HEALTH IMPACT ASSESSMENT  
(HIA)

Report of 
AN INTER-REGIONAL MEETING ON HARMONIZATION AND MAINSTREAMING OF HIA IN THE WORLD HEALTH ORGANIZATION 
and of 
A PARTNERSHIP MEETING ON THE INSTITUTIONALIZATION OF HIA CAPACITY BUILDING IN AFRICA 
Arusha, 31 October - 3 November 2000

Geneva, 2001
Table of contents

Introduction 5

Part I: inter-regional meeting on harmonization and mainstreaming of HIA in the World Health Organization 5
  Background 5
  Purpose of the meeting 6
  Specific objectives 7
  Expected outcomes 7
  Proceedings 7
  Decisions and actions 23

Part II: partnership meeting on the institutionalisation of HIA capacity building in Africa 25
  Background 25
  Purpose of the meeting 26
  Specific objectives 26
  Expected outcomes 26
  Proceedings 26
  Logical framework 29

Annex 1: List of Participants 34
Annex 2: Agenda and Programme of Work 35
Annex 3: HIA guidelines and capacity building, by Martin H. Birley 39
Annex 4: Memorandum of Understanding with IAIA 57
Annex 5: Proposal Acting Upstream - averting adverse impacts of development on health 59
**Introduction**

Two back-to-back WHO meetings were held at the headquarters of the Eastern and Southern African Management Institute (ESAMI) in Arusha, Tanzania, from 31 October to 3 November 2000. This report covers the discussions and outcomes of both meetings. A list of participants is presented in annex 1; the agenda and programme of work are presented in annex 2.

The first was an internal WHO meeting to which all Regional Offices had been invited. For a variety of reasons, representatives of only three could attend. The background, objectives and expected outcomes of the meeting are presented below. The second meeting involved members of an *ad-hoc* partnership established for a proposal submitted to the World Bank Development Marketplace event in February 2000. This proposal (*Acting Upstream*) addressed the institutionalisation of HIA capacity building in Africa. Representatives from the World Bank, the African Development Bank, the WHO Regional Office for Africa, two WHO Collaborating Centres (the Liverpool School of Tropical Medicine and the Danish Bilharziasis Laboratory - DBL) and ESAMI had been invited. Representatives of the World Bank and of the African Development Bank were unable to attend. The background, objectives and expected outcomes of the second meeting are presented in Part II of this report.

Following these two meetings, Robert Bos (WHO), Martin Birley (Liverpool) and Peter Furu (DBL) stayed on in Arusha to work on the final draft of the training manual *Developing intersectoral decision-making skills in support of Health Impact Assessment in development projects*. This manual will be published jointly by DBL and WHO in the course of 2002.

**Part I : INTER-REGIONAL MEETING ON HARMONIZATION AND MAINSTREAMING OF HIA IN THE WORLD HEALTH ORGANIZATION**

**BACKGROUND**

Development policies, programmes and projects are transforming the social and physical environment globally. The impact of this transformation is considerable and, for a number of reasons, most pronounced in the developing countries. In many instances, development provides opportunities for health improvements. Often, however, development processes compromise their own sustainability through negative impacts on health, both reducing benefit-cost ratios through loss of productivity due to ill health and transferring hidden costs to the health sector. In many countries, policy and legal frameworks for environmental impact assessment (EIA) of development projects are now in place and have been grafted into procedures for financial decision-making about proposed projects, internally as well as in external support agencies. Until now, however, it has been common for the impact of projects on human health not to be assessed properly, mainly because of an insufficient notion of the cross-cutting nature of health issues, both inside and outside of the health sector.
There is a need, therefore, to ensure that health receives a distinct profile in the context of environmental and social impact assessment and to create a procedural framework in which health impact assessments are commissioned and used. WHO aims to develop and promote such a procedural framework through its Regional Offices and Country Representations, and through working with its Collaborating Centres.

Individual WHO Regional Offices are currently discussing the need to promote environmental health impact assessment (EHIA). In order to assume its responsibilities and tasks effectively and consistently in relation to technical cooperation, research and development (R&D) and capacity building for HIA, it is crucial for the Organization to first mainstream HIA internally, to harmonize its position on HIA methodology and procedures and to develop a realistic strategy. The goal of the two-day meeting was to make as much progress as possible in mapping out the steps needed to complete the process of HIA mainstreaming, harmonization and strategy development, for completion within a realistic time frame.

The following table lists some of the actions undertaken by WHO Headquarters and the six WHO Regional Offices at the time of the meeting. The list is not exhaustive.

<table>
<thead>
<tr>
<th>Region</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRO</td>
<td>Earlier work on HIA of water resources development, HIA guidelines proposal</td>
</tr>
<tr>
<td>EMRO</td>
<td>Draft EHIA guidelines prepared, country workshops held, earlier work on HIA of water resources development</td>
</tr>
<tr>
<td>SEARO</td>
<td>Consultation on HIA for vector-borne diseases and development projects held in Bangkok, 18-22 October 1999</td>
</tr>
<tr>
<td>EURO</td>
<td>Draft guidelines commissioned, transportation initiative, healthy public policy initiative, earlier work on chemical safety and industrial pollution</td>
</tr>
<tr>
<td>AMRO/PAHO</td>
<td>Discussions held, HIA guidelines on industrial pollution produced in Spanish, workshops held in Ecuador</td>
</tr>
<tr>
<td>WPRO</td>
<td>Country HIA workshops held, assistance provided to Philippines and to the Asian Development Bank for HIA guidelines production</td>
</tr>
<tr>
<td>HQ</td>
<td>PEEM guidelines, report to World Commission on Dams, HEADLAMP project, national policy workshops in four African and one South-American country, intersectoral training course developed and tested</td>
</tr>
</tbody>
</table>

**PURPOSE OF THE MEETING**

The purpose of the meeting was to set in motion an Organization-wide process of HIA mainstreaming, harmonization and strategy development. Within this goal the generic objectives of the meeting were to find common ground on HIA methodology and procedures, to consider what actions would be enhanced by information exchange and collaboration between WHO Regional Offices and to define the capacity building needs within WHO itself so it can function optimally in the promotion of HIA in its relations with Member States and other development partners.
SPECIFIC OBJECTIVES

- To review the progress achieved in Health Impact Assessment and the activities presently under way by partners.
- To agree on and adopt generic HIA methods and procedures as the common basis for technical collaboration activities by all Regions.
- To agree on a process of capacity building needs assessment in Member States, on the basis of which common training course material could be developed, translated, printed, and used in all regions.
- To agree on the role of WHO headquarters, Regional Offices, Country Representations and Collaborating Centres in the promotion of effective Health Impact Assessment of development,
- To identify opportunities for the synergistic use of different budgets, and for the prevention of duplication, and
- To formulate an action plan for the mobilisation of resources in support of an Organization-wide effort in HIA.

EXPECTED OUTCOMES

- A report containing the shared knowledge of the global state of the art of HIA in the context of Environmental Impact Assessment, the current status of HIA plans and activities in WHO headquarters and the WHO Regional Offices, and recommendations for the strengthening of the position of HIA within the WHO and of WHO's interaction with other development partners,
- An agreed plan for the rapid formulation of a generic text on HIA methodology and procedures, that will serve as the basis for Regional HIA guidelines, and agreement on a common approach for the elaboration of guidelines for HIA,
- Agreement on areas of collaboration, information exchange, partnership and common goals for HIA in all regions and a roadmap, with a realistic time frame, for the development of an Organization-wide HIA strategy.

PROCEEDINGS

Introduction of issues

Following the formal opening by the Director-General of ESAMI, a round of introductions of the participants and a brief review of the meeting’s objectives and expected outputs, Dr Birley presented his background paper on Health Impact Assessment (see annex 3). The paper considered in detail issues of definition and scope, the procedural aspects of HIA and the policy context within which HIA is to take place in the Member States. The meeting addressed the key questions raised by the paper, to begin with the links between Environmental Assessment and Health Impact Assessment.

HIA links with EA

In order to ensure a balanced assessment of health impacts of development, both environmental and social determinants of health have to be taken into consideration. This key argument, put forward in the background paper, was favourably received by the meeting. Health within the context of EA was, as a rule, considered one of many bullet points on a
checklist without giving credit to its cross-sectoral nature. The health recommendations emerging from an EA were therefore usually strictly health sector confined. An EA seldom resulted in changes in project design and/or operation with the explicit goal of protecting or promoting human health. A distinct profile for HIA was, therefore, warranted, but HIA should not be divorced from EA; on the contrary, it should be an integrating factor in the link between environmental and social impact assessment.

**EA/HIA at country level**

Realities at the national level will dictate to what extent HIA can be assigned this distinct profile in the broad development context. In many countries in Asia, Africa and South and Central America, there is still insufficient capacity to carry out Environmental Assessment in a satisfactory way. Creating a parallel procedure for HIA would not only further stretch the existing impact assessment capacity beyond its limits, but it would also require from ministries of health to build their own capacity in this field of work, to play the necessary counterpart role in the process. A proper impact assessment requires resources and for externally funded development projects this often implies additional loan components, unless it was negotiated that the multilateral or bilateral agency involved covered the cost of impact assessment. A distinct health component would definitely add to the costs and it may therefore be desirable to review the need for an HIA on a case by case basis. This would be guaranteed by putting into place proper screening and scoping mechanisms.

**A distinct HIA profile**

The group agreed that WHO activities in the field of HIA should be based on the principle that ideally health in development deserves a distinct assessment which places health protection and promotion in a cross-cutting context, but that while capacity is being built in Member States, efforts should be made to ensure that the health component in Environmental Assessments is comprehensive and not limited to the formulation of recommendations exclusively addressed to the health sector.

**Environmental and social determinants**

It was also agreed that the model of health having stakes in both Environmental and Social Impact Assessment should be captured in a Venn diagram (see next page), where the environmental and social determinants of health are represented by two overlapping circles which are not static, but may drift apart or come together depending on local conditions. The overlapping part is the comprehensive public health area to be covered by an HIA.

**Strategic assessment**

The discussion on cost of impact assessment led to a reference to strategic impact assessment as one possible way of overcoming the need for more
resources resulting from a distinct HIA. In a simple form, strategic impact assessment, which would include health as a cross-cutting issue, would be an integrated procedure for a number of similar projects in the same ecosystem setting. For example, a strategic impact assessment could be made of small dam construction in the Sahelian zone of one or more West African countries, instead of carrying out an impact assessment for each individual project.

**SA definition**

In the process of preparing WHO’s input into the report of the World Commission on Dams, the following working definitions were used for Strategic Impact Assessment:

**Definition**: Strategic Assessment (SA) aims to facilitate early comparison of impacts of development options, well in advance of project level impact assessment; consequently, it operates at the policy and programme level, in a cross-sectoral context.

**Responsibility**: Strategic Assessment links the needs of economic development effectiveness to the needs of achieving optimal sustainability. The initiative and guidance for the SA process must, therefore, be the responsibility of national governments, shared by the highest authorities mandated to cover macro-economic development and environmental protection, respectively.

**Scope**: the scope of Strategic Assessment will depend on the natural resource under consideration. It will be determined either by geophysical boundaries (e.g. a river basin) or in a cumulative fashion (e.g. scattered mineral resources). The outcome should be the adjustment of the policy framework within which sectoral ministries implement their development activities.

**SA and healthy public Policy**

WHO has for a long time advocated healthy public policy, and in the WHO European Region this concept has gradually developed into a health version of strategic impact assessment. In many Member States in the other WHO regions policy frameworks were often weak, subject to considerable change and their application was sometimes erratic. In these countries, Strategic Assessment (in other words, impact assessment of development policies) would have to evolve from conventional project-oriented assessment, but in the process lessons from the European and North-American experience in this approach may be considered for their possible value in different contexts.

**HIA definitions**

There are several definitions of Health Impact Assessment in circulation and three of these were reviewed in greater detail:
- Assessment of the change in health risk reasonably attributable to a project, programme or policy and undertaken for a specific purpose.  
  (Birley, 1995)

- The estimation of the effects of a specified action on the health of a defined population.  
  (Scott-Samuel, 1998)

- A combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population.  
  (Ritsatakis et al. 1999)

**Gothenburg consensus** It was agreed that the third definition, developed through a list-serve consultation by the Brussels office of the WHO Regional Office for Europe and endorsed as the Gothenburg consensus contained all essential elements and also provided the broad scope for the further evolution of HIA over time. Compatibility of this definition with current and future impact assessment definitions of the International Association for Impact Assessment (IAIA) would need regular checking, however, to ensure that the link with the impact assessment community at large was maintained.

**HIA and risk assessment** Before this agreement was reached, there was considerable debate in the group over the differences and commonalities between HIA and traditional risk assessment as applied in environmental health. The development of risk assessment methods and procedures made substantial progress in the industrialised countries in the 1970s. At that time, the growing awareness of environmental issues, enhanced by the 1974 Stockholm Conference, focused attention on chemical contaminants in air, water and soil. Environmental health units developed and tested risk assessment and management based on an analysis of exposure in a dose-response model. This was particularly relevant to the problems faced by industrialised countries. Broader health impact assessment was slower to develop and had its roots in the developing countries. Projects for the development of natural resources had health impacts which did not fit the quantitative dose-response model, such as psycho-social disorder or even vector-borne diseases, which, because of their complexity, could only be captured in a qualitative way. Another difference was the fact that risk assessment could base itself on evidence generated through retrospective evaluations and through exposure studies in laboratories. These retrospective and laboratory-based elements were much weaker in health impact assessment. In conclusion: a health impact assessment could very well contain environmental health risk assessment components, while the opposite was less likely to be true. Conventional environmental health risk assessment is quantitative with retrospective overtones, while health impact
assessment is mainly a prospective exercise that looked at qualitative and, where possible, quantitative associations.

**EHIA and HIA**

Of the various attributes of the HIA definition, the first one to be explored by the meeting was that of the terminology differences between Environmental Health Impact Assessment and Health Impact Assessment. It was clear from the discussions that the promotion of a method that would balance environmental and social determinants of health would, in some parts of the world, meet with political sensitivities in relation with the latter. A restricted HIA concept was clearly to be preferred over no HIA at all, and in such political settings there would be greater opportunities for HIA to be strengthened in the context of Environmental Assessment.

**Broad health definition**

Beyond the determinants of health, however, it was agreed that health itself should be considered in its broadest sense (i.e. in accordance with the WHO definition of health) and that an HIA method that would focus on a single disease or disease group without having gone through the appropriate screening and scoping preliminaries would not be acceptable. The five disease groups identified in the background paper were adopted as being sufficiently comprehensive.

**Different epidemiological settings**

This did not imply that HIA should not take account of the differences in disease burden that exist in different parts of the world. Epidemiological transition was a key phenomenon in this context: it referred to the relative reduction of Burden of Disease (BOD) caused by infectious diseases with a simultaneous proportional increase in BOD caused by non-communicable diseases (cardio-vascular diseases and malignancies), as observed in countries moving to higher scales of industrialisation and urbanisation. Rural/urban contrasts reflected another difference to be considered at the start of an HIA procedure, with peri-urban populations at the interface between the two and carrying the brunt of both epidemiological patterns.

**A generic HIA method**

In promoting HIA, there was no need to be prescriptive to Member States on these issues. It was agreed that the key was to have an HIA method that would be sufficiently generic and flexible to allow national authorities to set the boundaries, select the emphases and identify the vulnerable groups in a way that would optimally address the key issues and provide the information required for sound decision making concerning development options. The meeting agreed that the HIA method and procedure proposed in the background paper and in the WHO submission to the World Commission on Dams fulfilled these criteria and should therefore be adopted for promotion by WHO.

**Impacts and**

A final point, on which the group reached consensus easily, was

---

opportunities

the need to look at the consequences of development for health in a neutral way. The word impact has a negative connotation, and it should be borne in mind that health opportunities in development deserve equal attention. The concepts of health promotion, especially where it looks at communities in special settings (healthy cities, healthy schools, healthy marketplaces etc) could contribute tremendously to the balanced development of HIA practice in Member States. Strengthened collaboration with the health promotion community was therefore considered essential.

Mapping HIA within the WHO structure

Clearly, the WHO structure was not always conducive to communication and collaboration between the different groups with a potential stake in HIA. It was needed to identify the various programmes and individuals, and advocacy would be essential to get the point across that the successful promotion of HIA related to many different aspects and depended on the inputs from across the Organization. It was agreed by those present that active follow-up would be given to identifying partners in the WHO and raising HIA issues with them. A discussion ensued on the current structure at Headquarters and the Regional Offices present at the meeting, to map out the relevant programmes and links between them that needed establishing or strengthening.

Three key principles

The WHO input submitted to the Secretariat of the World Commission on Dams had highlighted three key principles of Health Impact Assessment:

Equity – the economic and development objectives of projects aimed to exploit natural resources for the common good are often not fully compatible with an equitable distribution of the benefits and stresses between different stakeholder and community groups. Beneficiaries may be hundreds of kilometers away from the actual project site (such as usually is the case for hydropower dams benefiting urban centres) while local or downstream communities may suffer the adverse health effects of environmental change and social disruption. In irrigation schemes, those living at the tail end of the system may rely on water from canals for their domestic needs and may be exposed to increased levels of pesticide residues in the water they drink. A simple health accounting is not satisfactory. It is not acceptable to simply balance out the health gains of one part of the population against the health losses of another, to arrive at a net benefit, as one might do in a financial analysis. Benefits of development are not disputed – the risks to health, however, that result from inequity, need to be identified at an early stage.

Economics – most developing countries and most external support agencies spend about 5% of their budget on the health sector; most of the health budget is spent on the delivery of health services. A considerably larger part of national budgets and development funds is spent on the
construction and management of infrastructure projects. Decisions on infrastructure development are usually oblivious to the important implications they may have for people’s health status and lack procedures for the effective consultation of the health sector. When adverse health implications occur, they represent a hidden cost of the project that is in part transferred to the health sector without adequate compensation. The other part of the cost is transferred directly to the affected households, and comes to expression in a deteriorated health status as well as losses in productivity and education achievement.

**Sustainability** – the concept of sustainable development is not limited to the judicious exploitation of natural resources to safeguard needs of future generations, but also implies the protection of the community health status, so that in the development process the human resource base can be relied on to its maximum potential. While there have been, over the past 50 years, numerous examples of projects whose development effectiveness was dramatically undermined by their adverse health impact on local communities, the cumulative effect of more insidious reductions of the health status is only beginning to be explored and is likely to be considerably more important in economic terms.

**Principles endorsed**

The group reviewed and endorsed equity, economics and sustainability as key principles in the HIA concept the World Health Organization wants to promote.

**HIA in the project cycle**

A question that came up repeatedly in the discussion concerned the place of HIA in the development planning process. In order to put this into a logical framework, the basic concepts of the project cycle were explained. In brief, development planning follows a set pattern of sequential phases, where the output of one phase becomes the input to the next. Different actors play key roles in different phases. The main stages are: project identification, pre-feasibility studies, feasibility studies, appraisal, negotiation, implementation/ construction, evaluation, operation and maintenance, and with rehabilitation a new cycle starts. An example of the output-input sequence was presented: the pre-feasibility phase investigates different project options in the context of macro-economic and sectoral policies, and results in the formulation of Terms of Reference for a feasibility study on the preferred option. These Terms of Reference are the starting point for the next phase. They also provide one of the yardsticks against which the outcome of the feasibility study is measured at the appraisal phase.

**Critical decision-making moments**

Opportunities to incorporate health considerations in the project cycle are the subject of Tiffen (1991). She identifies two critical decision-making moments: the time of formulating the Terms of Reference for the

---

2 Tiffen, M. 1991. Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation. PEEM guidelines series 1, document WHO/CWS91.02, World Health Organization, Geneva
feasibility study and the time of negotiating the allocation of financial resources to meet the recommendations that have come out of the feasibility study. Health issues should be raised at the early identification and design stages, but a parallel HIA process (as well as an EA process) should start with the feasibility study and continue through appraisal, negotiation and implementation.

Regional presentations
This discussion was followed by presentations by the WHO Regional Offices in attendance.

AFRO
In the Regional Office for Africa, HIA was covered by the Programme of Environmental Risk Assessment (ERA) in the Division of Healthy Environments and Sustainable Development (DES). For the 2000-2001 biennium the following activity components made up the ERA programme:
1. Drinking water quality control
2. Sustainable management of biomedical wastes
3. Management of hazardous wastes and chemical safety
4. Health impact assessment
5. Health hazard mapping
6. Other environmental health hazards.
Health impact assessment and health hazard mapping were considered to be closely linked activities.

Health hazard mapping
At the request of Member States, ERA started a review of environmental health hazard mapping in Africa with special reference to the following issues:

- the approach focused on causes of environmental health impacts and potential risks to human health. It therefore consisted of mapping and analysing the distribution, nature and magnitude of environmental conditions and processes which might pose significant threats to health.
- The potential of applying environmental health hazard mapping in Africa was substantial, but it was constrained by the lack of reliable and suitable data and limited capacity at the country level, both in a technical expertise and a financial resource sense.

The review concluded that environmental health hazard mapping was a valuable tool in the African context and that with adequate capacity building, its introduction was feasible.

HIA and mapping
From this review it may be derived that geo-referenced data collection for Health Impact Assessment would combine the strengths of both methodologies. This was of strategic importance and merited the development of an effective policy framework. In this context, objectives for an African HIA programme needed to be defined. Regional guidelines for HIA would be a next logical step in this development.
A specific issue in which the DES Division cooperated with the World Bank dealt with health care waste in South Africa. This was an example of a health impact of activities of the health sector itself. An initial consultants report highlighted the institutional weaknesses, reflected by uncoordinated and overlapping functions and responsibilities of different government departments with respect to the compliance with existing statutory requirements and guidelines on health care waste management. As a result, there was inadequate segregation of health care waste, causing undue injury and contamination.

In the Eastern Mediterranean Region of the WHO, the Centre for Environmental Health Activities (CEHA) in Amman, Jordan, is responsible for Environmental Health Impact Assessment as part of its overall mandate in environmental health. The regional Plan of Action for Health and Environment in the Eastern Mediterranean had been adopted by the WHO Regional Committee in 1997. This regional Plan of Action called for an integrated approach to health and environmental management and, inter alia, referred to promoting the use of Environmental Health Impact Assessment (EHIA) as a tool in maintaining healthy development and a healthy environment. Nineteen countries in the EMR had formulated national strategies and plans of action for health and environment. In relation to EHIA, CEHA had organized, at the regional level, one seminar, two workshops and two consultations on the subject. In addition, it had supported 12 national seminars in Member States in the Region. It had established collaborative links with Health Canada, the Canadian Federal Environment Assessment Review Office and Carleton University, as well as with the Liverpool School of Tropical Medicine.

Member States in the Region could be classified into three groups according to their environmental health needs:

Afghanistan, Djibouti, Pakistan, Palestine, Somalia, Sudan and the Republic of Yemen were the least developed in terms of provision of water supply and sanitation and major efforts were needed to improve this situation. “Modern” hazards, while of growing importance, had a low priority as yet.

Egypt, the Islamic Republic of Iran, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, the Syrian Arab Republic and Tunesia had made substantial progress towards providing basic environmental health services over the past few years, but priorities remained a mix of traditional and modern hazards.

Bahrain, Cyprus, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates provided adequate environmental health services and their priority concern was mainly with modern hazards: pollution and chemical safety.
Healthy settings

It was recalled that the EMR had also been at the forefront of promoting the healthy settings approach: it had several successful Healthy Cities projects and it had spearheaded its rural counterpart, the Healthy Villages programme, which had been adopted by many countries in the region. The healthy settings approach provided one possible context for the application of Environmental Health Impact Assessment.

Activities

The specific activities in the promotion of EHIA in the EMR included:

At the regional level –
- preparation of regional guidelines for EHIA
- information collection and dissemination on EHIA

At the country level –
- preparation of national EHIA guidelines and their incorporation into development planning frameworks
- sponsoring environmental epidemiology studies
- EHIA capacity building

Guidelines

The preparation of regional EHIA guidelines had been an on-going activity since 1992. A first draft had been produced by the Liverpool School of Tropical Medicine in 1996, and had since then gone through various review stages.

Some indicators

With a region as varied as the EMR, stretching from Morocco to Pakistan, and with economies ranging from some of the poorest countries in the world to the high standard of living in the Gulf States, the Eastern Mediterranean faced daunting challenges in connection with health impact assessment and health risk management. Some indicators and issues to illustrate this included:

- Annual population growth rates ranges from 1% (Cyprus) to 5.1% (Djibouti); the child mortality rate fluctuates between 9/1000 (Cyprus) and 156/1000 (Djibouti)

- Eleven countries in the region have an annual renewable water rate below the scarcity bench mark of 1000m³/head; 50% of the world’s desalination plants are in the region, causing environmental problems in coastal waters (increased temperature and salt concentration); extensive irrigation schemes have caused water logging and salination and are linked to vector-borne disease transmission; there is a potential for conflict over water resources pertaining to international river basins.

- Outdoor air pollutants in many major cities exceed WHO guidelines for air quality by a factor 4 to 5; 50% of the region’s population
(especially in rural areas) uses bio-mass fuels which cause a serious problem of indoor air pollution because of lack of ventilation.

• In terms of land use, there are problems of de-forestation, over-grazing, extension of cereal crop cultivation into rangelands and over-use of fertiliser and pesticides in agricultural production.

SEARO

The ten Member States of the WHO South-East Asia Region have a combined population of about 1.5 billion people, i.e. 25% of the world population. The environmental health issues in the Region range from drinking water quality and air quality, to toxic waste management related to major industries and the vector-borne disease aspects of water resources development (dams, irrigation schemes).

Some examples

There are also a number of transboundary issues: haze (related to forest fires) and POPs pesticide use. Examples of important impacts included:

• Widespread pesticide use in agriculture has led to increased incidence of poisoning in Sri Lanka
• Cobalt 60 contamination due to inadequate factory waste disposal in Thailand
• Arsenic contamination linked to the rapid and unregulated expansion of tube wells for drinking water in Bangladesh (22 million exposed, 7000 clinical cases)
• Dermatitis caused by factory effluents in Bihar, India
• Air quality problems due to forest fires in Indonesia

HIA goals

SEARO had three strategic goals in Health Impact Assessment for the coming years:

The first goal, policy and advocacy support, aimed at advocacy for HIA in the Region and at the creation of a policy basis, to be eventually turned into legislation, for HIA. The second goal, technical support, was to set norms and standards, provide information on management and publicize technologies, tools and guidelines. The third goal, partnership, was to identify relevant development partners, relevant government sectors and relevant research institutes for collaboration and partnership in the area of HIA. It also aimed to strengthen internal coordination on HIA issues within the Regional Office.

Strategic goal 2

In norms and standard setting, the focus was very much on more conventional environmental risk assessment: standard case definition for environmental diseases, establishing monitoring indicators and defining exposure limits. The management of information, however, looked at issues in a more qualitative manner: situation analyses, outbreak investigation and macro and micro-mapping of environmental hazards.
Strategic goal 3

Within the WHO, different levels were clearly seen as being complementary. For example, with respect to the production of guidelines, in SEARO’s view Headquarters would provide generic HIA guidelines, ROs would develop region-specific guidelines and the WHO country offices translate these and insert locally relevant data.

Activities

Various health and environment initiatives had been taken in 1997 and this would be on-going. A document entitled *Sustainable Development and Health: Building Capacity*, had been produced in 1999. A workshop on Health Impact Assessment of water resources development with special reference to malaria had been held in Thailand in 1999. Support to Member States in the development of HIA policies was high on the agenda for the next biennium. Guidelines development and capacity building were planned, as was the development of research methodologies for attributable fractions of Burden of Disease. Exposure limits for arsenic were under study, and the development of indicators and the situational analysis for HIA had been initiated. There were also clear intentions to work towards HIA partnerships with UNEP, UNDP, FAO, the World Bank, the ADB and ASEAN, and to assist Member States in organising intersectoral meeting in which the Ministry of Health would discuss HIA with the Ministry of the Environment and other line ministries involved in development.

Mainstreaming HIA in the WHO

With the Regional Office information included into the discussion, the meeting next focused on practical ways of mainstreaming HIA in the WHO programmes. The process of mainstreaming needed action at all levels, but it was felt that the WHO representations in the Member States had so far been neglected in providing information on HIA options and possibilities. There was a need for a down-to-earth information paper on health impact assessment principles, methods and procedures specifically prepared for the WRs.

At the Regional Office level awareness creation also continued to be necessary, but the urgency of this need varied from one RO to the other. In addition to personal informal contacts among Regional Office staff, there could also be involvement of experts from Collaborating Centres who could give seminars for RO staff. Visits of staff from Geneva should also be used, when appropriate, for awareness creation seminars on the subject.

At the global level

The link to be established, through a formal Memorandum of Understanding, between WHO and the International Association for Impact Assessment (IAIA) would open new opportunities for a reciprocal exchange of impact assessment information. A copy of the MoU would be
distributed to all Regional Offices. IAIA has an HIA section and HIA usually features as a separate subject on the programme of the annual congress of IAIA. There was also an IAIA e-mail listserv on the subject of HIA, which provided a medium for debate and for the distribution of case studies.

**Collaborating Centres**

A number of Collaborating Centres of the World Health Organization have HIA written into the Terms of Reference. On the short-term, the TOR of a number of suitable Collaborating Centres could be reviewed to explore whether HIA could be effectively included into them. It was agreed that this would be the most efficient process, yet it would require some additional capacity building efforts as well, to bring centres up to date with the state of the art in HIA. On the medium term links with new institutions should lead to an increased number of Collaborating Centres which have HIA as their main focus for joint work with the WHO. In the TOR a distinction should be made between research and development activities and capacity building activities in HIA. For the latter, eventually a home may be found for HIA distance learning modules based on the experience with the problem-based learning course developed during the 1990s. In addition to the identification of centres, individuals with expertise in HIA could also be identified and included in an informal network, either with or without their institutional affiliation.

**Development partners**

One important target group for WHO’s HIA activities consisted of the bilateral agencies and multilateral development banks. There was a dual interest: WHO should mobilise support from these agencies for the further development and promotion of HIA, but it should also promote the HIA concept and its procedures as part of the internal planning, preparation and appraisal of projects intended for support by these agencies. This would be an efficient way of ensuring that future externally funded infrastructure projects take into account the health implications in a satisfactory manner.

**Bilateral agencies**

Particularly for the bilateral agencies, whose main remit lies in poverty alleviation and sustainable development of natural resources, this would require overcoming the intersectoral gaps that continue to exist within their internal structure. Policy change with respect to HIA in the context of bilateral assistance could be accelerated by influencing stakeholders, their representatives in parliament and senior politicians. It should be borne in mind that bilateral agencies favour partnerships which have a multiplier effect, and this was perhaps easier to achieve for HIA than for other issues. Decision making about support had now been decentralised by many agencies and country requests for, for example, capacity building in HIA could be generated locally. Health, population and nutrition departments in bilateral agencies still had a strong sector-orientation and often the

---

3. The MoU was concluded in December 2000 and the text can be found in annex 4.
Environment Department provided the easiest point of entry for HIA, as it was already perceived as cross-cutting in nature.

**Multilateral banks**

Of the multilateral development banks the Asian Development Bank had been the first to produce specific HIA guidelines, but it was not clear what their impact had been. More recently, the World Bank included an update on HIA in its Environmental Source Book. A guidelines for HIA in the African setting was under preparation by the World Bank. The status of HIA in the other regional development banks would need to be checked.

**NGOs**

It was not clear to what extent the considerable volume of development work carried out by local or international NGOs was subject to HIA, but there was a role for WHO in promoting HIA capacity building of NGOs. NGO experience in HIA needed cataloguing; this would provide a knowledge base from where to promote exchange of information between NGOs on the subject. There was a strong HIA knowledge base in universities: in Europe this was bundled through the European Network of HIA institutions, and similar networks could be started in other regions. The Commonwealth ministers of health had paid attention to the issue of HIA in a broad sense, as well as, in particular, the impact of the HIV/AIDS epidemic and expanding malaria problems on the functioning of health systems.

**Guidelines**

There was a general feeling that work on HIA had led to a plethora of guidelines and the question was rightly raised whether there was a need for more guidelines. Yet, there continued to be a demand for guidelines that would respond to local situations and that would fit in with national or institutional (bilaterals, banks) policy frameworks. Also, many institutions and agencies wanted to be seen to have their internally developed approach to HIA methods and procedures.

**Regional guidelines**

For the WHO Regional Offices it was agreed that, to reflect the policy of WHO speaking with one voice, there should be generic guidelines on HIA method and procedures that could be complemented by sections addressing regionally important issues. Member States preferred regional guidelines which could more easily be adapted and translated for national use. They would just need to add case study material and could make them compatible with local training activities.

It was agreed that a generic guidelines section would be prepared which provides definitions and glossary, introduces method and procedures and puts HIA in the context of the project cycle. This section would be incorporated in all regional guidelines. It should allow for more restricted

---

4 This was meanwhile published as Listorti, J. and Doumani, F, 2001. Environmental health: bridging the gaps. *Discussion paper no. 422*, World Bank, Washington DC.
approaches to HIA (such as EHIA) and it should also be compatible with efforts for the production of guidelines already underway in Australia, New Zealand, Canada, Ireland and several other countries.

Research

Finally, the meeting considered research issues in relation to HIA. A main research question referred to the validation of the proposed methodology in real-life settings. An information base should be established to document the impact of HIA. The monitoring of health in development should not be done just by applying typical health indicators, but process indicators for HIA should also be developed and tested. Comparative studies of HIA experiences in different parts of the world would help develop criteria on methods and procedures that work under specific circumstances.

Case studies

Case studies on HIA experiences could either document new projects and their HIA, or they could be retrospective and consider the health impact of development projects in the past. It was agreed that any such case study should have a solid economics component.

Health determinants

The area of health determinants required more basic research. It was important to develop a way of estimating the fraction of Burden of Disease attributable to change in certain environmental and/or social determinants. This methodology is critical if other sectors are to be convinced to invest in health safeguards.

Follow-up

There is a large area of research that needs urgent addressing: the development and testing of non-health sector interventions that can be deployed to comply with the recommendations emerging from an HIA. These can be of an environmental management or social engineering nature. Other than the blanket measures often deployed by the health sector, such measures are highly specific to local settings and their use therefore needs careful and controlled testing and proper documenting.
Decisions

1. WHO HQ and ROs to arrive at a common definition of health impact assessment

2. WHO HQ and ROs must all have a package of existing, relevant HIA documents, references and web-sites; subsequently, WHO Collaborating Centres in HIA must also have this package

3. Collection of case studies to be started (documenting adverse health impacts of development, experiences with health risk management measures and experiences with HIA undertakings)

4. A global WHO website on HIA is to be established

5. An adequate HIA policy basis is to be created in the WHO

Actions

E-mail consensus exercise involving HQ and ROs, coordinated by HQ, based on existing variations on the HIA definition

Collection of all relevant documents and information by HQ and ROs; HQ coordinates and sends out by the package; HQ regularly updates with support from the ROs and Collaborating Centres

E-mail consensus on the format; ROs to submit to HQ, which will make them available through the WHO HIA network

HQ subcontracts the establishment and maintenance of this web-site to CC in Liverpool. Website will have two-directional hotlinks to HQ and ROs.

E-mail consensus on format and contents.

Closely coordinated action of HQ and ROs on:
- E-mail consensus on a background paper (asap).
- Draft cabinet paper (aiming for discussion by the Cabinet in March 2001)
- HIA on the agenda of Regional Committees for discussion in Aug./Sept./Oct. 2001 (preparations completed by April 2001)
- Draft WHA resolution to pass through EB109 (Jan. 2002) for adoption by WHA55 (May 2002) (preparations completed by Aug. 2001)

Closely coordinated action of HQ and ROs on:
- E-mail consensus exercise to prepare an HIA information document for WRs
- Opportunistically, various formal and informal actions at the Regional Office level (lunch time seminars, sharing documents with colleagues, circulate relevant documents and others)
Decisions

7. For an effective implementation of a WHO HIA programme, various partnerships are to be established:
   a. With the International Association for Impact Assessment (IAIA)
   b. Through designation of WHO collaborating centers
   c. Through links with development partners (development banks, bilateral agencies, and intergovernmental and non-governmental organizations)

8. A common WHO framework for HIA guidelines is to be developed

9. HIA research efforts to be coordinated

Actions

HQ in co-ordination with ROs to work on:
   ▪ Establishment of formal links between IAIA and WHO through an MoU
   ▪ Explore IAIA corporate membership for WHO staff
   ▪ Communicate on global and regional activities
   ▪ Put regional IAIA sections in touch with WHO Regional Offices
   ▪ Promote the use of the IAIA list server for e-mail discussions on HIA

Short-term action:
   ▪ HQ and ROs to identify CCs to whose TOR HIA can be added (this may include the need for additional capacity building after formalisation)
   ▪ Explore the WHO “Centres of Excellence” mechanism

Medium-term action:
   ▪ Identify additional candidate institutions for collaborating centre designation
   ▪ Trace HIA trainees for their institutional affiliation to identify potential collaborating centres.
   ▪ HQ and ROs to pursue functional partnerships with the World Bank and Regional Development Banks in the field of HIA
   ▪ ROs (in collaboration with WRs) to pursue contacts with bilateral agencies at the level of recipient Member States
   ▪ HQ and ROs to explore capacity building partnerships with NGOs and intergovernmental agencies (in particular the promotion of HIA by health NGOs aimed at other development NGOs)

Collaborating Centre Liverpool School of Tropical Medicine to prepare generic guidelines as an introductory chapter to all Regional HIA guidelines (asap)

HQ to technically assist ROs in further guidelines development. Elaboration of research priorities in the area of HIA to be left for a next meeting

Part II: PARTNERSHIP MEETING ON THE INSTITUTIONALIZATION OF HIA CAPACITY BUILDING IN AFRICA
BACKGROUND

At the end of 1999 a number of development and academic institutions agreed to establish an informal partnership, under the title *Acting Upstream*, to work towards the institutionalisation of capacity building in the area of Health Impact Assessment, with an initial focus on Africa. The partners include the World Bank, the African Development Bank, the headquarters and Regional Office for Africa of the World Health Organization, two WHO Collaborating Centres (the Liverpool School of Tropical Medicine and the Danish Bilharziasis Laboratory), and the East and Southern African Management Institute. Their initial start-up proposal was submitted to the World Bank Development Marketplace event (February 2000) and this is attached as annex 5.

Capacity building in Health Impact Assessment is crucial in the process of making countries self-reliant in their decision-making on sustainable development. The partnership acknowledges that sustainability must go beyond the use of the planet's natural resources, to include the human resource base, for and by whom development takes place. In the words of former WHO Director-General Mahler (1982) *Whenever the health component is forgotten, you forget at the same time the vital factor in development, namely the human being, his creative energy, his physical energy* …

Strengthening the capacity of countries in Health Impact Assessment will take place in the context of already existing frameworks of Environmental Impact Assessment. Strategic Impact Assessments should cover environmental, health and social impacts of development policies as closely related but distinct entities; project-oriented impact assessments must be followed by effective Environmental Management, Health Protection and Resettlement Action Plans.

Consequently, capacity building efforts for HIA must be comprehensive, addressing a number of essential elements at different levels in a coordinated way: the creation of an enabling policy environment, the establishment of a strategic alliance between environment and health ministries, development of skills in intersectoral negotiation and decision-making, strengthening of the Ministry of Health's capacity to adequately respond to the needs of other development sectors, and creation of institutional arrangements to ensure on-going support for risk assessment and management through multidisciplinary research, training of professionals, normative functions and regulatory action. For some of these elements capacity building modules have been developed and tested, for others this remains to be done.

The elements of the proposed capacity building plan include:

- Organization of national policy review and adjustment seminars
- Organization of training courses for the development of intersectoral negotiating and decision-making skills
- Establishment of Memoranda of Understanding between environment and health authorities, as a basis for a strategic alliance
- Transformation of MOH Environmental Health Services to intersectoral Health and Environment Departments, with increased regulatory powers
• Formulating inter-institutional action plans on R&D, training and normative functions

Details of some of these components are elaborated in annex 5.

PURPOSE OF MEETING
To consider the components of a plan of action for the institutionalisation of a comprehensive programme of HIA capacity building in the African region through a partnership of development agencies, health authorities, institutes with technical expertise in the area of HIA, a management training network and national counterpart institutions and to operationalize the plan of action within a logical framework

SPECIFIC OBJECTIVES
- Establish needs assessment criteria for the elements of HIA capacity building
- Prepare an inventory of what has been done and is being done by different agencies on EIA and HIA training
- Decide on a course of action for institutionalisation which will lead to the most sustainable results in capacity building
- Identify sources of funding and develop a strategy of resource mobilisation
- Incorporate education expertise into the capacity building elements to be further developed

EXPECTED OUTCOMES
- Shared knowledge of training needs and training activities in EIA and HIA
- A logical framework for the institutionalisation of HIA capacity building
- A confirmation of the partnership and the roles of the individual partners in promoting HIA capacity building goals
- A report containing the outcome of deliberations, including a plan of action to be implemented within the logical framework

PROCEEDINGS
A brief introduction was given on the WHO Headquarters HIA capacity building activities over the past ten years, which had been carried out under the auspices of the WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control. Two main lines of activity had been developed: the organization of national policy seminars for senior government officials and the design and testing of a course for the development of intersectoral decision-making skills in support of HIA for middle-level management staff in ministries.

The policy seminars had been held in Benin (1993), Zambia (1995), Malawi (1998) and Ecuador (1999). They aimed at reviewing sectoral development policies, identifying options to include health into them and improving the policy environment and the institutional arrangements for intersectoral action linked to HIA. The training course had been set up as a task-oriented problem-based learning event of eighteen days, to which middle level staff of different relevant ministries were invited. The objective had been to develop the skills of ministry staff, irrespective of their sectoral affiliation, to participate effectively in the intersectoral negotiations in support of health impact assessment and health risk.

A report of the development of the course had been published in 2000 and a Manual for organizers of the training course was under preparation.

The meeting first addressed the issue of training needs assessment. The seminar and training course were important building blocks of a capacity building effort, but would not be enough to ensure a lasting impact on the way health in development is perceived and addressed. Member States should get assistance in assessing their capacity building needs in the area of HIA. Such needs assessments should clearly link HIA with the existing Environmental Assessment (EA) capacities. Encouragement of intersectoral action should be a key theme in capacity building. Any needs assessment should also take into account the high turn-over of human resources in many public sector institutions.

It was agreed that a special effort should be made to help strengthen ministries of health to perform the tasks related to HIA. A first start had been made by WHO in 1998 with the development of draft guidelines for strengthening Environmental Health Services and transforming them into Health and Environment Services. It was agreed that efforts in this area needed to be stepped up. The remit of conventional environmental health services remained confined to drinking water supply, sanitation, food safety and chemical safety, all in an operations-oriented mode. Essential functions should be re-defined and HIA tasks were amongst the new functions to be adopted. Ministries of environment could serve as a model how substantial progress was made through regulatory rather than operational action.

Next, the discussion focused on the issue of institutionalization of HIA capacity building in Africa. Agreeably, policy adjustment and skills development were main elements in this context and the past experience could serve as a basis to strengthen the managerial aspects of HIA in particular. ESAMI had been proposed as the "home" for HIA capacity building activities in Africa for a number of reasons:

- It was a centre of excellence for management training in Africa
- It had a robust alumni network of senior government officials in East and southern Africa
- It was well-connected with national institutions for public administration and management and incorporating HIA capacity building into the ESAMI programme therefore had a multiplier effect at the national level.
- It had a solid core staff, some of whom were already active in related fields such as Environmental Assessment.

At this point, Dr Joseph Mumba gave a brief introduction on ESAMI, its history and its current activities. While the institute's main focus was on conducting management development interventions, it was also involved in research and provided consultancy services. It covered ten disciplinary areas with ten training programmes in each area.

---


6 This Manual will be published in the course of 2002
More specifically and of relevance to HIA capacity building, ESAMI was involved in agricultural research management training for the SADC countries, with support from the governments of the Netherlands and of the USA. It had just completed the first phase of a Netherlands Government supported energy programme with three course components: awareness creation for ministers and permanent secretaries; managerial skills development; and technical courses.

Two questions were raised: (1) could ESAMI carry out an HIA capacity building programme without having the in-house expertise in HIA and (2) could ESAMI also cover West Africa, in particular the countries of francophone West-Africa?

Clearly, a programme of training of trainers and a general awareness creation campaign for ESAMI staff as well as for the staff at national ESAMI counterpart institutions would be a first step in the institutionalization process. For the proper performance of the programme there was, however, no strict need for HIA experts to be based at ESAMI. The programme would continue to liaise with WHO and its collaborating centres in this area, and for the capacity building activities would rely on local experts. Part of the institutionalization process would be the establishment of a database of local experts relevant to HIA capacity building. More important was the issue of ensuring the learning methodology developed for the 18-day course was well established and maintained. The institutionalization process would therefore be stretched over several years to have effective training of trainers and quality control in the start-up phase.

The question of ESAMI’s role beyond its core area of work (East and southern Africa) was more difficult to answer. Sporadically, ESAMI had worked in other parts of Africa or even other parts of the world, for example in Bangladesh. The issue was not so much whether ESAMI could expand into West Africa for this capacity building effort, but rather to what extent the course approach and materials would need adaptation (other than basic translation) to be functional and effective in a francophone context. This needed further assessment that would start as soon as the institutionalisation process would take off.

In conclusion, the meeting unanimously agreed with choice of ESAMI as the institute were HIA capacity building efforts in Africa would be focused in collaboration with WHO and the other partners, with the caveat that special attention should be paid to efforts in francophone West Africa.

The discussion went on to cover some of the more practical details of course organization, including logistics, costing per participant and so on. It was decided by the group to bring these elements into a logical framework which could serve as a basis for a proposal for institutionalization.

The results of this exercise are presented in the draft LogFramework presented on the following pages.
<table>
<thead>
<tr>
<th>Description</th>
<th>Indicators</th>
<th>Means of verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development objective</td>
<td>Poverty reduction and sustainable development enhanced through intersectoral action for health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate objective</td>
<td>National capacities to undertake HIA and intersectoral action in development policies, programmes, and projects sustainably strengthened in participating countries</td>
<td>Health is addressed as a cross-cutting issue of development planning in at least 8 countries</td>
<td>Policies and management guidelines</td>
</tr>
</tbody>
</table>

Immediate objectives

1. By end of project year 2, the capacity of ESAMI strengthened to organize and implement the training course "Health Impact Assessment of Development" on a regular basis in the African Region

   - Evaluations and assessments confirm human and managerial capacity and capability by ESAMI to run training course at ESAMI HQ and at satellite country offices including Anglophone, Francophone, and Lusophone
   - Quarterly and annual progress reports
   - Continued commitment of ESAMI; Availability of external experts;

2. By end of project year 4, transfer of technical responsibility for the training programme to ESAMI completed and extended to 4 country counterparts

   - Full withdrawal of external experts; Training courses run independently of external experts in new target countries; And Agriculture, Energy and Environmental Management Programmes
   - ESAMI course catalogue and annual reports
   - Relevant ministries are interested and committed to sending an appropriate number of officials to attend the course

3. By the end of project year 5, environmental health units in the MoH of 8 countries established/strengthened to perform essential HIA functions

   - National health policies and strategies reflect the HIA functions of environmental health units; Reformed EH units in operation
   - National policy and strategy documents
   - Continued policy support by WHO
<table>
<thead>
<tr>
<th>Description</th>
<th>Indicators</th>
<th>Means of verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. By end of project year 6, training programme continued on a sustainable</td>
<td>Number of training courses held with financial support from other sources</td>
<td>ESAMI annual reports</td>
<td>Countries wish to purchase the training from ESAMI; Countries can identify and attract other donor funding;</td>
</tr>
<tr>
<td>basis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Documentation centre and databases established;</td>
<td>Relevant data accessible and used in course development and promotion;</td>
<td>Quarterly progress reports, list of documents, database files</td>
<td>Adequate IT support</td>
</tr>
<tr>
<td>1.2 One ToT course for ESAMI staff conducted</td>
<td>Up to 6 ESAMI staff trained and involved in further course planning</td>
<td>Report of ToT course</td>
<td></td>
</tr>
<tr>
<td>1.3 Programme promotion initiated by production of flyers, course schedules,</td>
<td>Up to 8 sectors in each of 4 countries approached by ESAMI country officers;</td>
<td>Promotional materials; reports; correspondence files</td>
<td></td>
</tr>
<tr>
<td>and establishment of country contacts</td>
<td>A generic programme and two course flyers for individual courses produced;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 Existing training material adapted to the specific needs of participant</td>
<td>Timely availability of revised training materials;</td>
<td>Printed training materials</td>
<td></td>
</tr>
<tr>
<td>countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5 Two pilot policy seminars planned and implemented;</td>
<td>Seminar programme produced;</td>
<td>Seminar reports</td>
<td>Senior officials attend;</td>
</tr>
<tr>
<td></td>
<td>Seminars conducted;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least 1 participant from 6 sectors and 2 countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 Two pilot courses planned and implemented;</td>
<td>Course programme produced;</td>
<td>Course reports</td>
<td>Each sector releases enough participants; Enough mid-level women professionals available</td>
</tr>
<tr>
<td></td>
<td>Up to 4 participants from 6 sectors trained in 2 countries (total 48, of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>which 50% women);</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1. ToT workshop held for national training institutions (NTI) by ESAMI</td>
<td>At least 4 NTI staff trained from each of 4 countries;</td>
<td>Course reports</td>
<td>NTI staff available for release; NTI wish to participate</td>
</tr>
<tr>
<td>from 4 countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2. Policy seminars held by ESAMI staff in 4 countries</td>
<td>Seminars conducted;</td>
<td>Seminar reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least 1 participant from 6 sectors and 4 countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 ESAMI staff in charge of total course management and running at least 1</td>
<td>At least 24 participants trained in each of 4 countries (50% women);</td>
<td>Course reports</td>
<td>Each sector releases enough participants; Enough mid-level women professionals available</td>
</tr>
<tr>
<td>course in each of 4 countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Situational and needs assessment completed with MoH in at least 6 selected</td>
<td>Needs listed for at least 6 countries</td>
<td>Consultants reports</td>
<td>WHO AFRO facilitates; Guidelines for restructuring EH completed by WHO</td>
</tr>
<tr>
<td>countries</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Description | Indicators | Means of verification | Assumptions
--- | --- | --- | ---
3.2 Essential EH functions in 6 countries defined | EH functions listed for at least 6 countries | Consultants reports | 
3.3 National EH policy and strategy formulated in 6 countries | National focal points and taskforces designated | Taskforce reports and policy/strategy documents | 
3.4 Institutional arrangements created | Objectives and outputs of the arrangement defined | Memoranda of understanding | 

### Activities

<table>
<thead>
<tr>
<th>1.0.1 Establish Joint WHO/ESAMI Steering Committee</th>
<th>Input</th>
<th>Precondition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.2 Establish criteria for country selection and carry out selections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Identify and select documents and resource persons and subsequent administration of databases;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Plan and conduct one Training-of-Trainers course for ESAMI staff;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.1 Design and distribute promotional material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.2 Visit partner countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 Adapt training materials;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.1 Design and plan pilot seminars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.2 Carry out seminars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5.3 Evaluate and follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.1 Design and plan pilot courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.2 Carry out courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.3 Evaluate and follow-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6.4 Monitoring and review of first 2 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1 Select 4 countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.2 Plan and hold ToT workshop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Input**
- ESAMI standard charge per student ($560 per week)
- ESAMI student accommodation
- WHO HQ and AFRO associated staff time
- External consultants and resource persons time
- Travel costs for participants and staff
- Materials and equipment
- Donor funding (specified budget needed)

**Precondition**

- ESAMI standard charge per student ($560 per week)
- ESAMI student accommodation
- WHO HQ and AFRO associated staff time
- External consultants and resource persons time
- Travel costs for participants and staff
- Materials and equipment
- Donor funding (specified budget needed)
<table>
<thead>
<tr>
<th>Description</th>
<th>Indicators</th>
<th>Means of verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.1 Plan and implement seminars for policy makers;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.2 Monitor and evaluate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.1 Plan and hold country courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.2 Monitor and evaluate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4 Review progress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Prepare TOR, plan and perform consultant visits to countries, produce needs assessment report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2 Define essential EH functions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Help formulate country policy and strategy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Help create institutional arrangements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.1 Select countries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.2 Seek other funding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.3 Hold new seminars and courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.4 Monitor and evaluate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0 Final program evaluation and report writing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Changes to institutionalisation plan**

The final purpose of the visit was to work on the draft plan for institutionalisation. We reviewed the existing drafts. The following is suggested.

- Broaden the title from water resource development to all development.
- Build database of regional HIA and EIA experts.

**Programme schedule**

The programme schedule indicates that the first course would start within months of project initiation. This is unrealistic. Initiation should require at least 3 months and the first year budget should be correspondingly smaller.

**Material development**

The output of each training of trainers course should be training material produced locally and based on the DBL/WHO/HIP package. This will ensure local ownership and aid sustainability. The material should include local case studies.

The budget should be amended to include material development with travel, meetings, collection of case studies and their adaptation. SADC will be a good source of case study material.

**Competitive tendering**

Our donors may require ESAMI to bid competitively against other possible regional training institutions for this capacity building contract. In this case, we would have to develop a detailed TOR for them to bid against. The TOR should require a training institution from the region with international as opposed to simply national characteristics. In practice, this may reduce the number of potential bidders to two or less.
Course budget

We reviewed the draft budget with the objective of deciding whether it was cost effective or should be trimmed. We agreed that it should be compared with a recently completed similar project such as the Dutch/SADC Energy and Environment Management Training. This had received a post-project evaluation. This would form part of the ESAMI presentation at our meeting. We decided that the model of capacity building used in that project was inferior to our own and should not be used by us. Our basic plan is still sound and could only be trimmed by reducing the number of countries from 6 to 3. This would not change the cost per country or per student by much.

The basic comparative figure is what ESAMI charges at present: $560 per student per week for tuition plus $400 for subsistence. This figure does not include travel and there may be other hidden costs. Our current aggregate figure is $400,000 per country for about 79 participants or $5000 per participant. If we include only the 48 participants of the 3-week course it is $2777 per student week. This figure includes all travel, training of trainers, pre-course preparation.

More work is required to generate comparative figures.

Course marketing strategy

This issue was not properly addressed before.

- ESAMI should be paid a fee per student trained rather than per staff day. The budget should be changed accordingly. The objective is to provide them with an incentive to attract students. The current rate is $560 per student per week. This would replace the $450 per staff day in current budget.
- Guidelines for student selection would be prepared and agreed in advance, during the initiation phase. The national steering committee would be involved.
- A brochure would be developed, mailshots, newspaper advertising, website advertising on www.esamihq.org.
- A new budget line for marketing would be required that included country visits. Some of this may be covered by the existing budget plan, which needs modifying.
- A possible error was spotted in the existing seminar budget. It does not seem to include ESAMI staff time.
Annex 1

HIA meetings
Arusha, 31 October - 3 November 2000

List of participants

World Health Organization

Mr M. Ali Khan, WHO Regional Office for the Eastern Mediterranean, Centre for Environmental Health Activities, Amman, Jordan
Mr Robert Bos, WHO Headquarters, Geneva, Switzerland
Mr Harry Caussy, WHO Regional Office for South East Asia, Delhi, India
Ms Gisèle Nitcheu, WHO Regional Office for Africa, Harare, Zimbabwe
Mr Paul Roger Tia, WHO Regional Office for Africa, Harare, Zimbabwe

Collaborating Centres / partners

Mr Martin Birley, Liverpool School of Tropical Medicine, Liverpool, UK
Mr Peter Furu, Danish Bilharziasis Laboratory, Copenhagen, Denmark
Mr Joseph Mumba, ESAMI

Unable to attend

Mr Carlos Dora, WHO Regional Office for Europe, Copenhagen/Rome
Ms Patience Kuruneru, African Development Bank, Abidjan, Côte d'Ivoire
Mr Roy Kwiatkowski, Health Canada, Ottawa, Canada
Mr Jim Listorti, World Bank, Washington DC
Ms Julie McLaughlin, World Bank, Washington DC
Mr Jean-Roger Mercier, World Bank, Washington DC
Mr Hisashi Ogawa, WHO Regional Office for the Western Pacific, Manila, Philippines
Ms Vasna Ramasar, CSIR, South Africa
Mr Henri Salas, WHO Regional Office for the Americas, Pan-American Health Organization, Centro Panamericano de Ingeniería Sanitaria y Ciencias de Ambiente, Lima, Peru
Annex 2

AGENDA AND PROGRAMME OF WORK
INTER-REGIONAL MEETING ON HARMONIZATION AND
MAINSTREAMING OF HIA IN THE WORLD HEALTH ORGANIZATION

Day 1

0800 -- 0830 Registration
0830 -- 0900 Official opening
- Welcome address by the Director General of ESAMI
- Welcome address by Robert Bos

INTRODUCTION

0900 -- 0915 Adoption of the agenda,
Objectives of the meeting and expected outputs, Robert Bos
0915 -- 1015 General aspects of EHIA/ HIA, Martin Birley
- Presentation and plenary discussion
1015 -- 1030 Refreshments

PROGRESS OF HIA IN THE WHO REGIONS

1030 -- 1230 Presentations by WHO Regions and Headquarters
AFRO, AMRO, EMRO, EURO, SEARO, WPRO, HQ
Followed by discussions
1230 -- 1400 LUNCH BREAK
1400 -- 1530 Presentations of HIA activities by partners and their view of WHO's role
AfDB, WB, DFID, others
1530 -- 1545 Refreshments

AREAS OF COLLABORATION, SYNERGY AND PARTNERSHIP

1545 -- 1700 General discussion to identify key issues for in-depth discussion
The list below is tentative and subject to discussion and modification
- Awareness creation and strengthening
- Building the capacity of the World Health Organization
- Normative functions: guidelines development, promotion and use
- Technical cooperation with Member States: targeted support applied to national projects, programmes and policies
- Capacity building: policy review, human resources development, institutional strengthening
- Collaboration with development partners: assessment and appraisal of the health impact of large projects
AGENDA AND PROGRAMME OF WORK
(CONTINUED)

Day 2
0830 -- 0900    Wrap-up of the proceedings of the previous day

AREAS OF COLLABORATION, SYNERGY AND PARTNERSHIP
0900 -- 1000    Discussion on HIA in the WHO:
                 the role of the various entities, how to promote awareness
                 and relevant capacity at all levels
1000 -- 1030    Discussion on Guidelines development:
                 one WHO voice on HIA methods and procedures,
                 regional diversity in their context, emphasis and application
1030 -- 1045    Refreshments
1045 -- 1130    Discussion on Guidelines development:
                 one WHO voice on HIA methods and procedures,
                 regional diversity in their context, emphasis and application
1130 -- 1230    Discussion on technical cooperation
                 with Member States on HIA
1230 -- 1400    LUNCH BREAK
1400 -- 1430    Discussion on HIA capacity building in Member States
1430 -- 1530    Discussion on collaborating with development partners in HIA
1530 -- 1545    refreshments

THE WAY FORWARD
1545 -- 1730    - Preparation of a joint Plan of Activities to achieve
                 the objectives and targets set in each of the issues discussed
1730            The meeting is closed
PARTNERSHIP MEETING ON THE INSTITUTIONALIZATION OF HIA CAPACITY BUILDING IN AFRICA

Day 3

INTRODUCTION

0900 -- 0915  Objectives of the meeting and expected outputs, Robert Bos
               Adoption of the agenda
0915 --1000  General aspects of HIA capacity building
               Presentation by Robert Bos and plenary discussion
1000 -- 1015  Refreshments
1015 -- 1200  Presentation on HIA capacity building activities by partners
1200 -- 1230  Presentation by ESAMI on its capacity and experience
1230 -- 1400  LUNCH BREAK

LOGICAL FRAMEWORK

1400 -- 1530  Presentation of the logframe by Martin Birley
               Plenary discussions
1530 -- 1545  refreshments
1545 -- 1700  Completion of the logical framework

Day 4

0830 -- 0900  Wrap up of the proceedings of the previous day
               Facilitator

AREAS OF COLLABORATION, SYNERGY AND PARTNERSHIP

0900 -- 1030  Action Plan: the contents
               Plenary discussion
1030 -- 1045  refreshments
1045 -- 1230  Action Plan: the resources
               Plenary discussion
1230 -- 1400  LUNCH BREAK

THE WAY FORWARD

1400 -- 1530  co-ordinated action in the partnership
1530 -- 1545  refreshments
1545 -- 1700  Expansion to other regions
               Plenary discussion
               Other business
INTRODUCTION
Development projects and policies are transforming the social and physical environment. The impact of this transformation is immense. An environmental impact assessment framework is now in place in many countries and in many donor agencies. But the impact on human health is still not assessed. Many development activities have positive health benefits because poverty is the primary determinant of health and development is aimed at poverty alleviation. Many projects also contain opportunities for additional health improvement. Some have negative impacts which reduce the sustainability of the project, reduce benefit cost ratios through lost production and transfer hidden costs to the health sector. The health budget is often less than 5% of government expenditure. It is the expenditure of the other 95% that must have the greatest impact on human health. But development decisions have traditionally been made without consideration of health risks and benefits.

The solution is to enable environmental impact assessment to evolve so as to include health and social concerns; and to create a procedural framework in which assessments are commissioned and used.

OBJECTIVES OF BACKGROUND PAPER
This background paper has the following objectives:

- To set out the strategic importance and policy context of health impact assessment (HIA) and practical steps required to implement it.
- To suggest objectives for an HIA programme.
- To provide sufficient background material to stimulate discussion and decision-making at a meeting of potential partners.
- To suggest actions required to achieve purpose.
- To prepare an outline contents of the guidelines including audience, scope, audit, reference to literature, method, policy and procedure.
- To include: options for production, timetable, budget outline, routes of dissemination, peer review procedures, methods for soliciting advice and opinion about content.
- To propose a budget, timetable, course material and procedure for institutionalising appropriate training in member countries. This will include advocacy and sensitisation.
- To suggest a research strategy for case studies, economic analysis and designing a statutory framework.

AUDIENCE FOR THIS PAPER
The audience for this background paper are designated WHO programme managers with responsibilities in health impact assessment, and their potential aid partners in a programme of HIA promotion and implementation. Partners are defined as members of the donor community including lending agencies and bilateral aid agencies, and staff of other relevant WHO programmes.

1 Background paper prepared in August 2000 by Martin H Birley. International health impact assessment research group, Liverpool School of Tropical Medicine; views expressed in this paper are the author's and do not necessarily reflect a WHO position on policies and programmes. Martin H Birley asserts the moral right to be identified as author.
HIA DEFINITION AND SCOPE

**Definition**
There are two convenient definitions of health impact assessment. It has been defined as the assessment of the effect of a specific action on the health of a specific population. It has also been defined as the assessment of the change in health risk reasonably attributable to a policy, programme, or project.

**Risk versus well-being model**
These definitions relate to two different models of health assessment. These will be referred to as "the risk model" and the "well-being model". The risk model is concerned with risks to existing health and tends to emphasise reductions in ill-health and opportunities for improved health associated with health determinants. The "well-being" model is concerned with challenges to peoples' health and well-being associated with health determinants.

Both models are based on the broad socio-environmental definition of health espoused by WHO. Further, both models are concerned only with the change in the status quo that is reasonably attributable to a specific development action. The health of communities is always changing as a consequence of many changing factors in the social and physical environment. Many of these are unknown or unplanned.

**Scope**
HIA is concerned with the effect of development on health. The development activity may or may not have an explicit objective to improve health. If there is an explicit objective then health impact assessment is likely to be part of the normal project appraisal process and in principle need not be considered further. Consequently, the primary interest is in projects, programmes, and policies that are initiated outside the health sector. There are exceptions and these include the health impacts of hospital waste management and the occupational safety of health service personnel.

**Health issues**
HIA addresses a broad range of health concerns. One convenient classification is as follows.

- Communicable diseases including malaria, AIDS, respiratory and gastro-intestinal infections.
- Non-communicable diseases, including acute and chronic poisoning from hazardous chemicals and minerals, cardio-vascular and respiratory disease.
- Nutritional problems including protein-energy and micro-nutrient deficiencies.
- Injuries such as those that are occupational and traffic-related.
- Psychosocial disorders such as those associated with suicide, depression, communal violence, fear of crime, social disintegration and loss of well-being.

**Stakeholders**
There is great concern about the distributional effects of development. Neither benefits nor risks are shared equally among all stakeholders. Risk taking is either voluntary or involuntary. Principles of equity and community participation should be applied. There are a number of tools that can be used to ensure community participation and health impact assessment is one of them.

**Boundaries**
HIAs must set geographical and temporal boundaries. These include downstream effects, cumulative effects and all stages of the project cycle. The impacts of a project can be spread over great geographical distances by the movement of people and materials. They can be spread over future time as far as the decommissioning or rehabilitation stages.
Urban versus rural and industrial versus non-industrial projects

HIA has to be applied in a wide range of different settings. These vary from rural natural resource projects to urban industrial projects. Similar generic principles apply irrespective of the technical content or setting.

Prospective versus retrospective

HIA may be applied retrospectively to observe, record, monitor and manage the impacts of a project that is being or has been implemented. This is the realm of normal science. However, the objective is prospective assessment of projects, programmes and policies at the planning stage. At this stage no changes have yet occurred to the physical or social environment and so there is little to observe and record other than baseline conditions. The procedures and methods required for prospective assessment differ from standard scientific practice. They include general management principles such as quality assurance and consensus and more varied sources of evidence than those traditionally admitted in science. The definition and use of evidence is more akin to the legal process.

Procedures versus methods

The main purpose of the assessment report is to provide an instrument for use in negotiations between different sectors during the planning stage. To this end, it should include recommendations for options that safeguard and improve health while benefiting the project objectives. The steps required can be separated into procedures and methods. The procedures are similar to those used in any form of assessment. They include screening, scoping, setting Terms of Reference, identifying assessors, appraising the report to assure quality, negotiating, monitoring and implementing. The methods are subject to many debates. The system proposed is based on the risk model. In this model, development may change contextual determinants of health and this, in turn, may change the risk of specific health outcomes. The assessment seeks evidence of which health determinants will change and the direction of that change. The method is qualitative rather than quantitative and should not be confused with an accurate forecast of the future. Indeed, it is counter-factual: the assessment seeks to change the project plans and operations so that forecasted negative impacts do not occur. The primary concern is not accuracy but rapidity, simplicity and structure. The very process of asking project proponents “could this project have health impacts?” is probably enough to change the outcome. The primary determinants of health include poverty and income distribution. Therefore, a project which reduces poverty will have positive health impacts. In this model, procedural issues are more important that methodological issues.

Independent quality assurance professional body

Most professional activities are overseen by a professional body that represents a peer group of specialists. There is a need for such an independent agency that can appraise completed health impact assessments on behalf of governments or aid agencies and assure their quality. One important question in this context is whether quality assurance is synonymous with auditing.

Determinants of health

There are probably about 50-100 primary determinants of health that should be considered during a health impact assessment. They can be divided into broad categories such as social and environmental determinants. A more detailed classification includes: individual/family factors such as immunity, poverty and behaviour; physical, social and economic environment factors such as clean water, sex trade, employment opportunities; and institutional factors, such as medical provision. Guidelines for health impact assessment need to provide practical categories and examples of how determinants may be affected by development.

Community participation

We must hypothesise that increasing empowerment and reducing uncertainty are themselves improvements in health determinants and so contribute to improvements in health outcomes. Increasing real, informed community participation in project planning and operation is an accepted requirement of EIA, although frequently still not implemented. It should be a recommendation for mitigating health impacts and could be included in the terms of reference used to commission HIA.
Forms of evidence
The method of health impact assessment is to make use of existing secondary sources of data, key informants and community participation in order to assess the changes in health determinants associated with the project.

Maps and mapping
The assessment will have both temporal and geographic components. Existing maps will clearly provide a vital source of general data regarding the geographical component. These maps will locate the project in a specific topographical and ecological setting. They will indicate the existing administrative boundaries, health centres, schools, water supplies, communication routes, villages and towns. All this information will have a bearing on the health impact assessment. In theory, it can all be overlaid and analysed to determine new problems and new solutions. The overlay process is complex and can be long-winded and may not fit within the time or resource constraints of a health impact assessment.

In some cases, the assessment will make use of remotely sensed mapping data originating from aerial surveys or from satellite observations. The suitability of such data will depend on the scale of resolution and the purpose. For example, it is generally not appropriate to visualise a small irrigation project from space. In addition, it should be remembered that the assessment is concerned with future changes in the environment and not simply with the existing state of the environment.

As HIA is adopted as a routine tool it will generate its own demands for standardised mapped information. The growing technologies of GIS and RS may then respond by providing information in that format.

Economics
Many development decisions are made primarily on the basis of a rational cost-benefit or cost-effectiveness analysis. If this is accepted, then health impact assessments must be presented in an economic context. However, until fairly recently economic analyses were restricted to a limited number of measurable components. It is now recognised that the economic assets of poor communities can be categorised as five different forms of capital. These are referred to as natural, financial, physical, human and social. Considering how human health affects and is affected by these five forms of capital can form one possible model of HIA in an economic context. Table 1 associates capital with examples of health determinants. In this model, projects may change capital by changing health determinants or vice versa.

Table 1 Example of possible association of health determinants with the five forms of capital in relation to natural resource projects (Birley, unpublished)

<table>
<thead>
<tr>
<th>Type of capital and definition</th>
<th>Examples of associated health determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural capital:</strong> the natural resource stocks from which resource flows useful for livelihoods are derived</td>
<td>Environmental health determinants such as natural vector breeding sites, animal herds, drinking water sources and waste water sinks, food supplies, distance of travel for wild food and fuel collection</td>
</tr>
<tr>
<td><strong>Financial capital:</strong> the financial resources which are available to people and which provide them with different livelihood options</td>
<td>Treatment seeking behaviour, medicine purchases, food security; purchasing barriers to infection, insurance, reserves to counter lost production associated with illness; remittances from outside</td>
</tr>
<tr>
<td><strong>Physical capital:</strong> the basic infrastructure and the production equipment and means which enable people to pursue their livelihoods</td>
<td>Drinking water delivery, communication routes, health centres, man-made vector breeding sites, machinery, diversionary structures, irrigation systems; housing quality</td>
</tr>
<tr>
<td><strong>Human capital:</strong> the skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies</td>
<td>Good health, freedom from fear, pain and suffering, well-being, educational achievement, empowerment of women and minorities; capacity and capability of personnel in institutions responsible for protecting health including health centres; health promoting knowledge, beliefs, attitudes and behaviours; seasonal work migration</td>
</tr>
<tr>
<td><strong>Social capital:</strong> the social resources (networks, social claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring co-ordinated actions</td>
<td>Conflicts over traditional water, wild foods and land rights leading to traumatic injury, malnutrition and uncertainty; distributional mechanisms</td>
</tr>
</tbody>
</table>
**Links to other forms of assessment**

Health impact assessment has links to environmental impact assessment (EIA) on one hand, and social impact assessment (SIA), on the other. One reason for this link is that health has environmental and social determinants. The question then arises: should HIA be developed as a separate activity or should it be subsumed within EIA or SIA?

**Fragmentation**

HIA is by nature holistic and unifying. It addresses the linkages between development, environment, health and society. It asks how one action can affect another. However, as the concept of HIA has slowly gained ground among different agencies and divisions, a process of fragmentation has started. In this connection, issues include:

- Is it sensible to have a separate assessment procedure for single diseases such as malaria and AIDS? To do so is to pre-judge the outcome of the assessment. The assessment should focus on the project and one of the conclusions should be a prioritisation of the important health impacts of the project. The priorities will vary with each project and should be formed from consultation with all the major stakeholders.

- Should occupational health impacts be separated from the health impacts on other stakeholders? This separation can occur because occupational health is often the responsibility of labour ministries rather than health ministries.

- Is there a difference between environmental health impact and simply health impact assessment? The addition of "environmental" leads to the pre-judgement of whether social or environmental determinants have the major role in mediating the health impacts of a project. This judgement should be a conclusion of the assessment and will vary with each project assessed.

- Should social and environmental determinants of health be given equal weight or not?

**Uncoupling**

Experience suggests that the procedure and method of health impact assessment can be uncoupled from the specific technical content of the policy, programmes or project to which it is applied. If this is accepted, then a single and unified approach can be adopted for rural or urban, industrial or non-industrial projects and for projects where the priority health concerns range from malaria, on the one hand, to industrial pollution related diseases on the other. There will, of course, always be the need for an input of technical expertise and this can be obtained by employing the right consultant and interviewing the right key informant. The advantage of this approach will be that a single approach can be promoted in all regions and by many donor agencies.

**Policy, programme and project**

HIA may be applied at three main levels: policies, programmes and projects. In the past, the emphasis has been on projects. When there are a large number of small projects it is more realistic to undertake a strategic health impact assessment of a whole sector or of a programme. In the European context there is a preference for HIA of government policies. Examples include a policy of road transport or agricultural subsidy.

**Legislation**

There is no legislative requirement for HIA in most, perhaps all, countries. Specific research is needed to establish a legislative framework and this will require the appointment of a consultant with specific skills. The legislation would presumably have to decide whether a project met satisfactory criteria for safeguarding health. This can be achieved by setting targets and thresholds for health determinants.
**Targets and thresholds**

Some health determinants can be specified numerically and then it may be possible to establish acceptable thresholds. For example, levels of consumption of hazardous chemicals are determinants of health. It is common practice to set acceptable threshold doses for hazardous chemicals. The objective is clearly to safeguard health and the link between health determinants and health outcomes is relatively clear. In many cases, health determinants cannot be specified numerically or the link between health determinants and health outcomes is complex. In these cases, it may be more appropriate to specify standards that projects should achieve. For example, “there should be sustained and continuing improvement in the health of all women”. A project could then be judged according to how it affected such targets.

**POLICY CONTEXT**

The policy climate is ready for an initiative that raises the profile of HIA.

- The OAU Harare Declaration on malaria control (1997) calls for the EIA and HIA of all new development in Africa.
- The European Community Treaties of Maastricht and Amsterdam (article 152, 1999) call for healthy public policy.
- The UK government issued a policy statement calling for health impact assessment of national and local public policy (July 1999).

**OTHER INITIATIVES**

The following review is intended as a starting point for further reporting and documenting of new and on-going activities and is necessarily incomplete; several other initiatives are probably underway.

Draft Guidelines or other initiatives associated with HIA are in preparation or use in EMRO, PAHO, EURO, SEARO and WPRO. There has also been a programme of work in Geneva. In WPRO, EMRO, PAHO and Geneva the principal focus appears to have been the physical environment and the health consequences of industrial pollution. In EURO, by contrast, the principle focus seems to be healthy public policy and the social determinants of health including income inequalities. SEARO has held a regional HIA consultation that focused on vector-borne diseases. WHO HQ produced a submission to the World Commission on Dams (WHO, 2000), which is expected to be included into the best practice section of the Commission’s report.

The World Bank Environmental Department has incorporated an Update to its Environmental Sourcebook entitled “including health in environmental assessment” (Birley et al. 1997). In 1999 the malaria team of the Africa section in the Population, Health and Nutrition Department of the Bank held a consultation on infrastructure and malaria as part of its Roll Back Malaria activities. This recognised the need to ensure that new infrastructure developments for which the Bank provided loans did not increase malaria risks and the role of health impact assessment in that process. There are probably other initiatives in the Bank associated with social assessment, inequalities assessment and healthy public policy. Environmental health impact assessment guidelines are under preparation in the Bank.

Individual countries that are known to have environmental health impact assessment initiatives include Philippines, Canada, Australia, New Zealand and there are probably others. The United Kingdom has recently established a policy of health impact assessment of internal policies with particular emphasis on social determinants. The position in the UK Department for International Development is unclear. For example, there is a requirement for health division projects to consider environmental impacts but no requirement for environmental division projects to consider health impacts.

---

2 These guidelines were meanwhile published and the reference is as follows: Listorti, J. and Doumani, F., 2001. Environmental Health: bridging the gaps. *Discussion paper no. 422*, World Bank, Washington DC
impacts. However, some initiatives of the environmental division do include health impact. There is a growing interest in Canada associated both with internal policies and external assistance. Workshops, seminars and training courses have been held in several countries in the African region including Zimbabwe, Tanzania, Ghana, Malawi, Kenya and Benin under the auspices of WHO/PEEM. Actual health impact assessments have been undertaken by national or international consultants for a range of large projects, especially dams. These have usually been add-ons to Environmental Impact Assessments but have created pockets of expertise in South Africa, Senegal and Kenya.

Workshops, seminars and training courses have also been held in countries in other WHO regions including Ecuador, Egypt, Syria, Yemen, Jordan, Pakistan, India, Honduras, Singapore and Malaysia. WPRO has been active in holding seminars in other countries of that region. There appears to be no mechanism in WHO to collate and record the relevant initiatives of all the regions or indeed all the divisions of the Organization. The African Development Bank has a growing interest in health impact assessment. The Southern African Development Bank has an active Environmental Impact Assessment group but had not focused on human health as recently as August 1999. In the Asian region, the Asian Development Bank has a well-established Environmental Division and published Guidelines on health impact assessment (Birley 1992). Enquiries during 1997 indicated that there had been no specific evaluation of the use to which these Guidelines had been put and there was no indication that capacity building had occurred with respect to health impact assessment. However, members of the steering committee associated with those guidelines from WPRO had used the opportunity to promote further work in the Philippines and this led to the production of country specific guidelines with an industrial focus. Informal enquiries have been received from the Inter-American Development Bank.

**PROBLEM TREE**

Once it has been accepted that there is a widespread need for health impact assessment, it will be necessary to map out the tasks that must be accomplished and the constraints that must be overcome in order to deliver a widespread capacity building effort for health impact assessment. Some of these are presented in the accompanying problem tree (see Figures 2 and 3). These figures summarise some of the tasks that must be accomplished. The intention of the HIA project is to turn each problem into a solution.

For example, in order to ensure adequate health safeguards and mitigations in development projects there is a requirement for a health impact assessment procedure at development agency and client government level. This depends on available skills and an enabling environment. In order to ensure the skills are available there is a need for training courses and opportunities for intersectoral communication. These training courses must run regularly and slowly increase the pool of expertise in the country or agency. In order to ensure that they are run regularly they must be institutionalised in a local training institution. Local training institutions require support to achieve this in the form of training materials and training of trainers.

As a further example, the civil servants that are trained must be enabled by their managers to make use of new skills.

**Capacity building**

In brief, capacity building consists of:

- Policy seminars to sensitize senior managers and advocate change;
- Training courses to build knowledge of method and procedure;
- Dissemination;
- Institutionalisation to enable self-sustaining training in institutions and countries/regions;
- Case studies and research to build specialist skills;
Policy seminars
Policy seminars last 1-5 days and are aimed at busy senior staff. They introduce an overview of the need for HIA and provide a system of managing implementation by explaining a set of procedural tools. Experience has been gained of such seminars in many countries including Jordan, Egypt, Syria, Yemen, Malawi, Zambia, Zimbabwe, Benin, United Kingdom, Singapore, Malaysia and Ecuador.

Training courses
We can build on the experience of the DBL/PEEM/HIP initiative. Five courses have been piloted and each lasted 18 days and brought together 24 participants from 6 different sectors. The courses were based on small-group task-based training methods. A set of training materials was developed and awaits publication. The following is a summary of the aims and objectives of the piloted training course (Furu, Birley, Engel and Bos, 1999). There were six Tasks, each lasting about two-three days.

Task 1 - constructing a comprehensive development-planning framework
Aims: to describe the project planning procedures in the country and to identify mechanisms for coping with otherwise unforeseen effects.

<table>
<thead>
<tr>
<th>Learning objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To produce a table indicating the main stages of project cycle, the responsibilities of each ministry and the mechanisms for dealing with unexpected and unintended effects.</td>
</tr>
<tr>
<td>To indicate what the table should look like for key categories of water resources development projects in the country.</td>
</tr>
<tr>
<td>To emphasise the need for and potential of impart assessment.</td>
</tr>
</tbody>
</table>

Task 2 - health impact assessment, a preliminary step
Aims: to determine if an in depth health impact assessment is necessary and to convince government by reasoned argument.

<table>
<thead>
<tr>
<th>Learning objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To identify health hazards associated with a given development project.</td>
</tr>
<tr>
<td>To illustrate that development projects can change health risks.</td>
</tr>
<tr>
<td>To illustrate that development plans and operations can be modified to promote health.</td>
</tr>
<tr>
<td>To provide a simple method for assessing health impact and gain first hand experience of its use.</td>
</tr>
<tr>
<td>To illustrate the types of intervention that may be required to protect and promote health.</td>
</tr>
</tbody>
</table>

Task 3 - appraisal of a health impact assessment report
Aims: to learn how to evaluate critically a health impact assessment report of a development project made by a consultant and to recommend acceptance or rejection.

<table>
<thead>
<tr>
<th>Learning objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>To recommend whether to accept or reject the consultant's report and provide an adequate justification of the decision.</td>
</tr>
<tr>
<td>To decide if the report conformed to the terms of reference and whether these were adequate.</td>
</tr>
<tr>
<td>To determine whether the report had important biases and traps.</td>
</tr>
<tr>
<td>To decide whether the data and their interpretation were sufficient to support the conclusion.</td>
</tr>
<tr>
<td>To decide whether the recommendations made in the report were sufficient to support the conclusion.</td>
</tr>
</tbody>
</table>
Task 4 - appraisal of the recommendations of a health impact assessment report

Aim: to appraise the technical, social and economic aspects of the recommended options for interventions, in the larger context of the project's overall evaluation.

Learning objectives
To understand the language of technical, social and economic analysis.
To decide what kind of analyses of health impacts had been or could be made.
To identify what the technical options for interventions are, and whether their costs and financial benefits have been effectively addresses in the recommendations, and to appraise their validity.
To assess what health effects had been included.
To compare social and net economic costs of different strategies to manage health outcomes.
To decide if the assumptions made were realistic.

Task 5 - generic terms of reference for a health impact assessment

Aim: to extrapolate from the experience of the previous tasks the general rules and requirements for a health impact assessment.

Learning objectives
To list the components of a generic terms of reference for a health impact assessment.
To define the optimal pre-conditions and requirements for an acceptable health impact assessment.
To specify the expected output of the assessment.

Task 6 - interventions and monitoring: a plan for intersectoral action

Aim: to enable participants to debate and resolve conflicts that could arise between collaborating ministries regarding responsibilities and financial commitments.

Learning objectives
To formulate an intersectoral plan of action for the implementation of recommendations concerning health.
To agree on a Memorandum of Understanding specifying responsibilities, logistics, resource sharing and allocation of funds between the Ministry of Health and the other ministries involved.
To agree on plans for Project monitoring, including a list of health indicators that should be measured.

Institutionalisation

The next step is to institutionalise the course within a region/country so that it can run without an international faculty. First steps towards this end have been taken through consultation with the East and Southern African Management Institute (ESAMI) based in Tanzania.

Choice of ESAMI

Our experience of running five technical training courses in different countries has led us to understand some of the problems of institutionalisation. National Training Institutes (NTI’s) tend to be government owned, have relatively little international experience and tend to have a reactive rather than proactive approach to adopting new training courses. ESAMI, by contrast, is privatised and must survive by actively seeking new markets and satisfying new clients. Its staff does have both international experience and experience of working with the NTI’s. They are well-placed to take on a new course, promote it in the region and try to solve the problems of national institutionalisation. Moreover, ESAMI has no specific sectoral affiliation, which reflects the intersectoral nature of this
capacity building package and avoids the image of special pleading by one particular sector. ESAMI is linked to a network of national institutions for capacity building in public administration and management in East and southern Africa.

**Project schedule**

In each country, a cycle of activity would be covered that included:

- a policy level seminar (4 days, 15 participants);
- a training of trainers course (14 days, 16 participants);
- two technical training courses (18 days, 24 participants each);
- an action plan consultancy (7 days);
- evaluation.

The objective would be to create a policy level demand for capacity building; provide the means for capacity building and then create the empowering environment in which health promotion can occur. Two technical training courses would be included per country. This is the course that we seek to make self-sustaining. The other activities contribute to this objective. By holding two courses we increase the likelihood of the course being repeated in future years. This will also reduce the gross costs per course. The second course will be held five months after the first course.

In order to save on international travel costs, the seminar, TOT course and technical course would take place back-to-back.

In a three to five year period (depending on the level of support for co-ordinating staff), the cycle would be repeated at least in five countries.

**Costs and benefits**

The initial budget calculation per country is reproduced below and indicates $400,000. This purchases nine weeks of capacity building plus various meetings and related work. A total of 79 participants would have attended one or other courses and the national capacity to sustain the course would have increased and an improved planning procedure would be in place.
Schedule for a series of capacity building courses.
The letters a,b,c,d,e represent courses in different countries. The first two project years (PY) are indicated to illustrate the cycle.

<table>
<thead>
<tr>
<th>Months</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material development</td>
<td>xxx</td>
<td>xxx</td>
<td>xxx</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steering comm.</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project management comm.</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National organising comm.</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-seminar visit</td>
<td>a</td>
<td>x</td>
<td>b</td>
<td>x</td>
<td>c</td>
<td>x</td>
<td></td>
<td>d</td>
<td>x</td>
<td>e</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOT course</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech. training course 1</td>
<td>a</td>
<td>aa</td>
<td>bb</td>
<td>b</td>
<td>cc</td>
<td>c</td>
<td>dd</td>
<td>d</td>
<td>ee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech. training course 2</td>
<td></td>
<td>aa</td>
<td>a</td>
<td>bb</td>
<td>b</td>
<td>cc</td>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action-plan consultancy</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database acquisition</td>
<td>xxx</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detailed schedule of activities per country
This schedule is based on assuming back-to-back meetings and 2 technical courses per country. The codes are: d=days, w=weeks, m=months.

| Project management committee meeting | 3 d | | | | | | | | | | | | | | | | | | | | | | | | | |
| National organising committee meeting | 3 d | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pre-seminar visit | 3 d | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gap | 4 w | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminar | 5 d | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOT course | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical course | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gap | | | | | | | | | | | | | | | | | | | | | | | | | |
| Action-plan consultancy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gap | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second training course | | | | | | | | | | | | | | | | | | | | | | | | | |
## Indicative budget for institutionalisation, (US$) per country

<table>
<thead>
<tr>
<th></th>
<th>Pre-course visit</th>
<th>Seminar</th>
<th>TOT</th>
<th>Tech course</th>
<th>Steering comm</th>
<th>Organising comm</th>
<th>Project manage comm</th>
<th>Action plan consultancy</th>
<th>Management</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>People cost per activity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESAMI staff</td>
<td>1,800</td>
<td>3,000</td>
<td>8,400</td>
<td>12,600</td>
<td>3,600</td>
<td>3,600</td>
<td>3,600</td>
<td>6,000</td>
<td>12,000</td>
<td>54,600</td>
</tr>
<tr>
<td>European staff</td>
<td>0</td>
<td>3,000</td>
<td>8,400</td>
<td>12,600</td>
<td>1,800</td>
<td>0</td>
<td>1,800</td>
<td>0</td>
<td>0</td>
<td>27,600</td>
</tr>
<tr>
<td>National staff</td>
<td>1,500</td>
<td>2,500</td>
<td>7,000</td>
<td>10,500</td>
<td>4,500</td>
<td>4,500</td>
<td>3,000</td>
<td>1,500</td>
<td>0</td>
<td>35,000</td>
</tr>
<tr>
<td>Participants</td>
<td>0</td>
<td>12,107</td>
<td>36,160</td>
<td>81,360</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>129,627</td>
</tr>
<tr>
<td>Non-expert tutors</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6,300</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6,300</td>
</tr>
<tr>
<td>Local resource persons</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12,600</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12,600</td>
</tr>
<tr>
<td>Secretary</td>
<td>0</td>
<td>250</td>
<td>700</td>
<td>1,050</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>250</td>
<td>2,250</td>
</tr>
<tr>
<td><strong>TOTAL staff per activity</strong></td>
<td>3,300</td>
<td>20,857</td>
<td>60,660</td>
<td>137,010</td>
<td>9,900</td>
<td>8,100</td>
<td>8,400</td>
<td>7,500</td>
<td>12,250</td>
<td>267,977</td>
</tr>
</tbody>
</table>

|                      |                 |         |     |            |               |                 |                   |                        |            |        |
| **Travel, back-to-back model** |             |         |     |            |               |                 |                   |                        |            |        |
| International airfares| 1500           | 1       | 2   | 0          | 1             | 3               | 2                 | 0                      | 1          | 0      |
| No. of Local travel  | 200             | 2       | 18  | 17         | 37            | 6               | 5                 | 2                      | 2          | 0      |
| **TOTAL travel per activity** | 1,900          | 6,600   | 3,400| 8,900      | 5,700         | 4,000           | 400               | 1,900                  | 0          |        |

|                      |                 |         |     |            |               |                 |                   |                        |            |        |
| **Recurrent costs**  |                 |         |     |            |               |                 |                   |                        |            |        |
| Library books        | 0               | 0       | 1000| 0          | 0             | 0               | 0                 | 0                      | 0          | 0      |
| Communication        | 200             | 400     | 100 | 400        | 100           | 100             | 100               | 100                     | 400        |        |
| Printing             | 100             | 50      | 100 | 100        | 100           | 100             |                   |                        | 100        |        |
| Room rent            | 1000            | 2000    | 2000| 2000       |                |                 |                   |                        |            |        |
| Field visits         | 0               | 430     | 1020|            |                |                 |                   |                        |            |        |
| Action plan dinner   | 0               |         |     |            |                |                 |                   |                        | 300        |        |
| **Total recurrent per activity** | 300             | 1450    | 3630| 3520       | 100           | 100             | 100               | 800                     | 0          |        |

**Dissemination**

In addition to building capacity through on-site training courses there is a need to consider other pathways. These include publication of a training manual and distance learning courses based on websites.

**Case studies and research**

Short training courses are not sufficient to build the specialist skills required to undertake HIA. We envisage that civil servants will generally wish to commission assessments from specialists in universities or consultant companies. These specialists require training for a minimum of 3 months
and preferably 3 years. During a period of 3 months they can undertake one case study and report it. Such case study reports can form the example of good practice that subsequent assessments follow. There are still many issues associated with HIA that require research and these include economic analysis and development of model statutory frameworks. This can be accomplished by secondment of nationals to suitable centres through regional scholarships or donor support.

GUIDELINES

Do we need more Guidelines?
This project was initiated by a suggestion that AFRO should disseminate Guidelines on HIA in Africa. An important point to note here is that publication of guidelines is only a first and perhaps least important step in a process of HIA implementation. We have had considerable experience of guidelines and they are probably only useful as a component of the teaching material provided in courses on HIA. There is a real risk of believing that publication of Guidelines completes a programme. The emphasis should be elsewhere: on the implementation of procedures and the building of capacity.

Outline of Guidelines
Production of any additional guidelines by WHO should ensure consistency and compatibility. As a first step in the process, it is recommend that the points raised above and listed below are considered.

Purpose of Guidelines and target audience
The purpose of the Guidelines requires careful definition. The audience for the Guidelines should be civil servants in the health and other sectors of Member State/client country administrations. The Guidelines will need translating into several different languages.

Format of Guidelines
The format of the guidelines should be user friendly and accessible to a lay audience. It should be as short as possible and should not try to provide training in HIA methods.

Steering committee and regional meeting
A steering committee should be appointed to oversee the work. This could have representatives from the major partners and from clients and civil society. A regional meeting would be required so that member states could comment on a draft of the Guidelines and discuss whether it met their own needs.

Dissemination
The Guidelines should be attractively printed with illustrative photographs and widely disseminated. The Internet should be used as one means of dissemination. The Internet provides a useful method of developing consensus about an approach or document. Drafts are circulated and requests for comments are made using email and listservers. However, this only seems to work if an active group of listserver contributors can be created and this requires a substantial investment of staff-time.

STATUTORY FRAMEWORK AND REGULATIONS
The final stage of the programme will be the design and promotion of a statutory framework for health impact assessment. This can probably be modelled on the Environmental laws, bye-laws and regulations that have been enacted in many countries. One step in the process is to critically review such laws and to indicate where they can be strengthened. Regulation is available through two mechanisms. First, there is the Environmental Impact Assessment framework that is under the responsibility of an environmental agency or authority. Its
duty is to regulate new large projects that may transform the physical environment. In order to manage its workload, it may have to move upstream to the regulation of planning policy. For example, the cumulative effect of many small projects (e.g. small dams) may be more harmful to the environment and to human health than one large project of the same type.

Second, there is the town planning that is under the responsibility of municipal authorities. Such authorities are theoretically responsible for land zonation and the provision and maintenance of infrastructure. In practice, they are often overwhelmed by rapid urbanisation and the effects of the free market. As a consequence, sub-optimal decisions are made, such as the unsuitable location of sewage treatment plants.

Another approach to regulation may be to set standards for the determinants of health. The health targets set by WHO/EURO provide an example, see figure 1.

**Figure 1 Examples of health targets from WHO Europe**

<table>
<thead>
<tr>
<th>Target</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target 1. Equity in health</strong></td>
<td>The differences in health status between countries and between groups within countries should be reduced by at least 25%, by improving the level of health of disadvantaged nations and groups.</td>
</tr>
<tr>
<td><strong>Target 2. Health and quality of life</strong></td>
<td>All people should have the opportunity to develop and use their own health potential in order to lead socially, economically and mentally fulfilling lives.</td>
</tr>
<tr>
<td><strong>Target 3. Better opportunities for people with disabilities.</strong></td>
<td>People with disabilities should be able to lead socially, economically and mentally fulfilling lives with the support of special arrangements that improve their relative physical, social and economic opportunities.</td>
</tr>
<tr>
<td><strong>Target 4. Reducing chronic disease</strong></td>
<td>There should be a sustained and continuing reduction in morbidity and disability due to chronic disease in the Region.</td>
</tr>
<tr>
<td><strong>Target 5. Reducing communicable disease</strong></td>
<td>There should be no indigenous cases of poliomyelitis, diphtheria, neonatal tetanus, measles, mumps and congenital rubella in the Region and there should be a sustained and continuing reduction in the incidence and adverse consequences of other communicable diseases, notably HIV infection.</td>
</tr>
</tbody>
</table>
Figure 2 Solution tree - with health impact assessment

Benefits

Health risks reduced as a result of development

Upstream actions

Opportunities taken for health improvement

Health hazards of existing projects well evaluated

Project monitoring normal

Health impact assessment standard

Technical skills to design and operate health safeguards

Budget for health safeguards and improvements always included

Institutional capacity built

Sufficient staff trained

Procedures incorporated

Enabling environment

Curriculum standardised

Intersectoral communication skills common

Institutional requirements

Empowerment of project officers

Sensitization seminars completed

Many resources for concept development

Policy framework

Sustainable projects

Educational improvement

Productivity gains

Benefits to the health sector

Longevity and quality of life

Value of non-medical interventions well appreciated by health sector

Productivity gains

Health hazards of existing projects well evaluated

Opportunities taken for health improvement

Institutional capacity built

Training courses running

Training materials disseminated

Curriculum standardised

Intersectoral arrangements

Institutional requirements

Empowerment of project officers

Sensitization seminars completed

Many resources for concept development

Political will

Technical skills to design and operate health safeguards

Budget for health safeguards and improvements always included

Empowerment of project officers

Sensitization seminars completed

Many resources for concept development

Political will
Figure 3 Problem tree - without health impact assessment

Health risks increase as a result of development

Causes

Inadequate health safeguards and mitigations

No technical skills to design or operate health safeguards

No budget for health safeguards and improvements

No available skills

Inadequate health impact assessment procedure

Health hazards of existing projects not evaluated

No project monitoring

No training courses

No intersectoral communication

No training of trainers

No training materials

No curriculum

No training institutions

No intersectoral arrangements

Value of non-medical interventions not appreciated by health sector

No institutional requirement

No empowerment of project officers

No sensitization seminars

No resources for concept development

No policy framework

Lost productivity

Educational impairment

Hidden costs to health sector

Death and disability

Project not sustainable

Health impact assessment

Inadequate health safeguards and mitigations

No enabling environment

Hidden costs to health sector

Lost productivity

Educational impairment

Hidden costs to health sector

Health hazards of existing projects not evaluated

No project monitoring

No training courses

No intersectoral communication

No training of trainers

No training materials

No curriculum

No training institutions

No intersectoral arrangements

Value of non-medical interventions not appreciated by health sector

No institutional requirement

No empowerment of project officers

No sensitization seminars

No resources for concept development

No policy framework

No political will

Causes

Missed opportunities for health improvement

Health hazards of existing projects not evaluated

No available skills

Inadequate health impact assessment procedure

Health risks increase as a result of development

Effects
BIBLIOGRAPHY

See also www.liv.ac.uk/~mhb a website on health impact assessment with downloadable documents and links.


Annex 4
ANNEX 5
World Bank Development Market Place Event

Proposal
Acting upstream:
averting adverse impacts of development on health

Keywords:

<table>
<thead>
<tr>
<th>Issue-Keywords</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting good government</td>
<td></td>
</tr>
<tr>
<td>Combating corruption</td>
<td></td>
</tr>
<tr>
<td>Developing legal and judicial systems</td>
<td></td>
</tr>
<tr>
<td>Strengthening financial and regulatory systems</td>
<td></td>
</tr>
<tr>
<td>Insulating the poor from crises</td>
<td></td>
</tr>
<tr>
<td>Using information technology for development</td>
<td></td>
</tr>
<tr>
<td>Encouraging private sector development</td>
<td></td>
</tr>
<tr>
<td>Addressing cross-border/globalization challenges</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Indigenous communities</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area keywords</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>North Africa/Middle East</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>South Asia</td>
</tr>
<tr>
<td>East Asia/Pacific</td>
<td>Latin America/Caribbean</td>
</tr>
<tr>
<td>All</td>
<td></td>
</tr>
</tbody>
</table>

Proposal:

In describing your proposal to the final jury, please answer the following questions with as much focus as possible, and with as much concrete detail as the word restriction allows, to the best of your knowledge at this time. Please submit your answers in English, and please do not exceed the word allotment.

1. DESCRIBE YOUR IDEA? WHAT ARE YOU TRYING TO ACHIEVE?

   Health Impact Assessments (HIAs) seek to identify and mitigate increased health risks associated with development initiatives (e.g., HIV/AIDS related to transport, malaria related to dams).

   The idea is to demonstrate to countries and development institutions how they may incorporate HIAs in development planning; incorporate health risk management in project implementation; strengthen their capacity to apply HIA through regulatory and legal mechanisms; mainstream HIA in regulatory frameworks of African governments and development institutions; refine criteria for undertaking HIAs; and institutionalise HIA capacity building regionally and nationally.

   This will achieve increased development effectiveness; greater appreciation for the multisectoral aspects of health development; a more equitable distribution of development benefits; health gains; reduced household health expenditure; and increased national control over the development process.

   While initially emphasising the African Region, the experience has relevance world-wide.
2

**DESCRIBE YOUR ACTION PLAN, AND GIVE A TIME-LINE. WHAT ARE THE MAJOR STEPS ON THE DEVELOPMENT PATH, AND WHEN WILL THEY OCCUR?**

(1) Pilot-test HIA procedures/methods within development planning for their feasibility, practicability, relevance and effectiveness (1\(^{st}\)-4\(^{th}\) Quarter).

(2) Organise:
- Partnering Institutions workshop to define benefits and costs of upstream action to promote health (1\(^{st}\) quarter),
- *For WHO* consultation to mainstream HIA in the Organization (2\(^{nd}\) quarter),
- *For development institutions* (2\(^{nd}\) quarter), and *for governments in the region* (3\(^{rd}\) quarter) policy seminars to establish HIA criteria, procedures, and enabling policy frameworks.
- regional training of trainers workshop as a basis for a comprehensive, country-level capacity building proposal (3\(^{rd}\) quarter),

(3) Disseminate/market HIA tools to countries and development institutions (1\(^{st}\)-4\(^{th}\) Quarter).

3

**IN WHAT WAY WILL THIS IDEA BE INNOVATIVE? POINT TO ANY EXISTING SIMILAR ACTIVITIES/PROGRAMS THAT YOU ARE AWARE OF, AND NOTE THE CRUCIAL DIFFERENCES?**

HIA implies a paradigm shift from reactive to proactive health investments, addressing health concerns further upstream. It has the potential to revolutionize the health development perspective, with a longer-term view of environmental and social health determinants. HIA can ensure that infrastructure and agriculture projects do not increase health risks across the board.

The technology-driven health sector focus on curative services is giving way to a renewed appreciation of risk identification, mitigation and prevention. The environment sector sets the example. EIA institutionalisation is well underway. EIA aims to avert environmental risks, but seldom considers health as a cross-cutting dimension.

4

**PLEASE PROVIDE A DETAILED STATEMENT OF PLANNED EXPENDITURE ITEMS**

<table>
<thead>
<tr>
<th>Total Planned Expenditures</th>
<th>Cost (USD’000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) HIA Consultant</td>
<td></td>
</tr>
<tr>
<td>(4 months)</td>
<td></td>
</tr>
<tr>
<td>(ii) Travel/subsistence</td>
<td>40</td>
</tr>
<tr>
<td>(Europe/US/Africa, internal Africa)</td>
<td></td>
</tr>
<tr>
<td>(iii) Contracted regional services</td>
<td>40</td>
</tr>
<tr>
<td>(use of regional consultants and institutions to build</td>
<td></td>
</tr>
<tr>
<td>capacity and to deliver regional services)</td>
<td></td>
</tr>
<tr>
<td>(iv) Policy seminars to build institutional support</td>
<td>65</td>
</tr>
<tr>
<td>(organization, transport of participants from six countries for</td>
<td></td>
</tr>
<tr>
<td>each of 3 seminars, Policy Seminar in Abidjan for</td>
<td></td>
</tr>
<tr>
<td>development institutions hosted by AfDB)</td>
<td></td>
</tr>
<tr>
<td>(v) Capacity building activities</td>
<td></td>
</tr>
<tr>
<td>(training of trainers workshops, training courses, organization and transport of participants)</td>
<td></td>
</tr>
<tr>
<td>(vi) Printing/disseminating HIA advocacy and training materials</td>
<td>20</td>
</tr>
<tr>
<td>(includes web-site design, editing, materials production, graphic design)</td>
<td></td>
</tr>
<tr>
<td><strong>Total (USD’000)</strong></td>
<td><strong>241</strong></td>
</tr>
</tbody>
</table>
5 WHAT RESOURCES (FINANCIAL AND OTHERWISE) DOES YOUR IDEA NEED TO BE SUCCESSFULLY DEVELOPED:

(a) financing needed from the Development Marketplace:
   (i) HIA consultant
   (ii) Travel/subsistence
   (iii) Contracted regional services
   (iv) Policy seminars
   (v) Capacity building activities
   (vi) Printing/disseminating

(b) financing needed (or already secured) from other sources

(c) other inputs, e.g. agreements with relevant institutions or partners
   Staff-time by partners is a substantial component of the project, and of the contributions from agencies (WHO, AfDB, WB). Some has already been assigned, and additional commitments will be made when the proposal is funded. Development institutions will support additional travel costs (missions) from their regular budgets. The Banks will support the piloting through planned operations. WHO will access expertise from its collaborating centres in the region.

6 IF YOUR IDEA HAS NOT ATTRACTED FUNDING OR SUPPORT FROM OTHER SOURCES, PLEASE EXPLAIN WHY?

   The concept of HIAs is based upon a multi-sectoral and holistic perspective of development, yet governments and development agencies are typically organized in sectoral structures, and appreciation for the linkages between sectors has traditionally been limited. In addition, staff within governments and agencies have not have incentives to operate outside of their defined sectoral families or ministries. Thus, the idea has attracted limited funding. With the Comprehensive Development Framework and similar initiatives, there is growing appreciation for the cross-sectoral determinants of poverty outcomes, and a recognition that development efforts need to be better coordinated and integrated.

7 WHAT WILL BE THE OUTPUTS? WHAT ACTIVITIES WILL BE SUPPORTED BY THE FUNDS?

- A system of capacity building will have been piloted.
- An independent quality assurance mechanism will be functioning.
- A consensus of the benefits and costs of HIA will have been reached.
- Guidelines will have been drafted and agreed upon by partners.
- The policy seminars and workshops will have been undertaken, evaluated and reported.
- Regional trainers will have been trained.
- The next phase of activities will have been defined.
- Funding for follow-on work will have been mobilized.

8 WHAT WILL BE THE IMPACT THAT YOU EXPECT? ON WHOM?

   The institutionalisation of Health Impact Assessments and risk management within development planning will reduce the burden of morbidity and mortality borne by vulnerable populations, and enable them to better protect themselves. Increased awareness of the need for HIA at the senior level decision makers will be a key impact. Health risk management which is part of national regulatory frameworks will reduce the costs, and increase the benefits, of development initiatives. The collaboration across Partnering Institutions will demonstrate how each can most efficiently employ their institutional comparative advantage to improve the impact of development assistance.
### HOW WILL YOU KNOW IF YOUR IDEA HAS SUCCEEDED FOLLOWING YOUR DEVELOPMENT PERIOD? WHAT WILL BE THE INDICATORS YOU WOULD USE TO MEASURE SUCCESS?

By the end of development period:

- Partners will be committed to assessing the health impacts of their policies, programs and development projects and advocating this to other development agencies
- AfDB and WB will have agreed to pursue policies and procedures that will incorporate HIA into their activities
- Three Bank-financed operations will have the experience of applying HIAs, working in collaboration with WHO/AFRO
- Client countries and Bank staff will report favourably upon the HIA experience
- Development operations with the potential to increase the risk of HIV/AIDS, vector-borne or water-borne disease will have risk mitigation plans

### HOW WILL YOUR IDEA BE SUSTAINABLE? WILL YOU NEED YEAR 2 (AND FUTURE) FUNDING? IF SO, WHERE WILL IT COME FROM? WILL YOUR PROPOSAL BE SELF-SUSTAINING IN THE FUTURE?

The capacity building process is designed to be self-sustaining. This will be achieved by ensuring that training courses are available in regional/national institutions, and run regularly with local staff without outside assistance.

Development of the idea will persuade countries and agencies of the validity of acting upstream through HIAs to avert adverse health impacts, and in the future, HIAs will be mainstreamed in development planning. HIAs will also contribute to the long-term sustainability of development efforts.

Sustainable support to countries in undertaking HIAs will demand more effective partnerships, as individual development institution cannot afford to develop extensive in-house capacity. The idea will demonstrate ways in which these institutions can collaborate to better serve developing countries. Through working together with WHO, the AfDB and WB can access qualified technical support to promote joint appraisal processes. WHO has made a commitment to develop its capacity to better serve such roles in partnership with the multilateral lending institutions.

### PLEASE GIVE SOME BACKGROUND ON THE EXPERIENCE THAT YOU/YOUR ORGANIZATION AND/OR ANYONE ON YOUR PROPOSAL TEAM BRING TO DEVELOPING YOUR IDEA.

The proposal brings together the extensive technical expertise of WHO, DBL, LSTM, particularly Birley's work on HIA spanning 15 years. Bos/Listorti/Shannon have extensive experience in environment/health. Furu has been working on promoting intersectoral collaboration in water resource development. It also taps into the wide multisectoral outreach of the two development bank to fully operationalize HIA in development planning and national regulatory processes. WHO (Bos/Anikpo/Aalto) have been working to develop their institutional capacity in the assessment of health risks. Other participating staff from the two development Banks (Kuruneri/McLaughlin) have been working to foster a more holistic and cost-effective approach to health development.

### Key Issues Relevant to Health Impact Assessment and Risk Management In Development Planning

**Poverty reduction:** Most of the important determinants of community health are environmental and social and lie outside the control of the health sector. Health expenditure in poor countries represents less than 5% of government expenditure. Development policies, programs and projects in part of the remaining 95% of expenditure are intended to increase national wealth, which should increase
community health. However, ill-health and poverty are interlinked and reduce the rate of economic growth. Development spending should not add to health risks. Where risks increase, hidden costs of development are transferred to a health sector which has insufficient resources to absorb them.

**Value for money:** HIA examines the changes in the determinants of health attributable to a proposed project, program or policy. Where the overall direction of change is judged to be negative, alterations are required to safeguard health. These can often be incorporated at little or no extra cost and where this is not feasible, specific budget components can be allocated. Where the overall direction of change is positive, the development activity is likely to increase community health.

**Ownership/Control over the Development Process:** Developing national commitment and capacity to assess the health risks of development investments increases the transparency of decision making, and places increased information in the hands of client governments and communities. The institutionalisation of HIAs addresses the role of regulatory frameworks, and government accountability to communities.

**Vulnerable groups, Indigenous communities, and gender:** Cottage industries can expose workers to hazardous materials causing occupational diseases such as dust-induced lung disease, lead poisoning, deafness, and neurological problems. HIA can assist by ensuring that occupational health impacts are considered at the same time as environmental impacts. When indigenous communities lose their environment and their social systems as a result of development of communal lands they can suffer nutritionally as cultivation practices are forced to change. The benefits and risks of development fall unequally on different groups. HIA identifies vulnerabilities, for example, change of crops can increase women’s workloads and reduce other activities so that foods are prepared faster and stored longer. HIA is participatory and based on key informant interview and community perceptions of risk.

**Examples of the Cross-Cutting Nature of Health in Development**

**Agriculture/rural development and health:** Agriculture can increase the risk of communicable diseases, malnutrition and poisoning. The increased wealth of farmers can reduce these risk, as they spend their surplus on food security, protection from vectors, treatment and basic infrastructure. HIA can assist by ensuring that vector breeding sites are minimized, domestic water supplies are safe, food is available and functional health services are accessible.

**Transport and health:** Road construction can increase the risk of communicable diseases (e.g., through increasing vector breeding sites and population mobility) and injuries. Improved access to markets from road use can increase wealth and improve access to treatment. HIA can assist by ensuring that construction crew and local community contact does not lead to sexually transmitted infections, that roads are designed with traffic safety devices, and that emergency procedures are planned to cope with traumatic injury.

**Urban development and health:** Urban and peri-urban development of natural resource bases is regarded as an important economic goal. HIA can help ensure that waste streams are recycled safely.

**Energy and health:** An independent global inquiry is considering the future policy requirements for large dams. One issue is the conservation of floodplains and wetlands and the impact of dam management on dependent livelihoods. The Senegal basin provides a vivid example. HIA can contribute to the planning of improved operating procedures.

**Mining and health:** Miners risk dust-induced lung diseases, sexually transmitted infections, psychosocial disorders and traumatic injuries. They circulate to distant communities and transmit their infections. HIA considers these wider boundaries that conventional EIA would miss.

**Environment, health and regulatory systems and health:** Environmental Impact Assessment is an established procedure for regulating impacts. Health issues can strengthen this regulatory system and this can be achieved by broadening the Terms of Reference and providing quality assurance mechanisms. Reviews of Bank environmental statements illustrate that health is rarely considered.