIA refer to the task of prediction of the likely social impacts of a proposed project within an environmental assessment framework.

Dr Vanclay contemplated SIA and HIA both as related to each other and as potentially integrated (i.e. Human Impact Assessment), which would have many benefits compared to separate SIA and HIA. The benefits from integration could include better assessment, increased efficiency of assessment, better integration of SIA/HIA in EIA, more influence in decision making and increased well-being in the community. The obstacles to integration are disciplinary differences, institutional and organisational barriers, skills and capacity, conceptual barriers, and domination of health by medicine. Enhancing integration may need to take the following starting actions: to develop a common terminology and institutionalise the language, to develop shared conceptual models, and to identify and remove the barriers and perverse incentives that thwart integration. If there could be only one Human Impact Assessment approach, there still might be a need for specialists like health and social scientists.

## Social Assessment and Social Policy

Dr CP Wolf considered the relevance of SIA as a practical tool for the formulation and implementation of social policy. SIA could be seen as part of an impact assessment movement that emerged in the United States in the 1970s. SIA contains the following elements:

- Rationality and responsibility, where the former can be expressed in terms of “the knowledge of consequences” and the latter in “the ethics of consequences”.
- Comprehensive and integrated assessment, where comprehensive refers to the broad coverage of levels, scales and sectors, and integrated to disciplines, perspectives and methods.
- Impact theory is social change theory, where the Impact Assessment Model can be developed.
- Impact Assessment Methodology, where the methodology contains an assessment cycle of screening, scoping and management.
- Policy Assessment is the application of impact assessment at policy level - HIA and EU policy development as examples.
- HIA has been carried out as part of EIA and has recently been developed in a more systematic way, currently being an effective application of SIA.
- Integrated Impact Assessment could be seen as a conceptual framework and the operational methodology for impact assessment. However, there are some problems with integration concerning, *inter alia*, the definitions and boundaries between environmental, social and health impact assessment.
- Human Impact Assessment could be seen as an application of Integrated Impact Assessment (see also Tapani Kauppinen’s characterisation on HuIA).

Dr. C.P. Wolf considered different theories for Social Assessment and Social Policy. Impact theory is social change theory. Its substantive focus centres on stability and change in the structures and functions of social systems at all levels of organization, both in relation to the natural environment and to one another. What might count as impact theory is any rational explanation for predicting the incidence,

distribution and magnitude of an impact. The logical structure of such a theory is embodied in the Impact Assessment Model, consisting of a proposed action or precipitating condition, the human environment of existing social conditions and systems, their interaction as “impacts”, and responses which feed back to the initiating action, event or condition.

The logic of impact assessment as an operational methodology can be formulated in a series of ten assessment steps – from scoping to management – called the “Main Pattern”. The opportunity, and often the necessity, of people’s participation occurs at every step.

## In practice

HIA and SIA can be understood as tools or working methods at all levels of social and health policy. The challenge for both HIA and SIA is to emphasise that all levels of actions (global, national, local) are considered in an impact assessment. In this section there are examples of working methods and experiences of both HIA and SIA, as follows:

- At the EU level the launching of the new Health Strategy has contributed to efforts for HIA at the Community level, as stated by Michael Hübel.
- Examples at the national level included HIA and SIA by the Department of Health in England, and the Ministry of Social Affairs and Health, the Ministry of Finance, and STAKES in Finland.
- Karin Berensson’s presentation concerned HIA at both local and regional level in Sweden, and Liisa Lähteenmäki considered the ongoing SIA projects in two Finnish cities.
- The Finnish Ministry of the Environment’s presentations assessed the development of HuIA in EIA and its further challenges.

## Ensuring a high level of health protection – the European Community's role

Mr Michael Hübel, in his presentation, considered the EU's role and its impact on health and health systems. Community policies in terms of health relate to internal market products and services, free movement of health professionals, environmental policy, social policy, research and enlargement.

The impact assessment contains an EC directive on Environmental Impact Assessment (EIA) that came into force in 1985. Following the Amsterdam Treaty, health has been an important issue and a crosscutting theme that concerns a wide range of Community policies. The most recent initiative is a Communication on the EC's health strategy. According to the Amsterdam Treaty (1999), "a high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities". Hübel pointed out that an important issue is how best to implement the provisions of the Amsterdam Treaty and a new Health Strategy. According to Hübel, the following actions have been taken:

- from 2001, proposals with particular relevance to health will include an explanation of how the health requirements have been addressed,
- the co-ordination mechanisms within the Commission will be strengthened
- and the new public health programme will be able to support the development of methodologies for assessing the health impacts of certain policies and actions. As practical steps, the Commission has published 'A Practical Guide for Services', an HIA Screening Checklist and some background material on HIA, and is developing a 'helpdesk' function for member states.

Michael Hübel also dealt with the practical and methodological problems concerning HIA in

Europe and elsewhere. He discussed which kind of HIA is the most useful: prospective or retrospective? Who should carry out HIA? Should HIA combine with other assessments? Who is the audience for HIA? and concluded by asking "but what happens afterwards? Will anything change?" pointing out that the explicit value of impact assessment depends on whether or not the results of HIA have been considered in a real decision-making process.

## Key starting points in developing Mental Health Impact Assessment

Rachel Jenkins presented a Mental Health Impact Assessment (MHIA) project funded by the EU, in which all member states will be included. The aims of the project are to develop a European capacity for rapid prospective mental health impact assessment within the context of an overall health impact assessment, influence generic HIA to firmly include mental health outcomes, develop a core toolkit for MHIA and test the applicability of the toolkit in several EU countries on samples of socio-economic action.

Key starting points for the project include: generic HIA experience from Europe, Canada and Australia, experience in mental health policy formulation and evaluation, Mental Health Country Profile work, epidemiology and social psychiatry, socio-economic determinants of health and illness, and outcome measurement. The project aims to raise the perceived low priority of mental health compared to physical health. It also aims to integrate MHIA into HIA. Dr Rachel Jenkins mentioned the British government document *Our Healthier Nation* (1999), where MHIA is seen as part of impact assessment and it is stated that "national government will consider mental as well as physical health impact when developing wider government policies".

## Swedish experience of HIA as a policy tool to promote equity at the local level

Dr Karin Berensson presented the development of HIA for local and regional levels by the Swedish Federation of County Councils and the Swedish Association of Local Authorities. The main objectives of HIA are as follows:

- place health issues on the political agenda
- contribute to a reduction in health inequalities
- promote the revitalisation of policy making at local level.

The decision was made to develop the HIA method for local and regional authorities. One requirement was that any tool for HIA should be simple to apply to everyday work. A further requirement was that this tool should cover social impact assessment as well as assessments of the environment and issues related to equality. The tool consists of three different parts:

- the health question
- the health matrix
- the health analysis.

The key points for these are knowledge of health conditions locally and regionally, and the objectives on how to achieve a good and equitable health trend. The tool related to the health matrix has been described in the publication “Focusing on health. How can the health impact of policy decisions be assessed?” Some other educational materials have also been published on the Internet – one called “Democracy and Health”. A Swedish network for HIA has been grounded to stimulate the use of HIA. An evaluation of the work by local and regional authorities on the use of HIA is being carried out and the scientific evidence will be

considered in a separate study. Some training courses in HIA are running for county councils and local authorities.

## Experiences of governmental-level HIA in the UK

Dr Gina Radford presented the commitment by the British government, which ensures that “... *the major new government policies should be assessed for their impact on health*”. It is also stated by the government that “*we intend to make health impact assessment a part of the routine practice of policy making in government*”.

In the governmental strategy the purpose is

- to ensure policy makers at national, regional and local levels modify policies to mitigate adverse effects on health
- to develop HIA as a process, and to achieve this by estimating the health impacts of proposed policies and ensuring that these are considered during the development of policies.

The Department of Health has produced a policy makers’ checklist, a toolkit for impact assessment. In the year 2001–2002, £198,000 was used for funding projects for developing HIA methodology in England.

Three policy studies were demonstrated in this presentation: the Home Office Burglary Reduction Initiative, the Prison Service Family Ties Policy, and the DTI Foresight Vehicle Initiative.

Dr Radford concluded by underlining that there are still challenges to overcome: resources, policy development vs. policy implementation, accessibility, evaluating its achievement, positive v. policing, credible evidence, complexity vs. take up and imposition vs. integration.

## HUIA in a Finnish context

Dr Sinikka Mönkäre, in her opening address emphasised the long tradition of the Finnish cross-sectoral action in terms of social and health policy in Finland. In the 1970s a report by the Economic Council's Health Policy Group stated that the national health policy is not a matter for the health sector alone. If the health and well-being of the population is to be improved and an even distribution achieved, the contribution of other sectors is also needed to secure this.

Human Impact Assessment (HuIA) can be seen today as a method or a planning tool for anticipating or assessing the impacts – both positive and negative – of a policy, programme or project on national health and welfare, or for avoiding unwanted impacts. Impacts can be assessed at a global, international, national and local level. Globalisation and European economic integration may have significant impacts on the conditions of national welfare and health. Therefore, it is important to emphasise that all these levels are considered in an impact assessment.

Dr Mönkäre referred to the Treaty of Amsterdam, which states that “the high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities”. Similarly, social inclusion and social cohesion are stressed as part of EU social protection policies. This approach underlines the fact that a good level of social welfare and health is a precondition for securing a well-functioning society and economic growth. The principles of sustainable development also require that the economic, social and environmental values should be better integrated in society and public policy.

Dr Mönkäre highlighted the importance of developing cross-sectoral action and the need to raise social and health policy areas into line with economic development. She also stated that all sectors benefit from a decision-making process in which the social and health impacts are taken into account.

She welcomed the fact that HuIA that can be one mechanism and method that can

contribute to the assessment of the health and social impacts of decisions, policies and projects.

## SIA and HIA – is there a need for integration?

Dr Juhani Lehto considered the historical roots of “impact assessment” in Finland and pointed out that they originate from different historical roots. HIA is more rooted in inspection and regulation and SIA has grown mainly from the participation and advocacy roots.

If HIA and SIA are aimed at being institutionalized – being then the normal practice of preparing policies and projects – some choices have to be made. The issues that have to be taken into consideration include: expertise systems, information systems, awareness-raising mechanisms and international co-operation, financing of IA, the range of decision-making processes that should include IA, the responsibilities and obligations of different stakeholders, and the procedural and methodological rules of IA.

If HIA and SIA are combined, the expertise systems, information systems, awareness-raising mechanisms and international co-operation are needed in all models. The second choice is that EIA (environmental impact assessment) and SEA (strategic environmental assessment) are adapted and used as far as possible. Thirdly, the public health and social sectors should also be capable of promoting the practice of HIA and SIA as a party to good administrative practice and to carry out advocacy HIA and SIA on priority issues. Finally, he pointed out that whether HIA and SIA should be integrated or separate depends on many issues, which he expressed as follows:

- depends on the institutional context
- integrated with legal regulatory frameworks
- integrated with demands for good administrative practice
- less integrated with advocacy contexts
- integration at the level of national infrastructures such as expertise, research, training, information systems

- assessment on the project level – flexible management of projects with regard to integration.

In conclusion, he stated that a combined approach is more feasible in the inspection and regulation approach, as well as in the good administrative approach, than in the advocacy approach. At the level of national infrastructures (development of expertise, research, training and information systems), a combined approach should be preferred. The problem with these, according to Juhani Lehto, might be the low level of integration of HIA and SIA at the international (EU) level.

## Conceptualizing HIA

Dr Tapani Melkas presented the history of HIA in Finland. Systematic HIA has been launched as part of Environmental Impact Assessment (EIA). According to the EIA legislation, an assessment of the expected health and social impacts of large construction projects and physical planning should be carried out. He pointed out that the emphasis of assessment has been mainly on epidemiological predictions of physical and chemical health determinants.

The most recent public health project accepted by the government HIA was emphasised and four lines of action were presented. According to these action lines, every fourth year an external assessment of the health impact of activities in various sectors of policy is recommended; secondly, it is stated that guidelines for procedures for advance assessment of the health impacts of central government policies and decisions will be given by the Ministry of Social Affairs and Health and the Government; thirdly, models for HIA will be developed together with the municipalities for assessment of health impacts at the municipal level; and fourthly, it is stated that models should be made for promoting health impact assessment in decision making by business and industry.

Tapani Melkas presented two case studies of HIA at the government level. The first is HIA

on the 5<sup>th</sup> nuclear plant. A rapid HIA concluded that the health impact of the nuclear plant is positive, mainly by a decrease in the volume of other more polluting means of energy production. The second case concerns the limit value of dioxin in nutrition recently set by the EU. In Baltic fish, concentrations exceeded the value. It was assessed that the ban on Baltic herring was assumed to lead to increased consumption of cheap animal fat in sausages, etc and that the consequences would be a higher cholesterol level and a lower intake of vitamin D. These impacts were assumed to exceed the risk of an increased intake of dioxin, and that is why an exemption to the dioxin value was accepted for Baltic fish.

## A review of the HIA process in Finland

Dr Marita Sihto briefly described the context of HIA and its development in Finland. HIA has mainly been carried out as part of EIA. HIA within EIA has covered both the physical and the chemical determinants of health. To understand the health impacts, there is a need to take into account the social and economic health determinants that affect health. HIA can act as a tool for raising awareness of health impacts – both positive and negative – in the non-health sector. The need for HIA has been expressed in the government resolution on the Health 2015 public health programme. The programme highlights the importance of HIA – both at the national and the municipal level – and recommends the use of HIA in decision making by business and industry, guidelines and models for developing HIA, and both prospective and retrospective HIA. In carrying out HIA it is important to emphasise that HIA should focus not only on average impact values but also on the distribution of impacts. HIA can thus contribute to a reduction in inequalities in health, which is an important health policy goal in Finland.



## Conceptualizing SIA

Dr Väärälä highlighted the need for SIA from a social policy perspective in Finland. There is a need for renewing methods and tools for professionals to improve horizontal communication between experts. Secondly, there is a need to develop new tools for making social issues more visible and, thirdly, there is a need for influencing policy making in terms of prevention and social sustainability. According to Reijo Väärälä, SIA could be seen as a part of a new paradigm for understanding 'social'.

SIA methodology and its development offers some possibilities for understanding 'social'. New tools, methods and concepts are offered for understanding social processes and their complicated chains of impacts. SIA can create new ways and a new know-how for wider public participation, and can help to overcome the barriers of sectors. However, there are also some obstacles that need to be identified.

- The first question is What are the real impacts of impact assessment.
- Secondly, How to tackle the real, big issues such as power, interests, conflicts, etc.
- The third question relates to the tradition of planning - i.e. the rational approach to planning vs. true-to-life planning.

The challenges for SIA include the following:

- a need to understand the concept of SIA - this relates to research, education and training problems
- a need to create pilot projects for learning from experiences
- a need for better co-operation with HIA - experiences from the Health 2015 programme should be made common property.

## Human Impact Assessment (HuIA) in Finland

Mr Tapani Kauppinen introduced a practical view of HIA and SIA in Finland. The advance assessment of environmental impacts has been statutory since 1994. The Act on Environmental Impact Assessment Procedure (EIA) provides

that any impacts on human health (HIA), living conditions and amenities (SIA) need to be assessed.

He described how HIA and SIA have been prisoners of their own tradition. Before EIA law, the Health Protection Act stipulated that it should be ensured that plans would not cause health hazards. In practice, the concept of 'health hazard' corresponds to that of the 'significant health impact' used in Environmental Impact Assessment. In the Finnish language, 'social impact' mainly refers to social protection and social services; impact assessment has been more limited and it has been difficult to build the bridge between social and health impacts. In 1999 the Finnish Ministry of Social Affairs and Health published a handbook on the assessment of social and health impacts. In this book the ministry used the phrase 'Human Impact Assessment (HuIA)' to bring together the separate areas of social impact assessment and health impact assessment.

In Tapani Kauppinen's presentation, the development of the relationship between SIA and HIA in Finland was described as being divided into three phases:

- SIA and HIA are separate from each other. Thus competition takes place between different professions and different resources.
- SIA and HIA have approached each other. In addition to their own special areas, the different sectors of impact assessment also have areas of common interest.
- The social and health aspects have merged together at the opposite ends of the continuum. Seen in this way, all impacts on human beings have their social and health dimensions. An impact that poses a major threat to human health also has its social dimension.

Finally, he pointed out that what is needed is a genuinely common new umbrella concept that combines the different approaches and professions. Concepts such as human impacts, welfare impacts or impacts on human beings have been suggested for the purpose. Assessment of impacts on human beings can

function as a real umbrella concept. There is still a need for expertise from a variety of fields. Expertise is of vital importance in the identification and description of social processes, and in the analysis of health-related matters.

## Social Impact Assessment Projects in Hämeenlinna and Tampere

Ms Liisa Lähteenmäki considered two SIA projects started in 2001 in the cities of Tampere and Hämeenlinna. The main idea was to develop a system for assessing the impact on the inhabitants' well-being. The goal was to develop Social Report (Hyvinvointitase) as a tool for SIA and to include the assessment in the cities' budget and decision-making processes. The idea of Social Report is to collect enough information from different sources to draw key conclusions in terms of people's well-being. In Hämeenlinna the area of assessment was actions and measures concerning the entire city and in Tampere actions and measures by the Social and Health Department.

The data for Social Report contains information (mainly statistical data) on the population's social and health conditions, unemployment, housing, etc, and information from some key persons (social workers, teachers, etc. – "soft" data). The challenge is to develop indicators on the social well-being of the population. The purpose of Social Report is to contribute to all boards of the city in decision making and resource sharing with regard to social care. It is also expected that Social Report could improve cross-sectoral goal setting in these cities.

## Learning from EIA experience

Ms Seija Rantakallio, in her presentation, considered the development of HuIA from the Ministry of Environment's point of view. She emphasised that the development of SIA, HIA and HuIA is a positive direction and the co-operation between the environmental sector

(the Ministry of Environment and the Finnish Environment Institute) and the Ministry of Social Affairs and Health and STAKES within the EIA has been very important. The co-operation has consisted of arranging joint training courses on human impact assessment and other issues, and efforts to bring together the regional authorities of the health and social sector and the regional environment centres.

In assessing the results of this co-operation, it seems that the EIAs now cover aspects of HuIA better than before. However, the experiences are mostly from projects. There are still challenges that have to be faced and the quality of the work varies considerably from one sector to another. HuIA is still a fairly new issue. The second point is that HuIA is often not very well integrated with the EIA. Thirdly, she estimated that if the HuIA is insufficiently integrated with the EIA, it is very difficult to integrate HuIA into actual project design.

## The study of HuIA at a strategic level

Ms Marjaleena Kosola presented the study on HuIA at the strategic planning level. The data consisted of 30 reports from ten sectors: agriculture, forestry, natural resources, environmental protection, climate problems, energy, land use, water management, waste management and the traffic sector.

The study indicates that different sectors emphasise different human impacts. For example, health impacts were given attention in the traffic sector report by measuring the noise level and air quality. Public participation was taken into consideration in only three reports.

As a conclusion, she stated that many human impacts have been identified at the strategic planning level but the quality of assessment seemed to be very superficial, or an HuIA hasn't been made at all. The challenge is to make theory and practice meet each other - that is, the objective could be to construct assessment approaches that are theoretically valid and easily applied in practice.

## Conclusion

A broad-based assessment of the intended and unintended impacts of human activities on the environment and people's health and well-being, as well as on social institutions is an essential element of efforts towards more sustainable outcomes.

In Finland, there is increasing interest in developing HIA and SIA methods, as well as in the actual implementation of these in practice. As described in this document, HIA and SIA are being brought together under the umbrella of Human Impact Assessment (HuIA). This emphasizes the need to look at the social and health consequences in an integrated manner, and to understand them in a wider context. HuIA offers an opportunity to put health and social well-being on the agenda of other sectors in an explicit way.

The HuIA approach is functional in many ways, such as:

- It is a tool for preventive and promotive work
- It is also a proactive method for cross-sectoral action
- It is a new way of approaching the environmental, social and health dimensions simultaneously.

HuIA still needs to be developed, both in terms of methods and practical applications. The seminar offered useful examples of how SIA and HIA have been applied and implemented at different levels of action in different countries.

A number of future challenges were identified, such as:

- How to strengthen the role of research, education and training in HIA and SIA
- How to enhance the readiness of the administration to adopt and apply the HuIA approach
- How to institutionalize HIA and SIA, or rather, HuIA, at all levels of policy making and implementation.

Systematizing and institutionalizing Human Impact Assessment of all major initiatives by both the public and the private agencies would be a major step towards more cost-effective operations and better-quality outcomes. In the context of efforts towards more ecologically, economically and socially sustainable development, it would provide an integrated approach for telescoping the consequences of actions on people, their health and well-being, as well as on their living environments.

## Part B. Seminar presentations

### Opening of the Seminar

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Ministry of Trade and Industry  
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The purpose of this seminar is to increase knowledge of HuIA, Human Impact Assessment. It can be considered a planning tool for anticipating the impacts of a policy, programme or project on national health and welfare, or for avoiding unwanted impacts. Human impacts can be assessed at various levels of activity.

Finnish public administration has a long tradition in cross-sectoral action. For instance, as early as the 1970s a report by the Economic Council's Health Policy Group (1972) stated that national health policy is not just a matter for the healthcare sector alone. Contributions from other sectors were also called for so that the general state of health of the citizens could be improved, and that it would also be evenly distributed. In this connection, it was also discovered that a great number of preventive health policy measures were implemented in other social policy sectors, such as economic policy, employment policy, transport policy and trade policy. Another finding of the Economic Council was that "it should be possible to evaluate the health policy impacts of decisions made in all these sectors, and health policy planning and the related expertise should be capable of influencing the decision making in these sectors more efficiently".

It can also be concluded from this view that even then the idea of anticipating and assessing the implications on national welfare and health of decisions and actions carried out in sectors other than the health care and social sectors was brought up in social policy thinking.

Today, thirty years later, these basic ideas are as topical as they were then, despite the fact that the operating environment has radically changed. It follows from this change that it is no longer enough to conduct an impact assessment solely at the national level. Globalisation and the increasing economic integration are bound to change the practices of public administration and policy, as decisions are made more and more often in the European Union and in other trans-national organisations. Globalisation and economic integration may have significant impacts on the conditions of national health and welfare. Therefore, it is important that these levels are also taken into account in an impact assessment.

At the European level, in the EU, the Treaty of Amsterdam provides that a "high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities". Similarly, in the EU, the importance of social inclusion and social cohesion is stressed as part of social protection and as a precondition for maintaining and developing an information society that is based on economic growth. Thus economic growth, as such, is already considered to be calling for the securing of social welfare in all population groups. These approaches and values underline the fact that a well-functioning society is, besides economic values, also built upon values that emphasise social welfare and health.

The principles of sustainable development also require that the economic, social and

environmental values can be better integrated into each other in social policy. The aim is to make the values of social welfare and health visible and to bring them onto a par with the economic and technical values.

At the national level, the Ministry of Trade and Industry has acted as the summoner and leader of the Well-Being Cluster Advisory Board. A well-being cluster refers to co-operation under which research, service provision and business activities come together. The objective is to reach a common good in a way that meets the needs of all the parties concerned. The final product can be, say, a good export article. For instance, ageing people need many kinds of facilities. In developing these, technical know-how is needed but information on the users' needs and the services that make the products available to all is also required. The product developer has a commercial interest, the service provider has objectives related to equal opportunities and the researcher has a data interest. All of these can be implemented with the "Win-Win" principle.

In national social planning, the ecological, social and health-related dimensions of the living environment are taking on an increasingly important role. This can be seen, for example, in that more attention has been paid to actions having an impact on the environment. The Act on Environmental Impact Assessment Procedure (EIA) entered into force in 1994. Under this Act, social and health-related impacts on people should be assessed before any decision making. In addition, human impact assessment has a particular meaning as an instrument of preventive social and healthcare policy, which aims to prevent social problems and promote health. So the goal is to improve the public

decision-making process by assessing the positive impacts of a certain policy or project on the population's health and social well-being, as well as by eliminating negative impacts.

What, then, is my stand on the questions I have just raised? Firstly, I think that it is important that cross-sectoral action is developed so that the social policy areas that have traditionally been regarded as "soft" receive equal emphasis with the "hard" ones. Secondly, it is obvious that today's cross-sectoral action, which highlights health-related and social aspects in particular, is not only of use to the healthcare or social sector but also to my own sector, trade and industry. As I said earlier, an inclusive society is necessary so that the hard sectors, such as the administrative branch of the Ministry of Trade and Industry, could achieve goals of their own. All sectors would benefit from a decision-making process in which the social and health-related impacts of the decisions are assessed. Thirdly, it is evident that this cross-sectoral work needs new mechanisms and methods with which the health-related and social impacts of decisions, politicians and projects can be brought up more clearly in decision making - that is to say, with which they can be made explicit. The HuIA, Human Impact Assessment, provides one good opportunity for this.

At the moment, there is increasing interest towards impact assessment as a tool for decision making. This seminar is also an indication of this. Our aim here today is to focus on human impact assessment at the national and municipal levels in particular, and to learn from foreign experiences. I wish you all a rewarding day and await the results of this seminar with interest.

# HIA and SIA – Main Conceptual and Theoretical Issues

## HIA – Key Conceptual and Policy Issues

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Health impact assessment (HIA) has been defined as “the estimation of the effects of a specified action on the health of a defined population” (Scott-Samuel, 1998). It is essentially a decision tool drawing on a scientific evidence base. HIA has developed out of the now universal acknowledgement of the health impact of public policy (Milio, 1981), coupled with 30 years’ experience of the assessment of environmental (and later social) impact, following the US National Environmental Policy Act of 1969.

In the United Kingdom, the current New Labour government has given considerable encouragement to the development of HIA, and has made a commitment, in its English public health White Paper Saving Lives – Our Healthier Nation (Secretary of State for Health, 1999) to undertaking HIAs of major policies. In a recent progress report, From Vision to Reality, the Government stated that “in the past year health impact assessment has been used increasingly nationally, regionally and locally to enhance and support decision-making at policy, programme and project levels” (Department of Health, 2001).

The longest established UK programme of HIA is at Liverpool University, where first Liverpool Public Health Observatory, and then the successor body IMPACT (the International

Health Impact Assessment Consortium) have developed and applied systematic methods for health impact assessment (Scott-Samuel, Ardern and Birley, 2001). This has involved a programme of case studies prospectively evaluating urban policies and projects (Fleeman and Scott-Samuel, 2000; Winters, 2001). IMPACT, together with partners in Germany, Ireland and the Netherlands, has recently been funded by DG Sanco to synthesise and test methods for undertaking HIA of EU policies.

In brief, the Liverpool approach involves:

- applying a screening procedure to select policies or projects for assessment
- agreeing the scope of the HIA in terms of depth, duration, spatial and temporal boundaries, methods, outputs, etc.
- policy analysis
- profiling the areas and communities likely to be affected by the policy
- collecting qualitative and quantitative data on potential impacts from stakeholders and key informants
- using a predefined model of health impact
- evaluating the importance, scale and likelihood (and, if possible, cost) of potential impacts

- searching the evidence base to validate data
- undertaking option appraisal and developing recommendations for action
- monitoring and evaluation following implementation.

The model of health employed by practitioners is crucial to both the HIA process and its outcomes. Work in “less developed” countries has tended to employ a medical model, focusing on possible disease outcomes of development projects. Arguably, a social model which incorporates a more holistic concept of health and a broad range of social determinants is more appropriate to policies and projects in developed countries. In Liverpool a socio-environmental model derived from the work of Lalonde and of Labonte is used. Clearly, such concepts of health in turn result in the identification of broader ranges of potential impacts of projects or policies.

Like science, medicine and health, HIA is not value-neutral. The values used in carrying out HIA need to be explicitly stated. Equity is a

key value, because public policy impacts disproportionately on the already disadvantaged. This implies a need for the outputs of HIA to focus not just on average impact values but on the distribution of impacts across affected population groups (Barnes, 2000; Douglas and Scott-Samuel, 2001). From the adoption of an equity-focused approach also follows the need for participatory methods and for openness of all stages of the assessment process to public scrutiny.

Good science implies that methods should be appropriate to what is being studied, rather than that any specific method should be used in all situations. It is not therefore possible to prescribe one ideal method for appraising the whole range of health-relevant public policy. What can be said is that multi-method approaches are likely to be required, and that these will usually be both qualitative and quantitative, multi- and inter-disciplinary. But HIA is still an emerging approach; there is quite a way to go before a consensus can be achieved. In policy terms, however, it is undoubtedly in the mainstream of UK activity.

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## Comment: A review of HIA process in Finland

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Finland is in the process of developing mechanisms, instruments and methodologies for HIA. HIA is not a totally new issue in Finland. HIA has been carried out as part of the Health Protection Act and the EIA Act, which came into force 1994. According to the EIA Act, impacts on people's well-being and health should be assessed and taken into account. In this context, the components of the environment that protect people's physical health (household water, general food, hygiene, waste and wastewater, etc.) have been considered.

There is a need to develop a broader HIA approach that considers other important health determinants, such as the social, cultural and economic factors that influence health. HIA could be developed as a tool for decision making and inter-sectoral action for health (IAH) in raising awareness of health considerations in the non-health sector. HIA can act as an explicit tool for IAH and as an instrument of preventive health policy. This need for HIA has also been expressed in the most recent public health programme. The Government Resolution on the Health 2015

public health programme presents action lines regarding HIA as follows:

- Both prospective and retrospective HIA is needed
- The level of assessment is recommended to be both the national and municipal level
- The development of models for promoting impact assessment in decision making by business and industry is encouraged.

What these action lines do not highlight clearly is that they do not address inequalities in health, although in the Finnish health policy the goal of tackling inequalities in health is essential. This indicates that effects that are likely to affect health should be evaluated for their impact on health inequalities. This is especially important in Finland, where socio-economic differences in health persist and which, on an international scale, are unusually wide. Thus HIA should not only focus on average impact values but also on the distribution of impacts across affected population groups. This could form part of HIA in Finland and may offer a tool for reducing inequalities in health.



## Key Starting Points in Developing Mental Health Impact Assessment

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Over the last decade, considerable progress has been made on developing tools for health and social impact assessment, and while some of this work has included a little on mental health, there has not, to date, been a concerted specific effort to develop a comprehensive toolkit for systematic mental health impact assessment which makes good use of existing knowledge about the social, psychological and physical causes and consequences of good mental health and of mental disorders.

Such an enterprise can usefully draw on existing mental health projects with the EC health promotion and monitoring programme; generic HA experience from Europe, Canada and Australia; rapid prospective health impact assessment in urban regeneration schemes; experience in mental health policy formulation and evaluation; epidemiology; social psychiatry; health outcome measures; existing research knowledge about the social and economic determinants of psychosocial health; and psychiatric illness.

There is considerable existing knowledge about the variation of rates of mental disorder with sociodemographic variables, life events, social networks, perception of social support,

urbanicity, and such things as proximity to aircraft noise. Much more use can and should be made of this empirical data than has hitherto been the case in health impact assessments.

Any toolkit for mental health impact assessment should incorporate the explicit values of an equity focus, including consideration of the impacts on disadvantaged groups, distribution of impacts across populations, and consideration of which groups will bear the impact, in terms of gender, ethnicity and other sociodemographic variables.

The methods to be considered within a mental health impact assessment include policy analysis; profiling the areas and countries affected; a central participatory role for stakeholders and key informants; evaluating the importance, scale and likelihood of predicted impacts; considering alternative options; literature search; examination of local and national available data, both epidemiological surveys and routine service use data; expert informants; focus groups; and specific interviews.

As a first step, a multi-country proposal has been submitted to the EC to develop and pilot such a toolkit.

## Bringing SIA and HIA together for Human Impact Assessment

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### What is Social Impact Assessment (SIA)?

Social Impact Assessment (SIA) “is the process of analyzing (predicting, evaluating and reflecting) and managing the intended and unintended consequences on the human environment of planned interventions (policies, programs, plans, and projects) and any social change processes invoked by those interventions so as to bring about a more sustainable and equitable biophysical and human environment” (Vanclay 2002: 388). In other words: *SIA is the process of analysing and managing the intended and unintended social consequences of development.*

SIA is more than a technique or step, it is a philosophy about development and democracy which considers: (i) the pathologies of development (i.e. harmful impacts), (ii) the goals of development (such as clarifying what is appropriate development, improving the quality of life, increasing social equity, enhancing access, promoting health for all), and (iii) the processes of development (e.g. participation, building social capital).

SIA is an overarching framework that considers all potential impacts on humans and their communities including changes to:

- people’s way of life – that is, how they live, work, play and interact with one another on a day-to-day basis;
- their culture – their shared beliefs, customs, values, and language or dialect;
- their community – its cohesion, stability, character, services and facilities;
- their environment – the quality of the air & water they consume; the availability & quality of food they eat; the level of hazard or risk they are exposed to, the level of dust

& noise exposure; adequacy of sanitation, physical safety, and access to & control over resources;

- their health & well-being – health is “a complete state of mental, physical and social well-being, not merely the absence of disease or infirmity”;
- their fears & aspirations – perceptions about safety, fears about the future of their community, & aspirations for their future & their children’s future.

The objective of SIA is to ensure that the development that does occur maximises the benefits and minimises the costs of development, especially those costs borne by the community and often not adequately taken into account by decision-makers, regulatory authorities and developers. By identifying impacts in advance: (1) better decisions can be made about which projects should proceed and how they should proceed; (2) mitigation measures can be implemented to minimise the harm from a specific project or project-related activity; and (3) communities can be assisted in coping with change.

SIA has three different levels of meaning: 1) as a discrete step (or specific task) within EIA; 2) as a methodology, environmental management instrument or overall process of managing the social impacts of development projects and policies; and 3) as a paradigm, field of research and practice, a community of scholars, a sub-discipline. “SIA” is used at different times to indicate these different levels of meaning, thus creating confusion.

As a paradigm, SIA consists of a body of knowledge, techniques, and professional values. Various people identify as SIA professionals, or list SIA as a discipline or speciality area. There

is a community of scholars engaged in research and practice of SIA. These are people who practice the methodology of SIA and who undertake associated social and environmental research to inform the practice of SIA. As a methodology or instrument, SIA is the process (series of steps) that SIA professionals follow in order to assess and manage social impacts. That process requires substantial interaction with interested and affected peoples. Only at its narrowest meaning does SIA refer to the task of prediction of likely social impacts of a proposed project within an environmental assessment framework.

SIA assists project management through:

1. reports to regulatory agencies and affecting the decision-making process
2. working with the proponent to improve projects through project (re)design, site selection, mitigation measures
3. working with communities to assist in coping with change, and planning for positive futures

There is a role for SIA in all phases of the project cycle:

1. planning or policy development
2. construction or implementation
3. operation and maintenance
4. decommissioning or abandonment.

SIA is a valuable tool that assists all parties. Communities benefit by having more say, they become revitalised, social capital is built, harmful impacts are avoided, and project benefits are maximised. Regulatory agencies benefit through having better information on which to make decisions. Proponents (private sector) benefit through improved relations with local communities, workforces, and important stakeholders. Costly mistakes are avoided, the risk of future compensation payouts is reduced, there are improved siting decisions, and better plans.

## What is Health Impact Assessment (HIA)?

Birley (1995: 153) considers that HIA is “a multi-disciplinary activity that cuts across traditional boundaries between public health, medical services, environmental and social science . . . and that it is a necessary component of project planning in all countries and part of Environmental Impact Assessment (EIA)”. By “health impacts” he refers to the “positive and negative changes in community health that are attributable to a development project”. He argues that there are five categories of health impact: communicable diseases, non-communicable diseases, malnutrition, injuries, and mental disorder. In Birley’s view, although there is an overlap with social impact assessment, there is quite a clear delineation in focus. The overlap is greater in that the five categories of health impact (experience) have social and institutional precursors. Risk-taking behaviours (which lead to injuries), health related behaviours such as smoking, drug use and substance abuse, violence and suicide are also of concern. HIV/AIDS and other sexually transmitted diseases are forms of communicable disease that have special significance.

The World Health Organisation defines health as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity”. It also believes that health includes the extent to which an individual or group is able to realise aspirations and to satisfy needs, and to change or cope with the environment (WHO 1984). This is more social in orientation, especially when the philosophy of the WHO mission is considered. In explications of the mission, the definition of health is meant to apply to communities and societies as much as, if not more than, to individuals. Health, therefore, is unambiguously a social rather than medical phenomenon.

Since there are clear links between the spiritual and cultural integrity of indigenous

cultures and their physical, mental and social well-being, it is obvious that health is a multi-faceted, multi-disciplinary phenomenon. Health Impact Assessment, therefore, must consider an integrated, holistic complex set of interactions (Rattle and Kwiatkowski, 2002).

The problem is that general understandings of “health” tend to be limited to physical concepts of health, and the medical profession has appropriated the field of health through their political and professional power (known in sociological terms as medical dominance).

### Is a Human Impact Assessment desirable?

Because of the overlap between health and social considerations, it has been proposed that perhaps there should be a new field, human impact assessment. Such a concept would overcome the limited understanding that exists of what is “social”, and the limited understanding of what is “health”. It would also eliminate the problems caused by the overlap and the gap in things that are not considered. Developing a new field would also potentially overcome the project-based thinking that has constrained SIA. Human impact assessment could emerge from the beginning as a contribution to policy making

and decision making, applicable to policies, programs, plans and projects. Arguments about what should rightfully be included would be eliminated, with the new procedure defined to be broad and all-encompassing. It would be a manifestation of a new planning culture (STAKES 2000).

Integrating SIA and HIA in human impact assessment would have many potential benefits. It could lead to better assessments because the impacts are integrated anyway, and an integrated assessment process might well be better able to understand the complex web of interactions that occur in the chains of impact-causing factors and processes. This would be reinforced if social and health considerations received adequate attention in the environmental impact assessment (rather than being marginalised or subordinated as frequently occurs). Integration may result in efficiencies (cost and time) in the assessment process. If health and social issues are integrated, this may facilitate integration and contribution in environmental impact assessment, thus giving health and social issues a stronger legal standing than hitherto has been the case. This would facilitate greater say in decision making and project design, leading to better projects and plans, and greater well-being in the community (Rattle and Kwiatkowski, 2002).

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## HIA and SIA on Different Levels of Action

### Ensuring a High Level of Health Protection – the European Community's Role

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During the past twelve months there have been several developments of major consequence for Community health policy, notably the coming into force of the Amsterdam Treaty, which contains new provisions on health, and the restructuring of the Commission, one of the aims of which was to give greater priority to health. The Treaty, in Article 152, recognises that health is an important crosscutting theme that is relevant to a wide range of Community policies. In response, the Commission put forward its Communication on the EC's health strategy, and its proposal for a new public health action programme, in May 2000.

Given the wide range of Community policies that need to be covered (ranging from agriculture, fisheries and food policies to free movement provisions for health professionals, from internal market rules for certain products such as pharmaceuticals and medical devices to environmental, transport and energy policies, and from the Community's large-scale health-related research programmes to its external relations), it is not surprising that how best to implement the Treaty provision has become a question for debate.

The new health strategy, as set out in the Commission communication, seeks to ensure that proposals in key areas of Community activity, such as the internal market, social affairs and research, actively promote health protection. A number of specific measures are announced to achieve this:

- First, from 2001, proposals with a particular relevance to health will include an explanation of how health requirements have been addressed.
- Second, the co-ordination mechanisms within the Commission will be strengthened, and
- Third, the new public health programme will be able to support the development of methodologies for assessing the health impact of certain policies and actions and pilot studies.

As an important step in implementing the initial commitment, the Commission has prepared a guide for services on how to evaluate potential actions and proposals for their potential health impact.

## Experiences of Governmental level HIA in the UK

GINA RADFORD

Regional Director of Public Health, Department of Health, UK

Dr Gina Radford presented<sup>1</sup> the commitment by the British government which ensures that "...the major new Government policies should be assessed for their impact on health. It is also stated by the government decision that "we intend to make health impact assessment a part of the routine practice of policy-making in Government". In the governmental strategy the purpose is

- to ensure policy makers at national, regional and local levels modify policies to mitigate adverse effects on health
- to develop HIA as a process to achieve this by estimating the health impacts of proposed policies and ensuring that these are considered during the development of such policies.

The Department of Health has produced a policy-makers' checklist, a toolkit for impact assessment. In the year 2001–2002, £198,000 was used for funding projects for developing HIA methodology in England.

Three policy studies were demonstrated in this presentation: the Home Office Burglary Reduction Initiative, the Prison Service Family Ties Policy and the DTI Foresight Vehicle Initiative.

Dr Radford concluded by underlining that there are still challenges to overcome: resources, policy development vs. policy implementation, accessibility – "de-mystify", evaluating its achievement, positive v. policing, credible evidence, complexity vs. take up, and imposition vs. integration.

## Swedish Experience of HIA as a Policy Tool to Promote Equity at the Local Level

KARIN BERENSSON

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What is health and what affects health? These two questions formed the basis of our development of health impact assessment (HIA). Health is a very important issue for people, and to get their points of view on health we asked them about health and health determinants. We discussed health issues not only with teenagers, immigrants and unemployed people but also with politicians and experts in the field of public health. So, one point of departure for developing HIA was the determinants of health.

In this paper I will present

1. The development of HIA for the local and regional levels carried out by the Swedish Federation of County Councils and the Swedish Association of Local Authorities.
2. Some facts about the results, i.e.
  - what has happened in the local authorities and the county councils
  - a study from the Karolinska Institute on the use of HIA in a Health District Authority in Stockholm

The steps we hope to take next.

<sup>1</sup> This is a summary of the presentation of Gina Radford written by Marita Sihto.

## The development of HIA for the local and regional levels

Let's start with a simple question: Why carry out HIA at local and regional levels?

We know that health is determined by a lot of factors, such as age, gender, family and friends, housing, transport, and access to social and health care, as well as environmental factors and the economy. We also know that the local and regional levels in Sweden are responsible for many of these tasks, especially those in the third and fourth row. The local authorities are responsible for tasks such as schools, social care, care of the elderly and the environment. The county councils are responsible for health care and public health, some public transport and regional development. The local authorities, like the county councils, have directly-elected politicians and have independent taxation rights. The determinants of health therefore depend a great deal on political decisions at these levels.

A few years ago, we had a committee in Sweden made up of leading politicians from the municipalities and counties with the main objective of putting health issues on the political agenda. This committee initiated and developed HIA for both the local and regional levels.

The basis for the work of the committee was the overall objective for public health - that is, "to contribute to equality in health" and the special objective for the programme "to place health issues on the political agenda". A decision was made to develop HIA for the local and regional levels.

The main objectives, or the hopes we have, for HIA is that it will

- place health issues on the political agenda;
- contribute to a reduction in health inequalities and, last but not least,
- promote the revitalisation of policy making at the local level.

The programme worked with two processes. One was to find out what the determinants of health are in Sweden today, while the other was

to examine the political process in order to be able to produce an effective HIA tool.

Moving on to the development of HIA, most of us agree that the concept of health has different meanings, depending on where and when one lives and on the conditions under which one lives. So that the public, and especially those groups exposed to health risks, could make their voices heard in the work on HIA, a number of so-called "reference" groups were set up. Groups made up of immigrants, unemployed people, women, and young people - from throughout the country - discussed what health means to them. These groups included a youth council, a group of teenage girls, Muslim women and black immigrants. They also discussed what questions they feel politicians should consider before making policy decisions. Some of the groups also had discussions with local politicians about health-related policies - very interesting discussions for both the participants and for the politicians.

Furthermore, experts, scientists and officials at various levels discussed what an HIA might consist of, what it should contain and how it should be presented. We have also thoroughly discussed with local politicians what they regard as being important for people's health.

The extent to which views on the determinants of health coincide is remarkable. Leading politicians tend largely to have the same opinion as the unemployed, immigrants and young people. These views are also shared by experts in the arena. The factors that are regarded as important are:

- democracy/influence/equality;
- financial security;
- work/meaningful pursuits (activities)/education;
- social network;
- access to health care and welfare services;
- belief in the future/life goals and meaning;
- physical environment;
- living habits.

It is also interesting to observe that the tools produced for HIA in British Columbia in

Canada and in Liverpool in the UK include largely the same determinants.

One requirement has been that any tool for HIA should be simple to apply in everyday work. It needs to be usable in both the smallest municipality (around 5,000 inhabitants) and in the largest county councils and regions (1.5 million inhabitants). A further requirement is that any tool should cover social impact assessment as well as assessments of the environment and issues related to equality. The tool should also contribute to ensuring that trends are in the direction of the overall objective of favourable and equitable health development.

It is evident, as our politicians pointed out, that HIAs have to be carried out at an early stage, before too much has been invested in any proposal. HIAs should also reveal whether proposals are in harmony with the overall objectives of the society concerned.

To suit different practices and users, we developed a tool made up of three different parts:

- the health question
- the health matrix and
- the health analysis.

Key points of departure for all three parts are knowledge of health conditions locally and regionally, and the objectives of public health work - that is, achieving a good and equitable health trend.

We have focused on some central issues:

- What might a proposal mean for various groups in the community and for the population as a whole?
- How will certain conditions, such as the social environment and various risk factors, be affected by the proposal?
- What will the proposal mean in the short and long term?
- Are there any alternatives to the proposal?

Let us look at the part in between, “the health matrix”. On the vertical row we have the determinants of health. On the horizontal row we have got long term and short term, as well as the prioritised group and the whole population.

This is just a model and therefore we have the tool on the Internet so that users can download it into their own Word document and change it according to their own needs. For example, you can change the prioritised group to children. If you find that you have to emphasise one of the determinants, enlarge that square and fill in relevant facts. Alternatives to the proposal are important and there is a line for that, as well as for comments.

The tool has been described in a report “Focusing on Health. How can the health impact of policy decisions be assessed?” and on the Internet. I believe that the presentation on the Internet has been important for the introduction and use of the tool in Sweden.

Our aim is to enable the tool to be used in the everyday work of all politicians and local authority officials. The more advanced part, for proposals of a strategic nature, might demand social-medical expertise and experience.

To increase the understanding of HIA and health determinants, we have published educational material on the Internet especially for politicians. It is called “Democracy and Health” and focuses on the relationship between public health and politics. A main message was “politicians are public health workers”.

To stimulate the use of HIA we have founded a Swedish network for HIA. We meet once a year. We have also engaged special people to train politicians and officials in HIA in the county councils and municipalities.

The work conducted so far was the first stage in a development process. What has happened after that?



## Some results

### *a) What has happened in the local authorities and the county councils?*

We have just finished a study to see what is happening in the county councils and the local authorities. The study shows that more than half of the county councils have begun to introduce HIA in their organisations. This means that they have started training and so on. Nearly half of the county councils have begun to use HIA, even though the use of HIA differs in these county councils. 50 of the almost 300 local authorities have begun to introduce HIA, and ten of them have begun to use HIA.

### *b) The use of HIA in a Health District Authority*

Testing HIA in practical use was important. The South-West Stockholm Health District Authority (SWS HD) was an early beginner, and to get a scientific evaluation of the use of HIA in the district the Swedish Federation of County Councils commissioned the Karolinska Institute to conduct a study.

SWS HD has 360,000 inhabitants. The average age is lower than the average in the council, and there are more unemployed people and immigrants. The health status is relatively low and differs between different settings in the district. A main task for the board is to secure health care for the population. The vision is: "Good and proper health and medical care that contributes to the security of individuals, reduces health inequalities and provides the best possible results."

SWS HD began its involvement in HIA in the autumn of 1998.

The politicians on the board and the local government officers were trained. Training material on the Internet, "Democracy and health", was used.

A start-up conference was undertaken, and, since September 1999, SWS HD has conducted HIA on all political proposals.

In SWS HD the role of the local government officers has been to carry out the HIA. The role of the politicians has been to ask for HIA and to use it in the decision-making process.

The HIA tool was adapted to local conditions in five development stages. The latest version is a checklist based on the determinants of health and is structured under the headings

- Health promotion
- Disease prevention
- Health care
- Rehabilitation

As you can see, it now relates to a health organisation.

In the beginning, HIA was an attached document to the draft proposals to the board. Today it is a part of the proposals in SWS HD.

The study is a feasibility study of the tool and its usability. It was carried out step by step in an inductive way. The three steps are:

- An analysis of political documents and how HIA is applied in the political process.
- Interviews with key individuals among the politicians and civil servants, and
- A summarised analysis of all the work.

### **Important Success Factors**

In SWS HD the responsible local government officer feels that the implementation process has worked out well. Important success factors are, from her point of view:

- support from all levels of the organisation
- training opportunities adapted for all
- a distinct decision from the management
- a political intention
- all local government officers involved (which underlines the fact that public health issues concern the whole organisation)
- support from the national collaborators.

### **What can we learn from the evaluation in this district?**

At the board's last meeting, after almost 1.5 years of HIA use, the checklist was used on

every proposal to the board, and every proposal had arguments about the consequences for health.

The overall lesson learned is that the work with HIA in SWS HD has been dynamic and that time is needed when taking health impacts into account in the decision-making process, and when using the HIA tool.

In SWS HD, HIA has developed into an aid that can be used to:

- give the board a better basis for making decisions
- systematically analyse the health impacts of all proposals
- systematically adopt a health perspective throughout the decision-making process.

Furthermore, the evaluation has clarified that:

- it is important to develop HIA on the basis of the special conditions that exist in different political areas of responsibility and activity
- implementation and the practical use of HIA is a process involving cooperation between politicians and local government officers, which initially demands training but is subsequently followed by a dialogue for quality assurance and the development of the tool, and that
- the local government officers do not think that using HIA in the political process demands more work from them.

Finally, this study shows that the HIA process has contributed to placing public health issues on the political agenda. This is a result we hoped for in the long run, we did not expect to see it in this evaluation after just 1.5 years of use!

#### *c) A study from the Karolinska Institute on the scientific evidence*

We have commissioned Professor Finn Diderichsen of the Karolinska Institute to conduct a study on the scientific evidence for the determinants of health in our tool. This study will be presented soon – hopefully, also in English. We hope to develop a “years-saved

calculator” based on the material and DALYs on our website.

#### *d) Different uses of HIA*

HIA is a very broad concept and can be used in different ways. It must suit the local users and they can, therefore, develop the tool in their own ways. For example, some of the local authorities are developing the tool so that they can use it for the implementation of the UN Declaration of Children’s Rights as well as for health impact assessment.

Malmö uses a checklist that covers HIA and the UN Declaration of Children’s Rights.

The steps we hope to take next

#### **Evaluation**

We hope to follow and learn more about the adoption of HIA at the local and regional levels. Some counties and local authorities are planning their own studies.

A main objective for HIA is to contribute to a reduction in health inequalities, and I have also been asked to speak on the heading “Equity in health today”. Do we know if HIA contributes to reducing inequalities in health?

The answer is that we do not know, but we hope to take a second step to evaluate whether we are achieving our objectives for HIA, and, in particular, the objective concerning inequalities in health.

It would also be interesting to carry out an evaluation in a local authority.

#### **Training**

The ongoing training of local government officers and politicians is important. Today, people from the county councils and local authorities with experience of HIA are training people in other municipalities.

It would also be valuable if HIA could be included in public health courses. Just now, Malmö University (School of Health and Society, Public Health programme) is running a training course in HIA for the first time.

### Other aspects

In Sweden we have developed a Local Welfare Management System together with the National Institute of Public Health. It is influenced by the Verona Initiative and the Investment of Health. The indicators in the Local Welfare Management System are influenced by those in HIA. 50 local authorities have begun to introduce a Local Welfare

Management System. This is another way to adapt the concept of HIA, which can give us new experience.

Citizen participation is now often discussed in county councils and local authorities. The aim is to involve citizens in the political decision-making process. Major efforts are being made in this direction. This could be still another way to develop HIA.

## Social Impact Assessment and Social Policy

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### What Is Social Impact Assessment?

Social impact assessment (SIA) is a newly emerging field of interdisciplinary knowledge and application. Its aim is to predict and evaluate the social effects of a policy, program, or project while still in the planning stage – before those effects have occurred. Unlike the more familiar “evaluation research”, which gauges the effectiveness of programs already in operation, the task for SIA is anticipatory research. It seeks to place the expectation and attainment of desired outcomes – of policy formation, program development, and project implementation – on a more rational and reliable basis (Wolf 1980, 27; original emphasis).

Twenty-two years later, SIA’s potential and promise remain unfulfilled, although the occasion of this seminar marks a signal advance in that direction. In fact, thanks to colleagues in the EU, especially the U.K., and Canada, health impact assessment (HIA) is fairly flourishing. Moreover, it is receiving impressive recognition and support not only from governmental but also from professional bodies, notably the British Medical Association (1998). It can be fairly said that HIA is currently the most attractive and effective application of SIA.

What is social impact assessment? In principle, the answer can be found by deconstructing the term itself. “Social” impacts are “people impacts”, impacts of and on people, where they live, in families and communities, now and in the future. “Impact” is change – planned or unplanned, intended or unintended, recognized or unrecognized. “Assessment” is technical analysis coupled with public evaluation, the latter integral to the crucial role of people’s participation in the assessment process. In practice, what you do in social impact assessment is assess the social impacts – their causes, conditions, and consequences.

### The Impact Assessment “Movement”

In a sense, that is what social science is all about, and always has been; on this understanding, “social impact assessment” is only a modern expression of a traditional concern (Wolf 1974, 2). True, SIA draws freely on the full range of social science knowledge and methods, but in distinctive contexts and for specific purposes, which can be broadly stated as “building local and global capacity to anticipate, plan, and

manage the consequences of change so as to enhance the quality of life for all”.

In a larger sense, SIA is part of an impact assessment “movement” which emerged in the United States around 1970 and has now spread around the world, propelled by convergence of three major social innovations of the past century:

- 1) “the public”, as distinct from “the electorate”, centred in voluntary “public interest” and community-based organizations now referred to as “civil society”;
- 2) “the environment” as an object of generalized concern and a value to be respected and protected;
- 3) “the future” as something people can know better about and do better to shape.

Whereas previously change had been broadly equated with “progress”, after mid-century this construction was radically challenged, initially in the drinking water fluoridation controversy, then in nuclear weapons production and power generation, and the application of synthetic fertilizers and pesticides. Instead of passively “adapting” to such induced change, the public’s role shifted toward active involvement in the social management of technology. As Thomas Berger (1984, 2), chairman of the path-breaking Mackenzie Valley Pipeline Inquiry (the “Berger Commission”), observes, “we used to think that the changes wrought by science and technology would be altogether benign. But in recent years another view has begun to take hold: that the advance of science and technology – especially large-scale technology – may entail social, economic and environmental costs which must be reckoned with”.

Impact assessment is a way of reckoning with those costs – what sociologist Robert Merton (1936) called “the unanticipated consequences of purposive social action.” This social movement reflected a movement of thought which conceived and applied such intellectual and research innovations as systems analysis; cost-benefit analysis; social accounting, reporting, and forecasting; decision and policy analysis, and futures research. Impact assessment gained coherence and

prominence in the 1970s, particularly in the contexts of technology policy (technology assessment), environmental protection (environmental impact assessment), and nuclear development (risk assessment). Then, as now, the distinctive features of impact assessment were its concern for anticipatory and participatory research and action.

## Rationality and Responsibility

The impact assessment movement embodies the complementary themes of rationality and responsibility. The former can be expressed in terms of “the knowledge of consequences”; the latter in “the ethics of consequences”.

## Anticipatory Research

One way of stating the proposition for anticipatory research is that of “anticipating the unanticipated consequences” of purposive (or any) social action (or condition) – in effect, of “knowing before you know”. Some knowledge of consequences can be gained through what Biderman (1966, 267) called “anticipatory studies” – “the before part of before-after designs”. He noted (*ibid.*, 273) that “The contributions of research into the impact of immediate events on the behaviour of significant publics have generally been limited by the *ex post facto* or *ad hoc* nature of most such research. Only rarely have social scientists anticipated the occurrences or possible occurrence of unscheduled events that might prove to be of research significance. And even more rarely have they begun their work sufficiently well in advance of the events to be able to make precise measurements of change and direct observations of the processes of change while they were occurring.”

Biderman cited the impact of television as a case in point; contemporary examples could be added, such as the Internet, a credible nuclear or biochemical terrorist threat, and contact with extraterrestrial intelligence, not to mention the biological revolution taking shape

over the past half-century through genetic modification, and the phenomenon of globalization.

According to Biderman (1996, 274), anticipatory studies impose four requirements:

1. We must endeavour systematically to anticipate the occurrence of events that may constitute important objects of research.
2. Research plans must be developed using to the fullest extent our ability to anticipate the demands that will confront research on the occurrence of the event.
3. Where a study of change caused by the anticipated event is indicated, base-line measures should be made before the event. Such measures should be aimed at both relevant publics and variables.
4. A ready capability must exist for carrying out research observations where and when events significant for study occur.

Biderman (1966, 301) concludes that “I have attempted to highlight the general need for anticipatory studies and stand-by research capabilities to evaluate the impact of programs, policies, and institutions on society. Whether the effort is worth the cost is dependent upon how we answer the larger question: How seriously do we want to understand the full consequences of what we are doing?”

### The Knowledge of Consequences

For impact assessment practitioners, the answer can be phrased in terms of acquiring and applying “the knowledge of consequences”. The

same may be said of the social responsibility of scientists generally: “As scientists, it is their business to determine reliably the immediate and remote costs and consequences of alternate possible courses of action, and to make these known to the public” (Lundberg 1947, 29).

Because the knowledge of consequences implies responsibility, to intervene or refrain, it must be joined with an ethic of consequences – Max Weber’s “ethic of responsibility”. Linkage between the two is forged in the process of impact evaluation – not only analyzing what potential impacts of a proposed action or perceived condition may occur, but judging their desirability - “the direction of the sign”. Making that determination transcends the boundaries of science and enters the realm of politics - that is to say, of values. (Political scientist David Easton (1965, 21) equates the two, defining politics as “the authoritative allocation of values”.) Hence value inclusion and integration must occupy a central place in impact assessment-what Timmerman (1984) calls “coherent rationality”.

### Comprehensive and Integrated Assessment

While there are many types and variants of impact assessment, ideally all of them would converge in a system of “comprehensive and integrated assessment” – comprehensive in its coverage of assessment levels, scales, schedules, and sectors (Exhibit 1) and integrated across disciplines, perspectives, and methods.

EXHIBIT 1. Assessment Levels, Scales, Schedules, and Sectors

<i>ASSESSMENT LEVELS, SCALES, SCHEDULES AND SECTORS</i>			
LEVELS	SCALES	SCHEDULES	SECTORS
policy	global	far-future	multi-sectoral
program	national	near-future	environmental
project	regional	baseline	social
product/process	local	history	economic

For example, “becoming comprehensive” might mean raising the level of assessment to the consideration of policy alternatives, as in strategic environmental assessment (Therivel and others 1992), or broadening the scale of assessment to global dimensions. A full assessment would include consideration of such factors as:

- the full range of alternatives
- the full program or project development cycle
- the full range of impact categories and dimensions
- the full range of interested and affected parties.

### The Rationality Model

Implicit in impact assessment and similar approaches is a rationality model, which White and Hamilton (1983, 40) contrast with its polar opposite, incrementalism: “In contrast to rationality that emphasizes substantive knowledge and policy outcomes, incrementalism emphasizes process and participation. Whereas the rational model focuses on optimizing the achievement of policy objectives, incrementalism focuses on how policy is made and how multiple, often competing interests and values can be accommodated.”

The authors go on to note: Most policy choices in our political system are made on the basis of both facts about consequences and

negotiations among the representatives of the various interests and values represented in the policy-making process. Consequently, policy-makers need to know more in a narrow technical sense than how effective and efficient a policy choice would be in a narrow technical sense; they also need to know how equitable, flexible, and implementable a policy choice would be. (White and Hamilton 1983: 41.)

### Limits to Rationality

In a perfect world, comprehensive rationality would take all these factors into account. Still it is worth pondering “how rational can we be?” or, better phrased, “how can we be rational” about an uncertain future.

First, rational choice depends on the appropriateness of means to a given end; the starting point is a goal statement, implying value consensus and commitment. Where are those values coming from and with what consistency and authority? As White and Hamilton observe, policy makers often confront a diversity of interests and values. But that is just the beginning; in impact assessment there is a plethora of multiplicity, including multiple publics, purposes, perspectives, evaluative criteria, and methods.

Although rational techniques have been devised for managing this order of complexity, such as multi-attribute utility theory and multi-

objective planning, some rules of reasonableness must be applied to answer the question of “how much is enough?” One of them is Lee, Jr.’s (1974, 35) dictum that for decision-making purposes, “The optimal amount of analysis is the minimum that will distinguish between policy alternatives”.

Being able to distinguish between policies means only that the differences between the two (or more) choices need to be identified, and only with sufficient precision and reliability to evaluate the policies. Providing more than this is technically wasteful in that the capacity is not needed, and politically counterproductive in that irrelevant information distracts from the relevant.

Another decision rule might be to accept the “givenness” of institutional arrangements, although for policy analysts such “state of society” assumptions may be precisely those in question. In any case, “rationality” is relative to the set of existing (and evolving) institutions, whether those of market capitalism or welfare statism. From this standpoint, what is rational for polluters may be to externalize costs and for politicians to evade responsibility. Throw in enough subsidies and the economics always come out right.

A more fundamental source of imprecision and uncertainty derives from the nature of social systems themselves. Their attributes are variously characterized in terms such as:

Dynamic	Historical
Open	Evolutionary
Multidimensional	Purposive
Nonlinear	Hierarchical

These descriptors cluster around that property of systems Warren Weaver called “organized complexity” (La Porte 1975). They help to account for such phenomena as the “counterintuitive behaviour of social systems” (Forrester 1971) and illuminate the problem of knowledge in the field of impact assessment – most crucially, the problem of prediction.

One rational adaptation to that analytic situation might regard planning as learning and “reforms as experiments” (Campbell 1961). Early experience in the field of environmental impact assessment (EIA) is summarized by Holling and his colleagues (1978: 2–4) in twelve “myths” of environmental management and assessment. A light sampling will convey their flavour:

Myth 1:

The central goal for design is to produce policies and developments that result in stable social, economic, and environmental behaviour.

Myth 2:

Development programs are fixed sets of actions that will not involve extensive modification, revision, or additional investment after the development occurs.

Myth 5:

Environmental assessment should consider all possible impacts of the proposed development.<sup>2</sup>

Myth 7:

Comprehensive “state of the system” surveys (species lists, soil conditions, and the like) are a necessary step in environmental assessment.

Myth 12:

Ecological evaluation and impact assessment aim to eliminate uncertainty regarding the consequences of proposed developments.

Counterpart to these myths are “lessons learned”, foremost among which planning for system “resilience” – variability and uncertainty – is suggested as an overall criterion for policy design (Holling 1978, 19). It should be noted however that the systems in question are primarily ecological; when it comes to institutional systems, Holling and his colleagues (ibid., 46) warn that “...focus on generality is not possible in an analysis of institutional or decision behaviour”. Nevertheless, they consider that ecological and human systems share the same general properties (ibid., 36).

<sup>2</sup> The interesting question is rather: What does the fact that it is impossible to foresee all (or even most) of the impacts imply for the structure of the basic development plan and assessment research?

We are now in a position to estimate the state of the art/science/craft of impact assessment and to propose some lines for advancing its development. Field structure can be analyzed in four main areas: theoretical, methodological, institutional, and professional. Field relations can be analyzed in terms of their intersections and interactions, such as the relations between EIA, SIA, and HIA (health impact assessment).

## Impact Theory

Impact theory is social change theory. Its substantive focus centres on stability and change in the structures and functions of social systems at all levels of organization, both in relation to the natural environment and to one another.

As in any field, the condition of organized knowledge in impact assessment can be gauged by its theoretical development – at the highest level of systematization, “deductively formulated theory”. Such formulations have been termed “grand theory”, Talcott Parsons’ “evolutionary universals” schema – essentially a theory of structural differentiation in the history of society – is an example (Wolf 1975). Its microstructure on the level of social relations encompasses his earlier “pattern variables” schema. “Modernization theories” are recent extension of this tradition in the context of international development.

## The IPAT Model

The basic formulation of the IPAT model was put forward by Ehrlich and Holdren in 1975.

The impact of any human group on the environment can be usefully viewed as the product of three different factors. The first is the number of people. The second is some measure of the average person’s consumption of resources (which is also an index of affluence). Finally, the product of those two factors – the population and its per-capita consumption – is multiplied by an index of the

environmental disruptiveness of the technologies that provide the goods consumed. The last factor can also be viewed as the environmental impact per quantity of consumption. In short, Impact = Population x Affluence X Technology, or  $I = PAT$ .

The  $I = PAT$  equation is the key to understanding the role of population growth in the environmental crisis. It tells us why, for example, rich nations have such serious population problems (because the A and T multipliers for each person are so large)... It also tells us why a little development in poor nations with big populations like China can have an enormous impact on the planet (because the P multiplier on the A and T factors is so large). (Ehrlich and Ehrlich 1990: 58.)

This model has been cited by the United Nations Population Fund (1991, 16–19) as mapping the “critical linkages” among population, environment, and development. Similarly, the United Nations Development Programme (UNDP) have formulated a Human Development Index composed of three key variables – life expectancy, education, and income – to rank countries’ level of development.

The standard criticism of formulations at this level of abstraction is their remoteness from the level of data and insensitivity to disaggregate variations. Taking predictive power as a criterion of their utility, Lipset (1979, 2) renders a pessimistic verdict of such formulations: “It seems clear that social scientists ... can explain only a small part of the variance, of the causal factors, involved in dealing with the major societal or worldwide issues that concern them”.

## Theory Analysis

Less grand but better grounded are what Merton calls “middle-range theories”, such as the diffusion of innovations (Rogers and Shoemaker 1971) and of intervening structures (Berger and Neuhus 1977). Properly contextualized, a broad range of these theories are potentially relevant to impact assessment – for example, attribution theory in regard to



causal agency and responsibility, prospect theory in regard to perceived impact significance, and equity theory in regard to distributive justice.

What might count as impact theory is any rational explanation for predicting the incidence, distribution, and magnitude of an impact. Theory analysis in impact assessment might emphasize potential sources of change, the pattern of their occurrence, and the significance of their outcomes. Sources of change can be analyzed in terms of their location in regard to the impacted system - whether internal (evolutionary change) or external (contact and diffusion) and the conditions under which such change may occur. The logical form impact theory might take is exemplified in a simple system model, here called the Impact Assessment Model (IAM).

## The Impact Assessment Model

In IAM (Exhibit 2), activities or events that can produce impacts represent the “sending” side of the impact equation. The “human environment” is the “receiving” side, and consists of social conditions and social systems “with and without” the proposed action. It is the interaction of the proposed action with the human environment that produces impacts, cross-classified under substantive categories and analytic dimensions. “Categories” refers to the type of impacts, e.g., economic, demographic, cultural, and psychological. “Dimensions” refers to properties of those impacts, e.g., their incidence, distribution, and magnitude. Human systems are adaptive and respond not only to impacts that have already occurred from proposed actions but also to the anticipation of their possible occurrence. This adaptive and anticipatory response may take the form of adjusting to changes in social conditions and systems or to the alteration of proposed actions that may cause these changes, or to both. A few brief comments must suffice in describing these model components and their relations.

The proposed action consists of instrumental activities and phases. Generally this involves organizing and applying technological systems, hence the description and characterization of these systems is a main feature of the analysis. Associated with these technological applications are various change agents and instruments – what Wenk and Kuehn (1977) call “technology delivery systems.” The systems in question are thus properly conceived as sociotechnical systems. Alternatives to the proposed action are included in this component. The range of alternatives considered naturally varies with the level of assessment (policy, program, or project). It is important to note that “existing conditions” (such as poverty) and changes in those conditions (such as natural disasters), as well as planned interventions, can occupy the position of causative factors.

The human environment is comprised by social conditions and social systems. The distinction between them is analogous to that between habitats and species; while habitats are essential for the survival of species, they are not identical with those species. Existing (or “baseline”) conditions are the present states of social conditions and social systems. Future conditions are projected future states of those social conditions and social systems “with and without” the proposed action. The difference between the two is the estimate of impact from the proposed action or other causative factor.

Impacts are changes in the states and structures of social conditions and social systems. The interaction of the proposed action with the human environment can be analyzed in terms of impact categories and impact dimensions. Impact categories refer to types of social conditions and systems, e.g., psychosocial, socioeconomic, and sociocultural, and their attributes. Impact dimensions indicate what about those impacts should be assessed, e.g., their incidence, distribution, and significance.

Impacted systems do not simply react; responses can appear quite disproportionate to precipitating events (social amplification). Such responses can modify both causative factors

and existing conditions and systems. The response of adaptive systems includes impact evaluation (risk perception, attribution, and acceptance), impact mitigation strategies and measures (policy adjustment, program alteration, project modification), impact monitoring and management.

## Impact Assessment Methodology

In theory, any impact prediction is a hypothesis eligible for testing by application of impact assessment methodology. That methodology comprises an assessment cycle that commences with scoping (or before, with screening) and continues through management.

## The Main Pattern

The Main Pattern is essentially a “rational problem-solving” schema closely resembling many others in impact assessment (compare, e.g., Porter and Rossini 1980, 419-20) and related fields. Indeed, it is called the “Main Pattern” because it is thought to reflect a general consensus among practitioners in the field. A case in point is the independently developed “Merseyside Guidelines for Health Impact Assessment” (Scott-Samuel, Birley, and Arden 2001), which correspond almost exactly to the Main Pattern. (The independent development of impact assessment concepts and methods occurs in other fields as well, such as those of health technology assessment and of product life cycle assessment.)

The Main Pattern schema is outlined in Exhibit 3, explained in Exhibit 4, and further elaborated elsewhere (Wolf 1983). Although the steps are presented in a logical sequence, in practice there is frequent interaction and iteration among them. Associated with each step are specific analytic techniques and empirical data sets. The art of impact assessment is to select those most relevant to the particular situation or condition of interest. Many recent innovations could be cited to demonstrate the operational methodology of

impact assessment, such rapid rural appraisal, participatory poverty assessment, and cumulative impact assessment.

Although people’s participation is present at every step in the assessment process, it is crucial to impact evaluation. They are the “experts” on their own needs and values, and on the appropriateness of decisions and actions intended to benefit them. Practitioners can provide techniques and tools to empower a genuinely participatory assessment process.

The assessment cycle itself is situated between or within a planning (or project) cycle, which triggers the impact assessment process, and a decision cycle that employs its product. The intersection and interaction of these three cycles have both analytical and institutional aspects; how well these mesh or clash is itself a topic for institutional assessment.

## Policy Assessment

Institutional development in the field of impact assessment can be illustrated by reference to the level of policy assessment, which Boothroyd (1995, 83) regards as “an emerging synthesis” of policy analysis and evaluation and impact assessment. He traces the evolution of public policy goals over the past half-century from efficiency to equity to quality of life to sustainability (ibid., 84). Logically, policy impact assessment would proceed from such goals and their underlying values through operational program objectives to the selection and measurement of performance indicators and subsequent policy adjustment. In U.S. experience, policy formulation and implementation in the areas of social welfare and health appear quite otherwise.

## U.S. Policy History

Although sometimes peculiar and occasionally perverse, U.S. policy history may provide still useful insights for policy assessment in the EU and elsewhere. One of the more engaging episodes involved a social reporting initiative

launched in the mid-1960s by the (then) U.S. Department of Health, Education, and Welfare, in the words of its Secretary Wilbur Cohen, “to improve the Nation’s ability to chart its social progress”. *Toward a Social Report* (1969) “deals with such aspects of the quality of American life as: health and illness; social mobility; the physical environment; income and poverty; public order and safety; learning, science, and art; and participation and alienation.” (*Toward a Social Report* 1969, iii.)

“It is important to our Nation’s future to examine the qualitative condition of society regularly and comprehensively. An accurate assessment of our social well-being is essential so that we can make informed decisions about priorities and directions in this Nation’s social programs. It is our hope that “*Toward a Social Report*” paves the way for such an annual assessment.” (*ibid.*, iv.)

This noble attempt at societal intelligence and guidance, abetted by the social indicators movement, failed to achieve an enduring presence and policy impact in the federal government. The better success in social reporting has been achieved by UNDP’s Human Development Report series. A Washington sequel appears in the “quality of life” initiatives of the 1970s undertaken by the U.S. Environmental Protection Agency (Environmental Studies Division 1973) and a similar effort by the U.S. Water Resources Council (Andrews and others 1973) to habilitate its “social well-being” account. These were equally unavailing, both ending with agency reorganizations. Quality of life research has been successfully transplanted to the medical community, however, and to an active clinical practice in such diverse areas as:

Chronic Illness – Liver Transplantation  
 Mental Health Services – Mental Retardation/  
 Disorders  
 Aging/Elderly – Advanced Dementia  
 Long Term Care – Cancer  
 Nutrition – Antihypertensive Medications  
 Nursing Perspectives – Parkinson’s Disease  
 Health Promotion and Rehabilitation –  
 Alzheimer’s Disease

The EPA initiative did lead to a further development, however – alternative futures planning, in which the hypothetical outcomes of scenarios representing policy alternatives are projected and evaluated. An interesting specimen at the state level is the California Tomorrow Plan: The California Tomorrow Plan describes two futures for the state: California One and California Two. California One, in which the quality of life becomes seriously impaired before the year 2000, is a logical consequence of today’s methods of dealing with environmental and social disruptions. In California One, problems are met, in general, through separate, disconnected programs. There is no cohesive strategy for solving them. California Two attempts to deal with disruptions in a systematic way through a process of comprehensive state and regional planning. (Heller 1972: 109.)

These two Californias depict the most probable and the most desirable future, respectively. If present trends continue, the result will be California One, “in which the quality of life becomes seriously impaired.” The task for alternative futures planning is to devise policy interventions that will alter those trajectories so as to secure the most desirable future.

The process involves analyzing problems and their causes in existing (and projected future) conditions, such as agricultural land loss due to urban sprawl, and assessing the impact of alternative policies and their components in correcting them. This methodology of normative forecasting and planning offers a means for anticipating unanticipated policy consequences.

Impact assessment methods and procedures entered the U.S. federal policy process around 1972 with implementation of the National Environmental Policy Act of 1969 (NEPA), and the River and Harbor and Flood Control Act of 1970 which mandated social impact assessment in U.S. Army Corps of Engineers plans and projects. Other types of impact assessment have appeared in various times and guises:

- 1950s: Economic Benefit-Cost Analysis, Office of Technology Assessment, Congress of the United States
- 1974: Inflation Impact Statements, Energy Impact Statement, Judiciary Impact Statements (proposed), Arms Control Impact Statements, Urban Impact Statements, Family Impact Statements (proposed)
- 1994 Human Rights Impact Statements for Policies Health Policies (proposed by Gostin and Mann 1994).

Some conspicuous omissions may be noted as well, such as the failure to conduct an environmental impact assessment in 1993 of the (then) pending North American Free Trade Agreement (NAFTA) – although international treaties were included in the language of NEPA – supposedly because (then) President Clinton feared it would undermine presidential authority in the conduct of foreign affairs. The impact assessment movement suffered another major setback following the 1994 mid-term election, when a newly-elected Republican Congress voted to disband the widely admired and emulated Office of Technology Assessment. Efforts to revive it have so far proved unavailing.

Along with weak institutionalization is the equal and opposite problem of routinization. At the time of its inception, EIA was a marked departure from governmental business as usual; the novelty has worn off with habituation. Long-term commitment to improvement in environmental quality has been compromised by short-term political expediency. Of course, policy assessment cannot and should not transcend political considerations in public decision making. They should improve decision quality, however.

Reforms are generally undertaken in response to perceived policy failures, such as welfare dependency, without much benefit of foresight. Legislation passed in 1996, in relatively prosperous times, do not appear so auspicious in the current recession as welfare benefits expire and employment opportunities dwindle. The economic downturn has also placed environmental quality enhancements at

risk, in the name of job creation and retention. Public policy reforms in themselves are insufficient to solve long-standing problems. Their long-term viability depends on building political constituencies and communities.

## EU Policy Assessment

Generally, the EU has been receptive to impact assessment, going back to EC Directive 85/337 (amended on 3 March 1997 by Council Directive 97/11EC) on environmental impact assessment. Their proximity to the Organization for Economic Cooperation and Development (OECD), the World Health Organization (WHO), and other international institutions has facilitated this positive development. The latest chapter in this effort is the Directive on Strategic Environmental Assessment (SEA) approved in 2001. Health impact assessment is very much a part of this process, as it is in WHO Europe's negotiations on the Protocol on Strategic Impact Assessment (Breeze and Lock 2001).

The need for policy assessment is evident at many points, not least being the EU health strategy proposed December 2000. A summary of the Committee of the Regions' opinion (n.d.) notes:

People's state of health varies widely within the EU. The differences will become even more apparent when the Union is enlarged with new Member States. A more equal state of health should therefore be an overriding goal for the EU's health strategy.

Naturally this means a "levelling up" to the highest standards:

The overall objective should be to reduce health risks and inequalities in health in the EU. The health situation in different countries and different population groups should, in the long term, approach the level of the best in the Union."

It is clear in this formulation that some fundamental contradictions must be reconciled in order to achieve that policy objective. Foremost perhaps is that of reconciling diversity and equality. As the Committee recognize, the policy of expansion and

inclusion will at the same time increase the extent of inequality.

In the case of one applicant state, Turkey, infant mortality is an order of magnitude greater than “the best in the Union” (Sweden). Moreover, it must be considered that the infant mortality rate, whatever its components, is a reflection of the total society. Interventions to change the former imply major structural changes in the latter. Making these connections explicit might be a priority agenda for health policy assessment.

Another issue that has surfaced in various contexts, e.g., rural road improvement in Portugal, is that of unity and uniformity. Here the Committee heartily support the principle of subsidiarity: “... the higher level of ambition for the Union does not mean that the EU should intervene in the healthcare and medical care policies of the different countries. The Member States are still responsible for healthcare and medical care, and the principle of subsidiarity still applies.”

The preconditions for good health are created close to people. The Committee of the Regions demands that the local and regional authorities responsible for the public health area and the healthcare and medical care areas are given the opportunity to exert influence on the EU’s public health policy.

This might apply equally to national health policy, which the Commission reserves to the Member States. One implication of this position is to encourage diversity at the social policy level within the EU – in particular to sustain the distinctiveness of the Nordic welfare model and its commitment to universality, equality, and inclusion. This is not simply a question of ideological commitment but also of policy assessment.

The American experience has indicated the limitations, if not yet the limits, of “privatization”. As Twaddle (1999, 20) cautions in regard to health care reform in Sweden, in shifting from a planned system to one organized by market principles, from public to private services, there seems to be “much to lose in this change and little evidence that it would produce gains in quality or efficiency”. Nordic

experience confirms that decentralization can be community oriented and based, as well as market driven.

Finally, the Committee endorses “a policy that aims to ensure that public health aspects are taken into account in all of the EU’s decisions and actions, i.e., the EU should conduct health impact assessments”.

## Health Impact Assessment

Traditionally, health concerns have been at the centre of impact situations, such as energy “boom towns” (Davenport and Davenport 1979). The “Gillette Syndrome” was diagnosed to depict those conditions; it recurs throughout the impact history of the American West and many other locales. More recently, hazardous and toxic wastes have been the “vectors” of social stress in “contaminated communities” (Edelstein 1988). Mental health impacts such as post-traumatic stress disorder have punctuated disasters and dislocations worldwide. Given all this, it is ironic that explicit attention to health risks and health concerns has only belatedly arrived on the scene.

Apart from some early interest by WHO and the Pan American Center for Health and Human Ecology in EIA as an approach to environmental health and environmental risk assessment, HIA as a specialized application does not fully emerge until 1992, with Turnbull’s and the Asian Development Bank’s guidelines for development projects, and Ewans and others’ Australian National Framework for HIA in the context of EIA. Birley and Peralta (1995, 156) trace this development.

In 1990, the Health Impact Programme was established at the Liverpool School of Tropical Medicine with support from the British Overseas Development Administration (ODA). The objective was to improve the analysis and management of the health impacts of development projects by developing a procedure for HIA. The program initially focuses on generating a detailed review of health hazards, grouped by development sector. It also has undertaken training or advocacy

programs and rapid HIA's in nine developing countries.

Examples of the latter include Zimbabwe (Konradson and others 1997) and Kenya (Renshaw and others 1998). This is not to imply that health concerns have gone unattended – considerable attention has been focused on health (or medical) technology assessment, for example – only that they were carried on outside the context of impact assessment. Naturally the field of impact assessment benefits from this development, but the question may be asked what value is added by placing health concerns in that context. That question was addressed recently by the present writer in a presentation on “AIDS Impact Assessment” (Wolf 2000).

## AIDS Impact Assessment

The presentation reviewed two main areas: the impact of AIDS on existing conditions, and the potential impact on future conditions of AIDS policy and intervention alternatives. Quoting from the abstract: “By general assent, the ideal long-term solution to the AIDS pandemic is a broad-spectrum vaccine – a “magic bullet.” The time and cost requirements of such a development, combined with the current infection rate, indicate concentrating present efforts on prevention and control.

Given these circumstances, health risk behaviour modification seems a promising target for intervention strategies. Experience to date is not encouraging in this regard, however. One leading impact hypothesis to be tested is the efficacy of community-based interventions in AIDS prevention and treatment. The experience of South Africa and Nigeria will be examined in this connection.

An AIDS Impact Model (AIM) will be constructed as a means of codifying impact studies, building on the scenario approach by Jager and his associates (1992), which consists of a conceptual model, baseline studies, and specification of basic variables and indicators. Current indicator measurements and estimates will be incorporated where available.

AIDS research is a major industry; what impact assessment can bring to its vast and growing body of knowledge is a clarity and coherence that make it accessible and manageable for people whose own interventions may prove decisive. It must be admitted however that, because of its wide applicability, integration is problematic in the field of impact assessment itself.

## Integrated Impact Assessment

In varying kind and degree, the problem of integration has been encountered at every point in this discussion: between fact and value, science and politics, theory and practice, macro and micro, qualitative and quantitative, real and ideal.

What does it matter? Intellectual clarification matters; it is how we think. Public communication matters; it is how we build consensus and community. Solving problems matters; it affects the quality of peoples' lives.

The problem arises from the complexity of social actions, relations, and systems, and the social constructions for processing that reality. In the present context, questions and confusions arise over definitions and boundary relations between environmental, social, and health impact assessment. In intent and effect, impact assessment provides the conceptual framework and operational methodology for achieving such integration.

Although a valid distinction can be made between natural and human environments, as between habitats and species, it is difficult to think of one without the other. Even in the case of pristine wilderness (if such exists), there are (human) valued ecosystem components and policies. Most environmental impacts are interpreted in terms of (human) health effects. In the case of urban environments, human nature predominates.

Referring back to the structure of field development, the problem can be analyzed into modes of theoretical, methodological, institutional, and professional integration.

Theoretical integration is possible through conceptual integration – the “quality of life” concept being a prime example (Cleary, Wilson, and Fowler 1994), “meta-analysis” (e.g., Zimmerman and Vernberg 1994), and multifactor formulations such as Flay and Petraitis’ (1994) “triadic influence” theory of health behaviour.

Methodological integration might involve complementary and combinatory techniques such as triangulation – for example, using ethnographic and epidemiologic methods in AIDS interventions (Weibel 1994) – and quantitative and qualitative methods (Elliott and Baxter 1994).

Institutional integration might involve linkages between educational and occupational systems, consistency between various levels of a federal system, the erection of new “international financial architecture”, or the articulation of formal and informal health care systems (Zimmerman 1994).

Professional integration might involve the harmonization of textbook knowledge with field experience or the codification of knowledge in a particular discipline or application, such as the formulation and testing of guidelines for “best practice”. An example is training in inter-sectoral decision-making skills for incorporating HIA in development project planning (WHO 2000).

In practical terms, a strategy of integration might involve placing the knowledge and experience of an agency like the National Research and Development Centre for Welfare and Health (STAKES) in a systematic framework such as the Main Pattern (supra) or developing a process to synthesize an organizational model that will serve to order existing programs and orient future decisions and actions. In any case, the concentration of resources and coordination of efforts stand to benefit from the exercise.

## Human Impact Assessment

One such integrating activity is currently underway in STAKES under the heading of

“human impact assessment”. It is described by Kauppinen (2000) as follows: Social impact assessment (SIA) and health impact assessment (HIA) are tools for better planning and decision-making. They are also useful in cooperation between different administrative branches. In addition, assessment is helpful in dealing with conflicts. The social welfare and health authorities can apply impact assessment in their preventive efforts and in their work to promote welfare and health.

The characteristic features of assessment are advance assessment, transparency, the introduction of qualitative data alongside quantitative data, and citizen participation.

Social and health impact assessment have been widely tested in practice, and practical experience of assessment has been attained on the project. The model has proved to be well suited for everything from project planning to strategy-level decision making.

Social impact assessment means that the effects of a certain decision on people, on the community or on society are inspected in advance to determine the changes the decision will cause in people’s welfare or in the distribution of welfare. Health impact assessment means that health effects of certain decisions are assessed in advance. When used together they are called human impact assessment.

This initiative reaffirms the potential and promise of impact assessment as an instrument for “building local and global capacity to anticipate, plan, and manage the consequences of change so as to enhance the quality of life for all”. As such, it demands and deserves the emphatic support of professional colleagues in the EU and throughout the world. One immediate task will be to design a community health impact assessment model for application in developing as well as domestic contexts. Realizing the potential and fulfilling the promise of impact assessment will require the efforts and talents of many collaborators. This discussion is one contribution toward that end.

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# Practical Implementation of SIA and HIA, especially in the Finnish Context

## Conceptualizing HIA

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Systematic Health Impact Assessment (HIA) has been launched as a part of Environmental Impact Assessment (EIA). Legislation on EIA requires an assessment of the expected health and social impacts of large construction projects and physical planning. The focus has been mainly on epidemiological predictions of physical and chemical health determinants.

In May 2001 the Government accepted an inter-sectoral public health programme, Health 2015, in which there are commitments to develop and implement HIA. Firstly, a retrospective HIA of different sectoral policies will be made every fourth year, utilizing the National Social and Health Report. Secondly, guidelines for a prospective HIA of main government policies and decisions will be produced. Thirdly, models will be compiled jointly with municipalities for HIA of measures at municipal level. Fourthly, models for promoting HIA in decision making by business and industry will be drawn up. Until today, not much has yet been done to implement the decisions.

## Two actual cases reflect the problems of HIA implementation

An application for permission for the 5<sup>th</sup> nuclear plant has just been passed by the government and given to parliament for a decision. A rapid HIA analysis concludes that the health impact of a nuclear plant is strongly positive, mainly by a decrease in volume of other more polluting alternatives of energy production. The strong opposition among people and politicians is, however, based just on health risks. The question is, how to value normal expected health consequences and the unlikely risks of a nuclear catastrophe.

The European Union has just set a limit value to dioxin in nutrition. In Baltic fish, concentrations exceed the value. Baltic herring is a traditional cheap food in Finland, which today is consumed mainly by poor people over 50 years of age. The ban on Baltic herring was assumed to lead to increased consumption of cheap animal fat in sausages, etc. The consequences would be a higher cholesterol

level and a lower intake of vitamin D, both common risks among the older Finnish population. These impacts were assumed to notably exceed the risk of increased intake of dioxin, which is why an exemption to the dioxin limit value for Baltic fish was accepted.

There are remarkable economic interests behind both cases. The question is, how can such interests contribute to a qualitative evaluation of the different impacts of the alternatives.

## Conceptualizing SIA

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Dr Väärälä<sup>3</sup>, in his presentation, highlighted the need for SIA from the social policy perspective in Finland. Firstly, there is a need for renewing methods and tools for professionals to improve horizontal communication between experts. Secondly, there is a need to develop new tools for raising social issues more visible and, thirdly, there is a need for influencing policy making in terms of prevention and social sustainability. According to Reijo Väärälä, SIA could be seen as a part of a new paradigm for understanding 'social'.

SIA methodology and development offers some possibilities for understanding 'social'. New tools, methods and concepts are offered for understanding social processes and their complicated chains of impacts. SIA can create new ways and a new know-how for wider public participation, and can help to overcome the

barriers of sectors. However, there are also some obstacles that need to be identified. The first question is, what are the real impacts of impact assessment? Secondly, how to tackle the real, big issues such as power, interests, conflicts, etc? The third question relates to the tradition of planning - i.e., the rational planning approach vs. true-to-life planning.

The challenges for SIA include:

- a need for understanding the concept of SIA – this relates to research, education and training problems
- a need to create pilot projects for learning from experiences
- a need for better co-operation with HIA - experiences from the Health 2015 programme should become common property.

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<sup>3</sup> This is a summary of the presentation of Reijo Väärälä written by Marita Sihto.

## Human Impact Assessment (HulA) in Finland

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In Finland, the advance assessment of environmental impacts has been statutory since 1994. The Act on Environmental Impact Assessment Procedure (EIA) provides that any impacts on human health, living conditions and amenities need to be assessed.

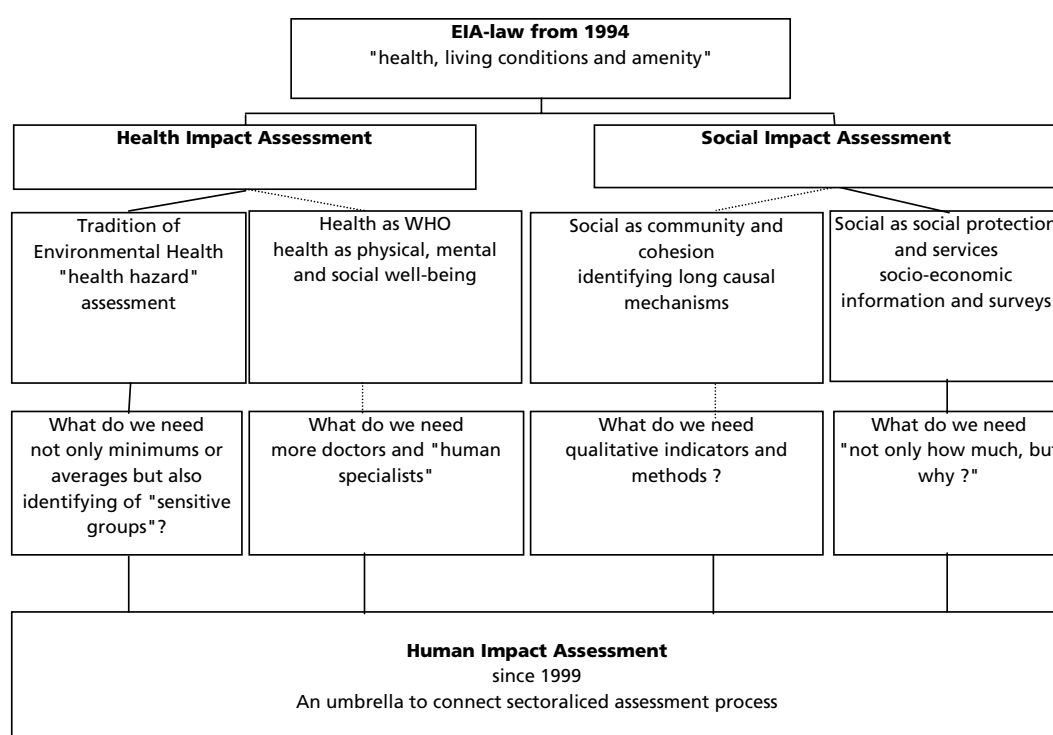


FIGURE 1. Human Impact Assessment in Finland

### Health Impact Assessment (HIA)

Environmental health has a long tradition in Finland. Before Health Impact Assessment, the Health Protection Act stipulated that it should be ensured that plans would not cause health hazards.

In practice, the concept of “health hazard” corresponds to that of “significant health impact” used in Environmental Impact Assessment. A health hazard refers to a disease

or other health disturbance, or to the occurrence of a factor or condition that may reduce the health of the living environment of an individual or a population. Minimum values and parameters have been set for factors that may cause health hazards, such as the quality of air, noise, household water, food, swimming water, soil, chemicals, and radiation. The exceeding of such values and parameters is then defined to constitute a health hazard.

Impact assessment has mostly been carried out by health inspectors and engineers, while doctors have participated to a lesser extent. In practical work, the main emphasis has been on the protection of environmental health (Environmental Health Impact Assessment (EHIA)). In most cases, perceived health hazards or a fear thereof have been regarded as social impacts.

In addition to environmental health, it has now become necessary to understand health more broadly. The World Health Organisation, for instance, broadly defines health as “a state of complete physical, mental and social well-being and not only the absence of disease or infirmity”. This definition, however, is more utopian and challenging than realistic. It states that health does not only mean the absence of disease or infirmity. The definition of health as a state of well-being in the broad sense of the word makes it necessary to view health problems as a tripartite entity consisting of the aspects of physical, mental and social well-being. The practical implications of this definition are now under discussion in Finland.

### Social Impact Assessment (SIA)

Social impact traditionally means the effect that a decision, project or measure has on an individual, a community or society, and the resultant changes in people’s well-being or in the distribution of well-being. The Finnish translation of the English word “social impact” is “sosiaalinen vaikutus”, although the meaning of the Finnish word “sosiaalinen” is much narrower than that of the word “social” in the Anglo-American culture. As the Finnish word mainly refers to social protection and social services, impact assessment has been more limited and it has been difficult to draw the boundary between social and health impacts.

Assessments have mostly been performed by the methods of natural sciences. In practice, Social Impact Assessment has very often been made by quantitative methods. In many cases the assessment has merely consisted of a general statistical review. If the inhabitants have been

interviewed, Gallup-type reporting of the results as mean values has been a common practice until recent years - for instance, different groups of people have not been considered separately.

Issues such as social indicators, willingness to pay, and costs and benefits have been on the agenda in Finland. Those engaged in impact assessment admit that everything cannot be measured. Another issue brought up for discussion is how qualitative factors such as “happiness” or “well-being” could be taken into account in the assessment.

### Human Impact Assessment (HuIA)

In 1999 the Finnish Ministry of Social Affairs and Health published a handbook on the assessment of social and health impacts. In this book the Ministry used the phrase ‘Human Impact Assessment’ to bring together the separate areas of social impact assessment and health impact assessment.

Human impacts may be related to health, living conditions, population, services or amenities. They should, however, be seen in a wider context and both direct and indirect impacts on well-being and on broadly-defined health should be taken into account in the assessment. Such impacts may also be seen to include the impacts of nature or the built environment on people. In this case, human impacts also include any impacts on community structure, landscape, townscape and cultural heritage.

### What do we need in the future?

I hope that the different aspects of impact assessment will not develop in different directions, as has been the case in many other countries.

I also hope that we will be able to consider the human being as a whole, instead of looking at the stomach, the lungs, the mind or the living conditions separately.

Further, I hope that we will be able to utilise the knowledge and experience of all different fields to promote well-being and health.

### Towards Human Impact Assessment

The development of the relationship between Social Impact Assessment (SIA) and Health Impact Assessment (HIA) in Finland can be described as being divided into three different phases.

In the first phase, SIA and HIA are separate from each other. SIA contains HIA, or HIA

contains SIA. The two ways of impact assessment are thus competing as to which is the umbrella concept and which contains the other. This competition takes place between different professions and different resources.

In practice, HIA has been related to the protection of health in Finland, and therefore the social aspect of HIA has meant perceived ill health. In SIA, in turn, there have been hardly any practical examples of health impact assessment. As a matter of fact, neither of the approaches has contained the other approach, but the two ways of assessment have remained separate (Figure 2).

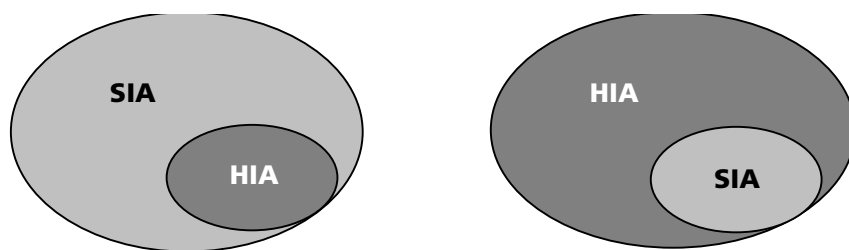


FIGURE 2.

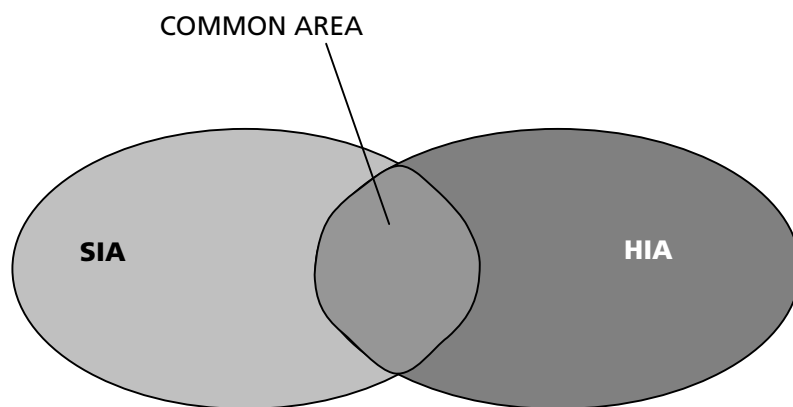


FIGURE 3.

In the second phase, SIA and HIA have approached each other (Figure 3). The different sectors of impact assessment overlap to some extent. A grey area, a no-man's-land, remains between them. The shared area may consist of perceived health or mental health. In addition to their own special areas, the different sectors of impact assessment also have areas of common interest.

This is how the relationship between SIA and HIA has been understood in Finland after the publication of the handbook "Environmental Impact Assessment. Health and Social Impacts on Human Beings" by the Finnish Ministry of Social Affairs and Health (1999).

The Ministry handbook considers that Health Impact Assessment covers health hazards as defined in the Health Protection Act. A health hazard refers to a disease or other health disturbance, or to the occurrence of a factor or condition that may reduce the health of the living environment of an individual or a population. Minimum values and parameters have been set

for factors that may cause health hazards, such as the quality of air, noise, household water, food, swimming water, soil, chemicals, and radiation. The exceeding of such values and parameters is then defined to constitute a health hazard. Perceived health hazards and a fear of health hazards, in turn, are mostly seen as social impacts. The grey area is seen to be covered by Social Impact Assessment.

The third alternative may still be Utopian. In the figure, the social and health aspects have merged together at the opposite ends of the continuum. Seen in this way, all impacts on human beings have their social and health dimensions. An impact that poses a major threat to human health also has its social dimension. Furthermore, even changes in people's happiness have health impacts in the long run. Accordingly, the debate on which one of the two concepts is the umbrella term or has a broader scope of application will gradually lose its meaning. Figure 4.

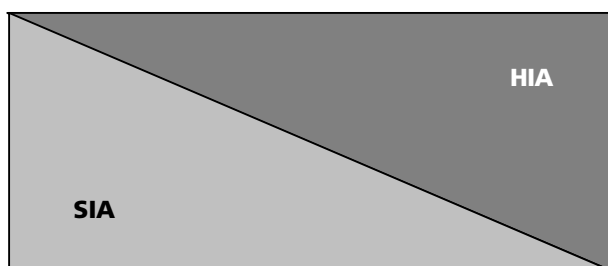


FIGURE 4.

What is needed is a genuinely common new umbrella concept that combines the different approaches and professions. Concepts such as human impacts, welfare impacts or impacts on human beings have been suggested for the purpose. Assessment of impacts on human beings can function as a real umbrella concept. There is still a need for expertise from a variety of fields. Expertise is of vital importance in the identification and description of social processes and in the analysis of health-related matters.

However, the term that is used to refer to the assessment to be carried out no longer needs to limit the participation of different experts and the identification of impacts, or to decide which methods can be used in the assessment. If the social aspect of the impact is more prominent, the methods of SIA are used at the beginning of the assessment, while the HIA approach is applied if the health aspect is more evident – the other viewpoint need not be excluded.

## SIA and HIA – is there a need for integration

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Four different roots of “impact assessment” in Finland may be identified:

- The idea of “democratic planning” or “counterplanning” that was developed as a critique of top-down urban and land use planning. It underlined public *participation* and social impacts and has influenced thinking about environmental assessment.
- Advocacy for healthy public policy and social economic policy, which have used impact assessment as *advocacy* tools - i.e. impact of food and agriculture policy on nutrition, tobacco and alcohol availability and taxation on smoking and alcohol misuse, or impact of income policies on income distribution.
- Environmental health *inspection and regulation*, underlining the assessment of compliance with environmental health threshold values and norms.
- Recommendations on *good administrative practice*, which include a statement that the expected impact on public finance and the economy should be included in all policy proposals.

It is noticeable that SIA and HIA have grown from different historical roots. HIA has more roots in inspection and regulation. It is also divided, because there are few links between “inspection-HIA” and “advocacy-HIA”. SIA has mainly grown from the participation and advocacy roots.

Important choices are made when HIA and SIA are transformed from a new idea to a part

of the normal practice of preparing relevant policies and projects. This transformation – institutionalization of HIA and SIA – may follow one or more of the models (roots) mentioned above. The different models are based on different expectations with regard to the motivational basis, level of conflict between different interests, institutional structure, sanctions, funding of IA, ownership of IA process, etc. They also differ in terms of locating IA internal or external to the policy process.

When HIA and SIA have different roots, and when it is possible that they are initially institutionalized in a different way, the question of combining HIA and SIA or developing and implementing them separately also becomes a question about the preferred model of institutionalizing IA. If HIA and SIA are institutionalized in a similar way, it is much easier to combine them. If they follow different paths of institutionalization, there are institutional barriers to combination as well as problems related to different paradigms and expertise.

An assumption can be made that a combined approach is more feasible in the inspection and regulation approach, as well as in the good administrative approach, than in the advocacy approach. It is also suggested that at the level of national IA infrastructures such as development of expertise, research, training and information system, a combined approach should be preferred. The problem here might be the low level of integration of HIA and SIA at the international (i.e. EU) level.



## Social Impact Assessment Projects in Hämeenlinna and Tampere

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In the year 2001, Social Impact Assessment projects were held in Hämeenlinna and Tampere. The main idea of these projects was to develop a system for assessing the impacts of actions of the city or social and health department on inhabitants' well-being. The other main point was to implement this assessment in the cities' budget and decision-making processes. This paper describes the implementation of these ideas in practice.

The common element of these two projects was to develop social reporting as a tool for Social Impact Assessment. In Hämeenlinna, the area of assessment was the actions of the whole city and in Tampere, the actions of the Social and Health Department.

After months of processing, Social Impact Assessment took the shape of Social Report. The idea of Social Report is to collect enough information from different sources so that some key conclusions can be thrown. By their very nature, these conclusions can be obvious (like rising numbers of juvenile criminals) or more uncertain or misty (if information is contradictory or some occasional hints of trouble arise). In the latter situation the problem needs a closer look before further measures are taken.

These reports contain mainly statistical data ("hard" data), such as information on the social and health conditions of the population, unemployment, housing and crime data, etc, and, secondly, information from different levels

of organizations and from citizens ("soft" data). In this part, the informants were social workers, teachers and nurses, senior council officials, Youth Forum and multi-sectoral area teams. The idea of this "soft data" was to get more up-to-date and qualitative knowledge than statistical data can provide. Some new methods of collecting information were used – for example, "Grey zone of worry" where social workers and other professionals estimate the amount of worry they have about their clients and what is the cause for concern. The main challenge in developing social reporting is to find indicators that really measure well-being (not use of services...). Social reports also include a viewpoint of comparison; comparisons to the former years of the city, comparisons to the national and parallel cities' levels.

The Social report is published annually. A new report is completed in the spring and by the autumn it is presented to the city administration. Goals and resources for the next year are considered with regard to the report's conclusions. Social report is also expected to improve cross-sectoral goal setting by putting shared concerns to the agenda.

A multi-sectoral working team assesses the SIA-process and contents of the report each year. In Hämeenlinna the Social report is also one of the instruments of the inspection board in assessing the city's goals and actions.

## Learning from EIA Experience

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The Environmental Impact Assessment (EIA) legislation came into force in Finland in 1994. The Finnish legislation defines environmental impact quite broadly. Not only does it concern the more traditional impacts on the natural and urban environments but also the impacts on human health and social impacts (i.e. living conditions and amenities).

The Ministry of the Environment sees the development of the field of health and social impact assessment as very important. The environmental sector and the social and health sector cooperated closely in developing human impact assessment within the EIA. Since the mid-1990s, the two ministries (Ministry of the Environment, Ministry of Social Affairs and Health) and the two research and development centres (National Research and Development Centre for Welfare and Health, Finnish Environment Institute) have been planning and arranging training together. At first, efforts focused on bringing together the regional authorities of the health and social sector and the regional environment centres, which are the EIA coordination authorities.

Now a new 3-year cooperation project has just ended. It mainly consisted of various kinds of training courses, but also included some research. The training comprised a beginner's course on human impact assessment and courses focusing on specific issues aimed at all interested parties. The good cooperation between the two sectors should continue. One of the future steps could be the more intensive involvement and initiation of other sectors into the development of human impact assessment.

Can we see any change in the actual assessments after these training projects? Looking at the situation before and after, we can see that the EIAs now cover the aspects of human impact assessment better than before. One good result is that the EIA coordination authorities, who check and comment on the quality and content of the EIA documents, now require human impact assessment as a part of EIA. This is a positive step.

There are still demanding challenges to face:

### 1. Quality

Even though more human impact assessments are conducted, the quality varies considerably from one to another. It is still a fairly new issue, and a challenging one in the Finnish EIAs. Also, the EIA coordination authorities themselves state that this is a new field for them and that they are still learning.

### 2. Integration

Human impact assessment is often not sufficiently integrated with the EIA.

### 3. Effectiveness

If the human impact assessment is insufficiently integrated with the EIA, it is very difficult to integrate the human impact assessment with the actual project design, on which it should have an effect. One way of integrating is to make sure that the conclusions of the assessments serve the practical needs of the project. The assessment results have to be as meaningful to those involved as they are to the decision makers, as well to the designers of the project.

## The Study of HuIA on a Strategic Level

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In the Finnish Environment Institute, a study concerning human impact assessment at the strategic planning level has been prepared. By human impacts we mean the consequences to human populations of any action that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of the society. The basic data of the study were about 30 program reports in eight sectors - namely, agriculture and forestry, natural resources and environmental protection, climate problems, energy, land use, water management, waste management and the traffic sector.

A lot of research has been done concerning human impact assessment, beginning with the Scandinavian Welfare Study in the early 1970s and ending in the research concerning the human capital and its importance to the welfare for nations. Also, the development of social indicators has been a long procedure started by the United Nations; the procedure is still going on in the form of a study of the possibilities of constructing indicators for sustainable development.

In our study, a four-dimensional framework was formed to identify human impacts in the strategic planning. The framework included the following themes: housing, income level, employment, services; safety and equality (between men and women, young and old, rich and poor), community structure, transportation facilities, local cohesion, neighbour relationships, perceptions of the environment; level of knowledge of the project, attitudes towards the project.

One result of the project is that different sectors emphasise different human impacts.

The productive sectors, like agriculture and forestry and the energy sector, identified peoples' everyday life factors, such as employment and disposable income. In nature resources programmes, nature attitudes and nature perceptions have been pointed out. In the traffic sector, security and equal opportunities to use transportation facilities were raised. Health impacts were given attention in the traffic sector reports. In addition, some reports mentioned social acceptability of a plan or programme (nature resources, climate sector, waste management).

Assessment of human impacts has mostly been qualitative in strategic planning. The state of the living conditions of people could have been described more or less thoroughly. Changes in the level of employment have been measured quantitatively. Health impacts like noise and air pollution have been assessed by measuring the noise level and the air quality. Enquiries to assess people's attitudes towards a plan were only made only in three cases (forest sector, natural resources, water traffic).

To conclude, many human impacts have been identified at the strategic planning level but their assessment seems to be quite superficial, or the assessment hasn't been made at all. However, it seems obvious that the assessment problem has been solved in theory. It also appears to be obvious that the results of the theoretical studies and the development work have not been effectively applied in practice. The challenge for the future is to make the theory and practice meet each other; the objective could be to construct assessment approaches that are theoretically valid and easily applied in practice.

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