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## TASK 1

# Constructing a Framework for Comprehensive Development Planning

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TASK GUIDE FOR THE TRAINING COURSE

**Health Opportunities  
in Water Resources Development**

# Constructing a Framework for Comprehensive Development Planning

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Task 1

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# Timetable

A total of six hours and thirty minutes is available for Task 1, starting with the briefing. This means your group will need to discuss conceptual issues, exchange factual information, reach a consensus on planning procedures for water resources development and complete its Table fairly rapidly.

Introduction of Task 1		30 minutes
Group work	3 hours	
<hr/>		
Group work	3 hours	
Plenary: presentation of the Table by each group	2 hours	50 minutes

## Resource material

**Tiffen, M. (1991).** *Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation.* PEEM Guidelines 1. Document WHO/CWS/91.2. World Health Organization, Geneva. (Referred to as *PEEM 1*)

# Introduction to the Tasks

Welcome to Task 1 ! This is the first of six Tasks you will be undertaking as an intersectoral group. Before starting with Task 1, we should like to give you some general information to help you carry out the Tasks effectively. Throughout the course you and your fellow group members will provide mutual support in completing your assignments. Each of your colleagues will contribute expertise and experience in accordance with his/her professional background and sectoral affiliation (*e.g. the Ministry of Health, the Drinking Water Supply Authority, the Environmental Protection Agency*). In the process, you will all develop and use negotiating skills to arrive at decisions as a group.

Just as importantly, you will be practising how to scan documents in an organized manner, how to arrive at reasoned conclusions in aspects that are not necessarily within your own expertise and how to pass justified recommendations to your senior colleagues.

*You have probably by now gone through informal introductions with the other members of your group. This is a good moment to go around your group and give each member an opportunity for a more formal introduction of him/herself. Think of professional training, current position, past experience and other areas of interest.*

*Then, turn to the next page for more information to help you get started.*

# Important points to consider at the start

Please bear in mind the following important points for this Task and for the Tasks that follow:

Local experts are available to assist you with issues that the group is unable to resolve. The experts can be consulted at any time if you feel you cannot continue the Task without their input. As a general rule, we encourage you to collect the questions that do not require an immediate answer. Such questions can then be discussed during the plenary sessions, at the start of each morning and afternoon, for the benefit of all participants.

The course library contains selected, relevant publications and documents. Together with the documents each individual participant has received and the project documents provided to each group, these will give you access to the information you are looking for.

Time management is the key to the successful completion of all six Tasks. For Tasks 2 to 6 you will receive "letters of remit" with a clear deadline. You will have to plan each Task and monitor your progress at regular intervals. To assist you in the planning, all Task Guides contain an overview of the steps in the Task. To facilitate monitoring, each page carries a reminder of these steps. There is no Guide for Task 5. You will carry out that Task on the basis of instructions given in the letter of remit.

Your non-expert tutor will not be able to help you with the technical subject matter. The role of your tutor is to guide your group in procedural matters, clarify possible misunderstandings, assist in time management and consensus building and help in conflict resolution. The tutor is also the group's formal link with the course organizers.

You will complete Task 1 by following this Task Guide step-by-step. At the bottom of each page one or more questions will be raised and/or instructions given. These should be dealt with to the satisfaction of the group before turning to the next page.

Document your findings for your report as you go along !

*If you have any question about the above explanations, please raise it now with your tutor. If all is clear, turn to the next page.*

# An overview

## Aim of the Task

The aim of Task 1 is to agree on what the planning procedures in your country are, with reference to water resources development projects.

## What does the Task consist of ?

The Task is broken down into the following activities:

1. Agreeing on concepts and definitions
2. Identifying types of water resources development projects
3. Identifying responsible authorities, referred to as "actors", and procedures in the phases of planning, design and implementation for the most important types of projects
4. Deciding when health should be considered in the context of these procedures

## Output

The output of this Task is a Table representing a framework for comprehensive planning procedures for water resources development in your country. It will be a permanent reference for the other Tasks. The Table should indicate the actors that are responsible for decision making as the process proceeds through various phases of planning, design and implementing until the project becomes operational. The outline of the Table is presented on the next page.

When the Table has been completed, important decision-making moments can be identified. Each decision may offer an opportunity to incorporate concerns about health. You should reach agreement on the question of which decision(s) are crucial and offer an optimal opportunity to address these concerns.

In the concluding plenary session of this Task each group will present the information it has generated and thus contribute to a comprehensive table for national planning procedures.

*Many public sector bodies (ministries, regional, provincial and district authorities) have authority over water resources or represent interest groups that use water.*

*Please prepare a tentative list of all public sector bodies in your country that have responsibilities in the planning, development and/or management of water resources.*

*Keep your list for reference further on in this Task.*

*Then turn to page 6.*

Table of planning procedures for water resources development in \_\_\_\_\_

Project category \_\_\_\_\_  
Externally/internally funded

	Phase 1 Initiation/ identification	Phase 2 Prefeasibility/ design	Phase 3 Feasibility	Phase 4 Appraisal	Phase 5 Negotiations	Phase 6 Construction	Phase 7 Operation & Maintenance
1. Central Government							
2. Provincial or regional government							
3. Local government							
4. NGO and/or community							
Proposed action for health protection and promotion							

# Planning, development and management of water resources

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

One of the most vital resources for any country is water. The availability of good quality water is becoming increasingly constrained, while the human population continues to grow, and with it the demand for domestic water. The same problem applies to water for agricultural production, for energy generation and for industrial use.

There are a number of user groups which have a claim on water resources. Each user group will belong either to the private sector or to the public sector. Within the public sector, they may be found in different ministries, for example: agriculture, water resources, local government, industry, energy. The environmental authority or river basin authorities will also be involved in water resources development and management, for instance to ensure the protection of fresh water resources or the conservation of wetlands.

Planning the development of natural resources is a complex matter. Consider the following:

- In most countries, it takes place within a national development policy framework, with predominantly macro-economic criteria.
- Several countries have recently formulated a national water policy and a national strategy for integrated water resources development, but in many others there continues to be a lack of intersectoral coordination in planning such development.
- The planning criteria and procedures in the different public sectors will be derived from the national policy framework, but they are not necessarily compatible.
- The role of public sector agencies in water resources development may be regulatory, operational or both.

Moreover, many water projects are of an informal nature. Usually because of their smaller scale, their planning does not fall within the formal planning procedures. Community initiatives and projects supported by Non-Governmental Organizations (NGOs) come into this category.

In this complex structure of planning procedures a common understanding of key concepts is essential for a successful intersectoral dialogue.

## Question

How would you define policies, strategies, programmes and projects ?

*Discuss your definitions and then turn to the next page.*

# Essential definitions

- |                               |
|-------------------------------|
| 1. Agree on definitions       |
| 2. Identify types of projects |
| 3. Identify actors/procedures |
| 4. When does health matter ?  |

We propose the following:

<i>Policy</i>	A course of action adopted by an authority for the achievement of an objective, guided by well-defined criteria for decision-making
<i>Strategy</i>	The allocation and deployment of resources and the establishment of institutional arrangements in pursuit of a policy
<i>Programme</i>	A definite plan of intended procedure with measurable targets within a realistic timeframe
<i>Project</i>	Within a development programme, projects are the "units" of activities leading to a specific goal

The planning, development and implementation of a project follows a standard pattern: a sequence of events, where the output of one phase serves as the input to the next. This sequence of events is known as the project cycle. See *PEEM 1* (pages 30 and 31) for a diagram of the project cycle and for a detailed description of the phases.

Different stakeholders may have different perceptions of the project cycle. For example, for a multilateral development bank (such as the World Bank or one of the Regional Development Banks) the project cycle comes to an end with the evaluation phase, when it is ascertained that funds have been disbursed and used. For an irrigation authority the emphasis will be on the operational phase, which is proportionally much longer than the project planning, design, appraisal and construction phases together. From that perspective, the cycle stretches over a much longer period and re-starts when the irrigation scheme is in need of rehabilitation.

## Types of water resources development

In order to develop your Table of the planning procedures for water resources development projects, the first important step is to make a complete list of types of such projects that are relevant in your country.

*List the different types of water resources development projects in your country. Each type of project can be described by a number of characteristics.*

*Identify characteristics you feel are important in the context of project planning and prepare a list of options for each characteristic.*

*Then, turn to page 9.*

# Types of water resources development

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter?

Purpose, scale and source of water are three important characteristics of water resources development projects. Following are lists of options for each of these characteristics:

<p>(i) Purpose</p> <ul style="list-style-type: none"> <li>Irrigation for agricultural production</li> <li>Hydropower generation</li> <li>Domestic drinking water supply</li> <li>Industrial use</li> <li>Aquaculture (fish and shrimp cultivation)</li> <li>Ecosystem conservation</li> <li>Flood control</li> <li>Drinking water for cattle</li> <li>Navigation improvement</li> <li>Recreation</li> </ul>	<p>(iii) Source</p> <ul style="list-style-type: none"> <li>Groundwater</li> <li>Run-off water</li> <li>Natural springs</li> <li>Water from impoundments</li> <li>Urban waste water</li> <li>Industrial waste water</li> <li>Seawater (through desalination plants)</li> </ul>
<p>(ii) Scale <sup>1</sup></p> <ul style="list-style-type: none"> <li>Large</li> <li>Medium</li> <li>Small</li> </ul>	

<sup>1</sup> (Note: these designations are not absolute: what is considered to be a large scale irrigation project in one part of the world may be only small to medium scale by standards applied in another part !)

Make sure you have included in your list all types of water resources development projects in your country, based on the above characteristics (e.g. *small-scale irrigation using groundwater sources, rural drinking water supply from impoundments*).

Look again at the Table on page 6. Note that, over time, a project will go through different phases. The actors in each phase may belong to different sectors and to different levels in the administration.

## Question

What would determine whether different actors should become involved in the different phases? Don't forget to consult *PEEM 1*!

*Discuss this question.*

*Then, copy the Table onto a flip chart. From your list, select the most important type of water resources development projects in your country. At the top of the Table, fill in the name of your country and the project type you will work on.*

*Now, turn to page 10.*

# The dimensions of planning

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter?

A development project may be initiated by a ministry; it may pass by the National Planning Bureau for appraisal and approval; its environmental impact may be assessed by the Environmental Authority; and, it may end up with the Ministry of Finance for loan negotiations with donors. Therefore, over time, a sequence of decisions is made by authorities in different sectors. This is referred to as the horizontal dimension of the project cycle.

Planning has a second important dimension. At one or more times during the planning process, the project proposal may move up or down between the national planning authorities and the local community, through intermediate levels of regional, provincial and local government authorities. This is the vertical dimension of the project cycle. Many countries have adopted a district development focus; district councils may be instrumental in initiating project proposals, often with support from local NGOs. Where river basin authorities play a role in planning, the discrepancy between administrative boundaries (for example, provinces) and the natural boundaries of the river basin may complicate the process.

It is important to keep in mind both the horizontal and the vertical dimensions of the decision-making processes when developing the Table. On the following pages you will identify actors and procedures in each of the phases.

*Please carry out the instructions on pages 11 to 19 inclusive. You should organize your time in such a way that you can repeat this part of the Task at least for the second most important project type.*

*Then, turn to page 11.*

# Phase 1

## Identification

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

Given a certain development goal, e.g. increased food production, the first step in the project cycle is to identify where and how this goal is to be met. This is called the identification phase and the tangible output is a project document.

Those who propose a project (*the proponents*) will also have undertaken the identification phase. On page 5 you created a tentative list of public sector institutions involved in water resources development projects.

### Question

Who would normally be the proponent of your type of project ?

*Add this information in the Phase 1 column of your Table before you turn to the next page.*

# Phase 2

## Pre-feasibility

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

Your project will have to be considered in the light of national policies and priorities. The pre-feasibility phase has policy appraisal as its main objective. If a project idea is approved as being in line with the Government's policies and within its priorities, then Terms of Reference (TOR) for the next phase (the feasibility study) are drawn up.

Here are a few different scenarios, depending on who is the project proponent:

- If the project proponent is a ministry responsible for policy making (*for example*, the Ministry of Agriculture, the Ministry of Energy, or the Ministry of Water Resources), the project will automatically be compatible with the policies and priorities of that ministry. It will only have to be appraised against the national development plan, usually by a central planning authority.
- If the project proponent is an executing agency, such as a water authority or a river basin authority, or if the project originates from an NGO, it will have to be validated both by the relevant ministry and the national planning authority against sectoral and national policies and priorities.
- Projects that originate at a level below that of the national government (provincial or regional government, municipalities, district councils or communities) may, in a centralized government structure, have to go to the relevant ministry and the national planning authority for policy appraisal and priority setting. In a more decentralized structure, and depending on the scale of the project, decision making may take place at one of the lower administrative levels.

Even if a project fits national policies and priorities, but it can be foreseen that it will grossly exceed the economic capacity of the country or, if it is expected to lead to major environmental degradation or social disruption, the proposal can be stopped in this phase.

### Question

Is there a national water policy and an integrated water resources development and management strategy in your country ?

*If your country has a national water policy, please indicate this in a footnote at the bottom of your Table.*

*In the Phase 2 column of your Table, indicate where the initial plan for your water resources development project would be sent for policy appraisal.*

*Then turn to the next page.*

# Phase 3

## The feasibility study

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

In the pre-feasibility phase a project proposal is approved from a policy viewpoint, normally by a planning authority. It should fit in the national development policies, and it should not clash with the policies of other ministries.

The resources available to governments to achieve their development goals are limited. Before it is decided that government funds will be spent on a project, a feasibility study will have to establish its **economic viability** and its **sustainability**.

Again, different scenarios are possible:

- The feasibility study is the responsibility of either the proponent, which will have to submit the results to the planning authority and the Ministry of Finance, or
- the feasibility study is commissioned by the planning authority.

It is beneficial (imperative in the case of large projects, for which external support is essential) to involve prospective donors or banks in the feasibility study. They would normally cover the cost of the feasibility study and it is more likely to be carried out in accordance with the specifications and requirements of the donor(s).

Environmental Impact Assessment (EIA) tends to run in parallel with the feasibility study.

### Questions

What is an Environmental Impact Assessment ?

In your country, is EIA part of feasibility studies ?

Is there a legal basis for EIA ?

If so, is an EIA always, sometimes or never required for your type of project ?

What criteria apply in deciding whether an EIA is required or not ?

*Document this information well - you will need it when you are identifying opportunities to include health considerations in the project cycle at the end of Task 1.*

*Then turn to page 14.*

# Environmental Impact Assessment (EIA)

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

EIA is concerned with identifying and assessing the environmental consequences of development policies, plans, programmes and projects, with a view to ensuring optimal efficiency in the development of limited natural resources and the incorporation of environmental management measures to mitigate possible adverse impacts on the environment.

Most countries have legislation that defines the criteria which make EIA an obligatory element in the planning of development projects. Many countries, however, do not yet have the capacity to carry out their own impact assessments and, therefore, have to rely on international consultants.

Most bilateral donors and multilateral development banks have established criteria which make EIA a condition for their support.

In the context of a conventional EIA, human health is usually considered the exclusive responsibility of the health sector. The way the activities of other sectors affect community health is seldom fully appreciated. Health is, therefore, rarely considered the responsibility of other sectors (*a "cross-cutting" issue*). As a result, recommendations do not tend to address the impact of environmental change on the human health status (and the relevant safeguards). Any such recommendations would normally focus on strengthening the health services.

HIA should not be carried out in isolation. It should be done in the intersectoral context of EIA and requires the input of health professionals into the actual assessment.

## Question

In your country, which agency formulates the TORs for feasibility studies for your type of project ?

*Document the answer in your Table before turning to page 15.*

# Phase 4

## Appraisal

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

Feasibility studies are commissioned from independent consultants whose task is guided by TORs.

The output is a report which serves as the basis for decision making about the project, for example, whether or not a drainage component is included in an irrigation project, or whether the height of a dam and the design of its spill-way are adequate.

A conventional feasibility study will, in its conclusions, stress the economic viability of a project.

If the Terms of Reference only prescribe economic and design criteria, then the consultants will not consider any other aspect !

Appraisal is a critical review by the appropriate government authorities of the report of the feasibility study and of the way in which it was performed. It will result in a decision whether the project is approved to be submitted for funding or not. You will look into this procedure in detail in Tasks 3 and 4.

Usually, considerable resources have been spent on the preparatory work by the time a project reaches the appraisal stage. Complete rejection of a project is, therefore, rare. More commonly, individual recommendations for corrective measures are appraised and accepted, amended or rejected.

### Question

In your country, is the appraisal of proposed water resources development projects based on economic and design criteria only ?  
If not, which other criteria are applied ?

*Indicate in column 4 of your Table, which ministry or authority is responsible for appraisal. Make a note of the criteria that are applied. Also indicate the role of the Environmental Authority, if any.*

*Then continue on the next page.*

# Phase 5

## Negotiations

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

The final negotiations aim to settle resource requirements within the limits of what is economically feasible and technically sound. They usually involve the Ministry of Finance.

Water resources development projects may be funded from the Government budget, from external sources, through loans from international development banks, or through grants from bilateral donor agencies, or by NGOs.

The nature of the negotiations will depend on whether the project under review will be internally or externally funded.

Local politics and inter-ministerial rivalries may influence negotiations about internally funded projects. A local politician may be instrumental in obtaining the financial support for small, local projects for the benefit of his constituency (for example, small-scale irrigation development proposed by a district development council).

In negotiations with external support agencies, the policies of banks or donors will influence the process. In the case of international loans, governments may be reluctant to accept additional liabilities, for example to cover environmental or health safeguards. International politics may also play a role in such negotiations.

### Question

How can a ministry ensure that its interests are successfully taken into account in the allocation of resources ?

*In the heading of your Table, give an indication whether your type of project is usually funded internally or externally.*

*In column 5 of the Table, indicate whether the negotiations for your type of project are the sole responsibility of the Ministry of Finance, or whether other ministries are also involved.*

*Then turn to the next page.*

# Resource allocation during the negotiations phase

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

The decision about the financial support for an internally funded project will be made by the Ministry of Finance. Ideally, other ministries that are directly affected by a development project should be consulted by the Ministry of Finance. This should lead to the allocation of funds, allowing them to play their role in the project.

Mechanisms for direct consultations seldom exist. Other ministries may actively pursue the allocation of such funds to their sector, by taking the initiative to submit a memorandum on the subject to the Ministry of Finance, by bringing the issue to the agenda of the Council of Ministers (this mechanism can only be used in exceptional cases) or by bringing it to the attention of parliament.

In the case of externally funded projects, more ministries may be involved in the negotiations (Foreign Affairs, Economic Affairs, Finance and the project proponent). Other ministries may argue their case to be included in the negotiating team. They should prepare a well-documented case which justifies the need for funds and presents the planned activities and the expected outputs.

In negotiations with bilateral donors it helps to investigate the areas of their special interest for which they may make additional grants available. For example, timber-producing countries may be keen to support reforestation activities, oil-producing countries may have a preference for studies on chemical safety.

Two more pieces of information are now needed for completion of the Table.

## Questions

Which agency is responsible for construction in your type of project ?

And, which agency is responsible for operation and maintenance ?

*Include the answers to these two questions in the appropriate columns of your Table. This information completes the Table.*

*Check your answers against the information on the next page.*

# Phases 6 and 7

## Construction, operation and maintenance

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter?

**Once a project reaches the construction phase**, the project proponent may hand over responsibility to another ministry (for example, public works or infrastructure), to an executing agency (for example a water authority or river basin authority) or to a local authority.

Monitoring will be needed, to ensure that technical specifications are adhered to, that recommendations resulting from the Environmental Impact Assessment are implemented and that health is safeguarded.

The transition from construction to operation sometimes calls for passing responsibilities to another authority. Large dams may stay under the control of river basin authorities, and urban water supplies will be operated and maintained by the municipal authorities who also constructed them. Small and medium-scale irrigation schemes, however, may be turned over to the local farmer cooperative, which will have to recover the costs of operation and maintenance.

In the process of handing over responsibilities, adequate institutional arrangements will have to be maintained to ensure that the interests of other sectors continue to be addressed.

You now have a comprehensive idea of the project cycle for one of the key types of water resources development projects in your country.

You have organized this information in your Table and this will facilitate your understanding of how your next Tasks relate to the complete process of planning, construction and operation.

All development projects affect health.

### Key question

In which of the planning phases is it crucial to give specific attention to issues of health?

*This question deserves full discussion. Now fill in the relevant boxes at the bottom of the Table: the proposed action for health protection and promotion.*

*Then check your proposals against the information on the next page.*

# When should health be considered?

1. Agree on definitions
2. Identify types of projects
3. Identify actors/procedures
4. When does health matter ?

There are two crucial moments in the project cycle when human health must be considered:

- In the prefeasibility phase, when the TORs for the feasibility study and the EIA are formulated. Possible health implications of the project are sure to be considered if a health impact assessment is included in this phase. As a consequence, salient health issues will be discussed during appraisal.
- At the time of negotiating the allocation of funds. In this Phase it will be decided which health safeguards and health promotional measures will be implemented. And it will also be determined to what extent the health sector will be given a role in the next phases.

Clearly, there are other factors which will facilitate the effective consideration of human health in the planning process.

For example, a policy framework which requires intersectoral collaboration is essential. Environmental policies and strategies should explicitly consider the human health aspects of environmental change caused by development. All ministries, including the Ministry of Health, should become fully aware that the quality of human health is a collective responsibility.

*If you have documented everything as you worked through this Task, your Table will be ready for presentation.*

*As a final control, compare your findings with the checklist on the next page. These items of information will be needed at the plenary session. This check concludes Task 1 for your most important type of project.*

*If time permits, return to page 11 and follow the same instructions for the next most important type of water resources development project in your country.*

## To check your information

For the Table	Additional information for your presentation
<ul style="list-style-type: none"> <li>■ Type of water resources development project</li> <li>■ Project proponent of your type of water resources development project</li> <li>■ Ministry/agency responsible for policy appraisal</li> <li>■ Ministry/agency responsible for formulating the TORs for the feasibility study and the associated EIA</li> <li>■ Ministry/agency responsible for the feasibility study</li> <li>■ Ministry/agency responsible for appraisal</li> <li>■ Ministry/agency responsible for resource allocation</li> <li>■ Ministry/agency responsible for project construction</li> <li>■ Agency responsible for operation and maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>■ Horizontal/vertical dimensions</li> <li>■ National water policy National water resources strategy</li> <li>■ EIA requirements</li> <li>■ Role of the Environment Authority</li> <li>■ Type of funding (internal or external)</li> </ul>

*– and for incorporation into the Table, when all columns have been completed:*

*The phases when health should be included, with a justification.*

***This concludes Task 1.***

## TASK 2

# Rapid Health Impact Assessment

## A preliminary step

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TASK GUIDE FOR THE TRAINING COURSE

**Health Opportunities  
in Water Resources Development**

# Rapid Health Impact Assessment

## A preliminary step

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# Timetable

A total of 22 hours and 55 minutes is available for Task 2, starting with the briefing. In addition, an eight hour field trip is an integral part of this Task. On completing the Task, two hours will be available for the presentation of group reports and discussions. A breakdown is presented below to assist you in planning your work on the Task.

Briefing on Task 2		25 minutes
Plenary		30 minutes
Group work	3 hours	
Plenary		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary		30 minutes
Group work	3 hours	
Plenary: briefing for field trip		45 minutes
Preparing for field trip	3 hours	15 minutes
<hr/>		
Field trip	8 hours	
<hr/>		
Plenary: field trip debriefing		30 minutes
Group work	3 hours	
Plenary		30 minutes
Group work (report writing)	3 hours	30 minutes
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Oral presentation, discussion, submission written reports	2 hours	

## Resource material

**Birley, M.H. (1991).** *Guidelines for forecasting the vector-borne disease implications of water resources development.* PEEM guidelines 2. Document WHO/CWS/91.3. World Health Organization, Geneva. (Referred to as *PEEM 2*)

**Birley, M.H. (1995).** *The Health Impact Assessment of Development Projects.* HMSO, UK.

**Birley, M.H., M. Gomes and A. Davy (1997).** *Health aspects of environmental assessment.* Environmental Assessment Sourcebook Update (# 18, July 1997), Environment Department, World Bank, Washington DC

# An overview

In Task 2 you will be looking at a proposed development project. You will receive the project documents and you will carry out a fact-finding field visit to the project or to a project which features many of the characteristics generally found in areas where water resources development is about to take place.

Unresolved questions will be discussed at daily plenary sessions. So bring the group's questions with you to these sessions. There are specialists available for you to consult, do make use of them !

Do remember to write down every decision made by the group and the reasons for the decisions. In this way the group's report is virtually written by the time you have completed the Task !

You may find it difficult to work within the time allotted to this Task, so plan it carefully.

## Aim of the Task

You will undertake a rapid health impact assessment. Your output will be a reasoned argument recommending whether a full health impact assessment is needed or not. In order for you to make reasoned arguments, this Task focuses on questions which illustrate that:

- Development projects can change health risks.
- Plans and operations can be modified to promote health.
- A simple method of assessment can be used.
- Intersectoral discussion and collaboration are possible.

The Task is made up of three components:

- Procedure.
- Method.
- Presentation of results.

## The Letter of Remit

The end-result of this Task will be a report that satisfies the letter of remit. Take a look at that letter now. How will the group tackle this request ? The question below will help you to make a start.

## Question

What is health impact assessment and what is its purpose ?

*Discuss this question and then turn to the next page.*

# The purpose of Health Impact Assessment (HIA)

HIA is an examination of a development project, in order to assess whether it will affect the health of a community<sup>1</sup>. Safeguards and mitigating (*harm reducing*) measures can then be proposed to protect the health of that community. In addition, the assessment can consider opportunities for health promotion within the community.

Development projects are designed to confer benefits on a community, including improved standards of living and health. Sometimes, however, there are unintended and indirect negative effects. These may affect the environment, the socio-economic condition or the health status of some community groups.

Increases in ill-health represent a hidden cost of the project which, ultimately, must be borne by the health sector.

HIA provides an early warning, so that decision-makers can review and modify project plans, design and operations by negotiation.

## Question

How could an increase in ill-health represent a hidden cost of the project ?

*Discuss this question before continuing.*

1) The official WHO definition is: "Health is a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity".

# The hidden costs of development

Ill-health caused by a development project can lead to reduced productivity, school absenteeism, increased consumption of medicine and more visits to health centres.

Such hidden costs can be reduced or avoided by safeguarding human health. Therefore, it is necessary to assess the potential health impacts of new development projects.

Assessment also has its costs. In order to contain the costs of assessment, a rapid HIA should precede a full HIA. The rapid HIA is cheap. The full HIA is expensive, time-consuming and may not be required.

The main output of the rapid assessment is a decision about whether a full assessment is needed or not. You must justify your decision.

## Question

What procedure do you need, in order to make this decision ?

*When you have discussed this, turn to the next page.*

# An HIA procedure

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

As you read through the following procedure, compare it with your own suggestions.

The HIA procedure is similar to the Environmental Impact Assessment (EIA) procedure. Preferably, HIA should be part of EIA.

Development projects are proposed by a project proponent to a regulatory authority. The proponent is a private company or government department that wants to undertake a project. For example, the agriculture department may wish to build an irrigation project. The regulatory authority is a government planning agency that regulates the kind of development that can take place, e.g. the Environmental Protection Agency.

The regulatory authority decides whether a rapid health impact assessment is needed. The decision is based on a list of the types of project that require such an assessment. For example, irrigation projects beyond a certain size are usually on the list.

The regulatory authority then asks the proponent to prepare a rapid health impact assessment. A letter of remit may be provided by the regulatory authority that specifies what the assessment should contain. A decision is made as to whether a full health impact assessment is required, or not. All of the steps above are referred to as the screening process.

A full health impact assessment is similar in content to a rapid health impact assessment, but it is guided by detailed Terms of Reference (TORs) and based on more accurate information. The process of deciding what should be in the TORs is called scoping. The full assessment may be undertaken either by private consultants or by government departments. When the assessment has been prepared it is appraised by the regulatory authority. This means that it is critically examined to decide whether it was carried out in accordance with the TORs and whether the recommendations meet a number of criteria.

In this Task you will make a rapid assessment. You will consider appraisal in Tasks 3 and 4, and TOR preparation in Task 5.

## Question

What method would you use to make a rapid health impact assessment?

*Discuss this question and then turn to the next page.*

# A rapid HIA method

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

There are many possible methods of assessing health impact and many questions to consider. It is helpful to divide the assessment into smaller and more manageable components.

The method will involve:

- Identifying health hazards.
- Assessing health risks associated with the project.
- Proposing measures for health risk management.
- Considering opportunities for the improvement of health.

## Definitions

A health hazard is an agent that may cause harm.

A health risk is a measure of likelihood that an identified hazard causes harm to a particular group of people at a particular time and place.

A health impact is a change of health risk associated with a project.

## Examples

1. The malaria parasite is a health hazard in the tropics. However, malaria may be a very small health risk in the middle of many large cities in the tropics, because the mosquitoes that transmit the infection are likely to be absent.

2. Electricity is a health hazard in the workplace.

The risk of electrocution, however, depends on:

- An environmental factor: a live wire.
- A vulnerable person who does not appreciate the hazard and whose behaviour causes contact with the wire.
- A lack of health protection: no warning signs.

## Question

Can you think of another example to illustrate the difference between a health hazard and a health risk ?

*Discuss this question before turning to the next page.*

# Health hazard identification

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

Health hazards can be classified in many different ways. It is proposed you use the following categories:

- Agents of communicable diseases.
- Agents/causes of non-communicable diseases.
- Causes of malnutrition.
- Causes of injury.
- Causes of psychosocial disorders.

Many examples within these categories can be found in Birley (1995).

## Questions

What kind of health hazards are commonly associated with the kind of development project that you have been asked to consider ?

How could you determine whether the development project is in a location associated with particular health hazards ?

*List the health hazards associated with your project and classify them under the different categories.*

*Discuss the second question and then turn to the next page.*

# National health data for hazard identification

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

You have probably decided that you need regional or district health data and a map. See how much of the following data are available to you now.

The map should enable you to locate the project within a particular health district or subdistrict. It should indicate major geographical features such as rivers, forests, roads and mountains. You may also need a map indicating district health administrative boundaries and the location of health centres, towns and villages.

The health data should enable you to determine some of the health hazards that are currently important in the project area. Indicators of health hazards are the disease prevalence rate (*the number of disease cases divided by the total number of people at risk at one particular moment in time*) or disease incidence (*the number of new cases over a given period, usually a year*). In order to obtain the total number of people at risk, you will require population data.

You should also have access to published research findings based on limited, but more accurate surveys.

You may wish to interview health officers from the district where the project is located. Plan this for your field trip.

## Questions

Does the information that is available to you inform you about the particular health hazards in the project location? *Remember, your challenge is to decide what the health data will look like in the future, when the project has been developed and when it is in operation.*

Is there anything wrong with the data? *Hint: consider under-reporting.*

How could you establish the reliability of the data? *Hint: compare with other data or ask someone who might know.*

*Take time (perhaps an hour) to study the available information and then discuss these questions.*

# Health risk assessment

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

In order to assess the health risks you will need to:

1. Decide the scope of the assessment. This includes geographical boundaries, time boundaries and affected communities.
2. Break the assessment into its main components:
  - Community risk factors are characteristics of a community or community group, which determine its vulnerability to a health hazard.
  - Environmental risk factors are characteristics of the physical or social environment, which determine the level of exposure of a community to a health hazard.
  - Institutional risk factors are the strengths and weaknesses of public and private institutions that play a role in protecting health prior to the project.
3. Identify key questions to ask about each component.

## Questions

The following questions are about the scope of the assessment.

How would you determine the number of years that have to be considered by the assessment ?

And how would you define the geographic boundaries for your project ?

*Discuss these questions, note the answer for your report and turn to the next page.*

# The scope of the impact assessment

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

You need to decide what to include and what not to include in the assessment. For this decision you need to consult other line ministries and members of the public. Let's concentrate on what to include.

You should consider:

## 1. The number of years into the future

Some diseases spread slowly through a community and may not become a widespread cause of ill-health for many years. Others spread very quickly and are an immediate cause of ill-health.

Examples:

- Malaria is a "fast" disease but schistosomiasis is a "slow" disease.
- Malnutrition can be a long term problem, leading to stunting, or a short term problem, leading to wasting.

## 2. The geographic boundaries

The health hazards associated with a development project may move considerable distances. They may be carried by wind, water or infected hosts.

Examples:

- Some insects that transmit disease causing agents can migrate several hundreds of kilometers downwind (See *PEEM 2*, Table 1-5, chapter 1, page 28 for vector flight ranges).
- Migrant workers carrying disease agents can come from and go to different countries.

You will make an assessment of the changes in health associated with your project by filling in the outline Table on the next page.

*Please start by filling in the name of the project and its location. In the left column fill in upto five health hazards that you would regard as important. As you work through the following pages, you can fill in the four remaining columns.*

*Then turn to page 13.*

# Summary Health Impact Assessment Table

Project title				
Location				
Community group				
Health hazards	Community risk factors	Environmental risk factors	Institutional risk factors (prior to the project)	Expected change in health risks attributable to the project

## Scope (continued): Vulnerable community groups

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

There are many different community groups associated with the project. They include the people living in and around the project area, people resettled from other areas and temporary migrants. They are among the stakeholders, because they have a stake, or interest, in the project.

*Identify up to five different community groups that may be affected by the project.*

*Then go on to page 14.*

## Scope (continued): Community groups

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

The communities that will be associated with the project during the construction and operational phases may be different from the communities already settled in the area before the start of the project.

### Examples

- Subsistence farmers and their dependants may be displaced from the development project site. Many may be offered resettlement or re-employment on the scheme, the rest will move into uninhabited areas, or drift into town.
- Groups providing support services such as teachers, health workers and their dependants may move into the project area.
- Settlers such as cash crop farmers plus dependants may be settled on new agricultural schemes. These will include members of displaced communities and some town dwellers.
- Construction workers are usually males who are separated from their partners for many months or even several years.
- Camp followers are attracted to construction sites and include food sellers and sex workers plus their dependants.
- Fishing folk plus dependants may be attracted to new reservoirs.
- Migrant labourers will establish a circulation pattern linked to cropping and harvesting seasons.

### Question

What characteristics of the groups in the above examples would make them vulnerable to health hazards ?

*Discuss this question.*

*Enter the name of one of the groups you identified in row 3 of the Table. You will fill in the rest of the Table as we go along, referring to this group.*

*Then, turn to the next page.*

# What community risk factors are involved ?

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

The vulnerability of community groups to health hazards depends on risk factors, such as poverty, behaviour, education, occupation and immunity. Behaviour will depend partly on their knowledge and their attitudes. The community risk factors vary with each hazard and each community group.

Examples:

- Practising irrigated agriculture in Africa may lead to occupational exposure to schistosomiasis.
- Believing that malaria is caused by bad air may reduce the desire to use nets as a protection from mosquitoes.
- Driving a vehicle without proper training increases vulnerability to traffic injuries.

*Summarize the community risk factors of the group in your Table for each health hazard and enter this information in column 2. For example, if the health hazard of a farming community is the introduction of agricultural machinery, then you might write in the corresponding box of column 2: "increased risk of injury for lack of training."*

*Now, turn to the next page.*

# What environmental risk factors are involved ?

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

For each of the health hazards that you have identified, the next step is to determine the nature of the environmental risk factors (both social and physical), as illustrated in the examples below.

1. Communicable diseases, e.g.:  
Will the development project change the environment and increase vector breeding sites ? Will the transmission season be extended ?  
Water-borne diseases are associated with poor domestic water supply and sanitation. Will there be changed exposure to contaminated water ?
2. Non-communicable diseases, e.g.:  
Will there be changed exposure to toxic chemicals ?
3. Injury, e.g.:  
Will there be any fast moving machinery, including vehicles ?
4. Malnutrition, e.g.:  
How will the project affect subsistence crops and the division of entitlements within the household ?
5. Psychosocial disorder, e.g.:  
Is it likely social disruption could lead to a change in the suicide rate ?

Whilst some environmental risk factors are localized, others are widespread.

## Questions

What will you need to say about environmental risk factors in your report ?

What could you learn from visiting existing and similar development projects in the region ?

What do the feasibility study report or other project documents tell you about the changing environment ?

*Document your answers for the final report and complete the third column of the Table with a summary. For example, if the hazard is an agent of communicable disease: "decreased breeding sites for malaria vector mosquitoes."*

*Then turn to the next page.*

# Which institutional risk factors should be considered ?

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

This component of the assessment asks the question: what is currently being done to protect health ? Many government and non-governmental agencies carry responsibility for protecting human health. In addition to the health services, which are the responsibility of the Ministry of Health, the areas covered by government agencies may include:

- Occupational safety (Ministry of Labour).
- Pesticide use (Ministry of Agriculture).
- Pollution monitoring and control (Ministry of Environment, or Environmental Protection Agency).
- Water supply and sanitation (Ministry of Public Works or local government).

Ministries or agencies responsible for health-related issues can be judged in terms of:

- Capacity, i.e. the resources available in terms of staff and equipment.
- Capability, i.e. the knowledge, skills and experience of the staff and the procedural framework that allows them to operate as efficiently as possible.
- Jurisdiction, i.e. their power to regulate or control a particular aspect of the project.

These constitute the institutional risk factors

Jurisdiction is important because in projects for the development of natural resources there may be areas where institutional responsibility and accountability are lacking. For example, the occupational safety of farmers may not be the responsibility of the Ministry of Labour, because it is only concerned with labour conditions in industry. The Ministry of Agriculture will support farmers' well-being in terms of income, but not in terms of safety and the Ministry of Health may not have occupational safety specified in its remit. Who, then, is responsible ?

The existing institutional risk factors provide an indicator for the ability of health protection agencies to cope with the present and future demands in the project area.

## Question

What do the various agencies concerned do at present to protect the health of your community group from the health hazards you have identified ?

*Document your answer, then turn to the next page.*

# Which institutional risk factors should be considered ? (continued)

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

## Examples

There are important variations in the quality and coverage of delivery of curative services, preventive services and health promotion.

The following examples illustrate some of the problems which you will need to consider for your report.

- Drug supplies for rural health centres are often irregular and insufficient.
- The ability to diagnose the cause of ill-health accurately is limited by the level of training of health personnel and the diagnostic tools available.
- Health surveillance: health centres usually supply monthly statistical summaries to district headquarters. These summaries are often inaccurate, as the purpose for collecting the data is seldom made clear to the staff. National health statistics are published annually but may be several years out-of-date.
- National disease control organisations are often under-funded and city-based. Their vehicles may not be functional when they are needed. Local disease control may be the responsibility of a primary health care system that lacks the resources, staff and expertise to concentrate on more than one disease. Health education units may focus on family planning.
- National planning procedures for considering health impact and for acting on information generated by impact assessment may not yet be well developed.
- There may be no communication between the development planners, the local health service, or the local public works department responsible for water supply and sanitation.
- Project planners may be relying on the health sector to deal with health problems and may not be giving these problems any attention themselves.

*For each of the health hazards you identified, write notes on these factors for your report and include a summary in column 4 of the Table. For example: "limited stocks of anti-malarial drugs in health clinics, no preventive measures in operation."*

*Then turn to the next page.*

# Justification of your entries into the summary HIA Table

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

You have examined the three main components of health impact assessment.

Your notes should justify the summary points made in the Table. The evidence listed in your notes will have different degrees of validity, such as:

- Calculable.
- Estimable.
- Definite but not measurable.
- Speculative.
- Anecdotal.
- Hypothetical.

Try to be clear about each of them.

*Document the justifications for your final report.*

*The remainder of the Task will be completed after your field trip.  
There will be a briefing about the field trip.*

*Turn to the next page for some general information.*

# About the field trip

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

The aims of the field trip are:

- To assist you to understand the concept of a feasibility study and visualize the issues to look for in an area where a project is proposed.
- To observe features of the community, environment and health services, which may be relevant to the Health Impact Assessment.
- To collect data from key informants representing the health service, the community, the irrigation department and others as appropriate.

The methods used will be interviews with key informants and direct observations. The key informants include both officials and members of the community. Each interview will last 20-30 minutes. Key informants are likely to present biased views based on their own perspective and interests. A comparison will be necessary between what different key informants tell you. Remember that the community may be culturally different from your own. Aspects of their culture may affect their vulnerability.

*Now make a list of questions to ask on the field trip that will help to fill some of the gaps in your information.*

*If you have time before the field trip you should do some background reading in the library as another way of filling the gaps.*

# Completing the rapid HIA

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

The changes in health risk associated with each of the hazards have to be recorded in the last column. These are the changes associated with the project that are expected if no additional safeguards are included. Conclusions should be supported by facts and observations.

For example, you may conclude that the project will increase the number of malaria mosquito vectors, make no provision for prevention and introduce susceptible people into the project area. As a result, the risk of malaria will increase for those susceptible people.

*Use the results of the field visit, plenary discussions, further reading and consultation with local experts to complete and justify your conclusions.*

*Consider and list possible safeguards and mitigating measures that may be included in the project to avoid the increased risks listed in your Table and to improve the health of your community group.*

*Then, turn to the next page.*

# Measures for health risk management

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

Do any of the following interventions apply to your project?

Irrigation and drainage channel design and maintenance:

The purpose is to improve water flow, prevent leakage and stagnation and prevent vector breeding. This requires action during the design, operation and maintenance phases. Maintenance is cheap if the community participates, but it may be difficult to motivate the community.

Sanitation:

The purpose is to ensure safe excreta disposal, prevent contamination of open water and prevent filariasis vector breeding and fly breeding. This requires action during the construction stage.

Proper storage of chemicals and training of workers:

The purpose is to prevent poisoning. This requires action during the construction and operation phases. Stores for pesticides and other chemicals can be constructed cheaply.

Improved drug distribution:

The purpose is to cure individuals who become clinically ill. It may be difficult to recruit trained staff and to maintain drug supplies.

Settlement location:

The purpose is to reduce exposure to localized health hazards. Action is required at the design phase. This can be cheap if government owns the land and socially acceptable if distance between the settlement and the workplace is not excessive.

*Sort your proposed interventions into the following categories:*

- *Cheap or expensive.*
- *Easy or difficult.*
- *Socially acceptable or not acceptable.*
- *Maintenance cheap or expensive.*

*Then turn to the next page.*

# Health opportunities

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

You have taken the first step towards safeguarding the health of the affected communities.

The health of these communities could, however, also be further improved.

Please consider whether additional aspects of design could be modified or added, that would substantially improve the community health status.

This approach is referred to as promoting health opportunities to distinguish it from health risk management.

A classic example is the incorporation of a drinking water supply component in an irrigation project. This may not have been included in the original design and the community may have to rely on unsafe sources of water. Housing improvement, such as screening of windows to keep out insects, is another example.

*List the health opportunities that you can identify for your project.*

*Finally, decide whether a full HIA is needed and justify your decision.*

# Report writing and presentation

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

To complete Task 2 your group now needs to prepare its written report and plan its oral presentation for the plenary session. You should be able to do this by reassembling the notes you have been making. Try to limit your report to a maximum length of seven pages. The oral presentation should only contain three main messages, not the whole report. Divide the task among the members of the group.

- Title
- Names of writers
- Date
  
- 1. Introduction (one paragraph).  
Who is the assessment for and what are they expected to do with it?
  
- 2. List of community groups affected by the project.  
Description of the community selected for detailed analysis.
  
- 3. Summary Table listing all the hazards you have considered and the conclusions concerning risk (one page).
  
- 4. Explanation of the conclusions presented in the Summary Table.  
Under each hazard use the following subheadings:
  - a. Community risk factors (one paragraph).
  - b. Environmental risk factors (one paragraph).
  - c. Institutional risk factors (one paragraph).
  - d. Conclusion: whether the health risk will increase, decrease or remain the same and how this conclusion was reached (one paragraph).
  
- 5. Analysis of health risk management measures and health opportunities.  
Distinguish between planning and operation stages and consider whether each measure is cheap/expensive, easy/difficult, and socially acceptable/not acceptable).  
Headings include:
  - a. The project design.
  - b. Environmental management measures.
  - c. Strengthening of health services (what is inadequate and what can realistically be improved?).
  - d. Monitoring and surveillance activities (how will the data be used ?).
  
- 6. Recommendation whether a full HIA is needed with a convincing justification.

*If any of your questions remain partly unanswered, bring these to the next plenary session. You can judge your Report and Presentation by using the checklist on the next page. This concludes Task 2.*

# Basis for evaluating reports

1. Procedure
2. Hazard identification
3. Risk assessment
4. Risk management
5. Health opportunities
6. Presentation

Your written reports will be judged according to the following criteria:

- ❑ Did the introduction state who the report was for and what they were expected to do with it ?
- ❑ Was the report concise and to the point ?
- ❑ Was the Summary Table completed as intended ?
- ❑ Was a firm conclusion reached whether a full HIA is needed ?
- ❑ Was the conclusion supported by convincing justifications ?
- ❑ Did the justifications cover all components ?
- ❑ Were facts and assumptions distinguished and was missing information noted ?
- ❑ Were realistic health risk management measures and opportunities proposed and justified in relation to health risks as well as to costs, acceptability and ease ?

Your oral presentations will be judged according to the following criteria:

- ❑ Visual materials (overhead transparencies, flip chart sheet) contain no more than 15 words per sheet/transparency in large writing.
- ❑ The presenter faces the audience and speaks loudly and clearly.
- ❑ More than one member of the group is involved in the presentation.
- ❑ Only the main points are discussed.

## **TASK 3**

# **Appraisal of a Health Impact Assessment Report**

## Assessment Procedure and Conclusions

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TASK GUIDE FOR THE TRAINING COURSE

**Health Opportunities  
in Water Resources Development**

# Appraisal of a Health Impact Assessment Report

## Assessment procedure and conclusions

Task 3

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# Timetable

A total of eleven hours and thirty minutes is available for Task 3, starting with the briefing.

Briefing on Task 3		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary session		30 minutes
Group work	3 hours	
Plenary session		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary session	1 hour	20 minutes
Group presentations (10 minutes of presentation followed by 10 minutes of discussion per group)		

## Resource material

**Tiffen, M. (1991).** *Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation.* PEEM Guidelines 1. Document WHO/CWS/91.2. World Health Organization, Geneva.  
(Referred to as *PEEM 1*)

**Birley, M.H. (1991).** *Guidelines for forecasting the vector-borne disease implications of water resources development.* PEEM guidelines 2. Document WHO/CWS/91.3. World Health Organization, Geneva. (Referred to as *PEEM 2*)

**Birley, M.H. (1995).** *The Health Impact Assessment of Development Projects.* HMSO, UK.

**Birley, M.H., M. Gomes and A. Davy (1997).** *Health aspects of environmental assessment.* Environmental Assessment Sourcebook Update (# 18, July 1997), Environment Department, World Bank, Washington DC

# An overview

## Aim of the Task

The aim of this Task (and the next) is for you to learn how to appraise a Health Impact Assessment (HIA) which has been carried out in association with an Environmental Impact Assessment (EIA).

The outcome of the appraisal will be one of the following decisions:

- Reject the HIA as inadequate.
- Require that the HIA be improved.
- Accept the HIA with minor corrections.
- Accept the HIA as it stands.

Your decision should be accompanied by an adequate justification.

## Output

The output of Tasks 3 and 4 will be an appraisal report.

Task 3 focuses on the appraisal of the assessment procedure and the conclusions drawn on the basis of the summary impact assessment.

At the end of this Task, you will present a brief oral summary of your findings so far. At that point in the appraisal you will have to decide whether the quality of the assessment procedure and the conclusions warrant appraising the recommendations.

Task 4 addresses the appraisal of the recommended measures for health risk management and health promotion.

Each step in both Tasks ends with the requirement to write a paragraph for the appraisal report. In this way the report is written as the group goes along.

## Questions

What is meant by an appraisal ?

What is the purpose of appraising a Health Impact Assessment ?

*Discuss these questions, then turn to the next page.*

# Introduction

Take a look again at the letter of remit which the group has received.

Appraisal is the quality assurance component in the HIA procedures. Its objective is to establish and maintain independent quality standards. The HIA report needs to be appraised against the Terms of Reference (TOR) that were given to the consultant(s). TOR may be found in an annex to the reports of the HIA, EIA and/or feasibility study.

In order to reach the objectives of this Task you will need to carry out the sequence of activities listed below:

1. Decide whether the assessment conforms to the original TOR and whether these were adequate.
2. Verify the objectivity of the assessment and identify any important biases or unforeseen obstacles.
3. Decide whether the assessment procedure allowed for the data and their interpretation to be sufficiently comprehensive and credible to support the conclusions.
4. Decide whether the conclusions follow logically from the data collected, and whether they are accurate, comprehensive and probable.
5. Write the section of the appraisal report dealing with the assessment procedure and conclusions.

You will need to consider and agree on criteria for your appraisal as you come to each step in turn.

*If you can find one or more sets of TOR, please read them carefully.*

*List any items that specifically refer to or are relevant to health.*

*Then turn to the next page.*

# Terms of Reference

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

At the end of this Task we will take another look at the list you have just produced.

You have familiarized yourselves with the available TOR for the feasibility study, environmental impact assessment and possibly health impact assessment. *PEEM 1* explains why it is crucially important to include human health as a specific item in the TOR for a feasibility study/environmental impact assessment.

In many instances, it is even preferable to formulate TOR for a distinct HIA in the context of an EIA.

In relation to the questions below, you need to identify appropriate criteria for judging the adequacy of the TOR. For example, in terms of scope they may be too general (just a reference to "health" in a checklist) or too restrictive (limited to a small number of specific health hazards or even a single disease).

## Questions

In your judgement, were the TOR adequate for a meaningful HIA ?

Which items in the TOR are addressed in the HIA report and which items are not ?

*Record your answers for your appraisal report.  
Then turn to the next page.*

# Report objectivity

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

A good report should be objective. Even with adequate Terms of Reference as the starting point for the HIA, objectivity can be compromised by:

- Consultant's conflict of interest.
- Inappropriate timing.
- Inadequate budgeting.
- Consultant's lack of expertise.
- Lack of access to information.

Analysis of each of these problems will help you to make a reasoned judgement of the objectivity of the HIA report that can be entered into your appraisal.

## Question

How could the above problems affect the objectivity of an HIA report ?

*Document your answers and use them to compare your expectations with your judgement of how each of these potential problems influenced the HIA report.*

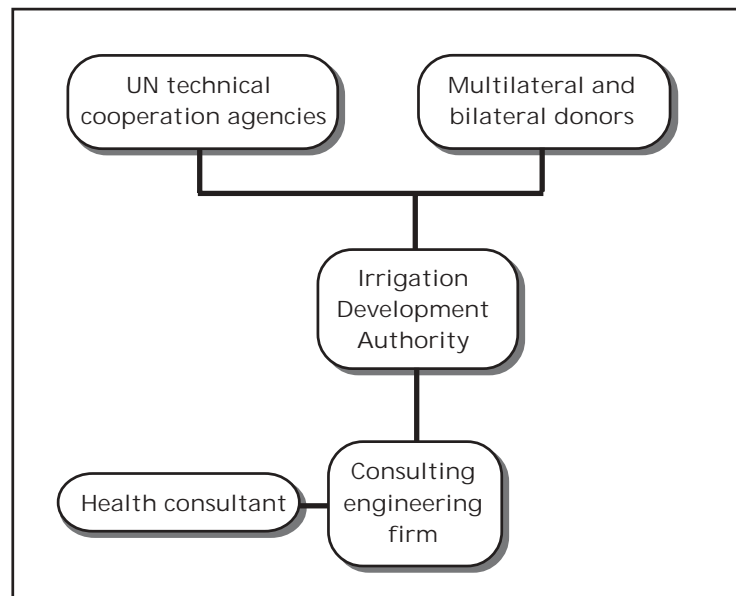
*Then go on to the next page.*

# Conflict of interest

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

## Example

Consultants depend on their clients and may not want to be too critical of their clients' projects. The issue of client relationship is most sensitive when the consultant is paid by the project proponent. It is less prominent when the consultant is paid by the funding agency and the assessment is included into the project by order of the funding agency.



Agencies involved in the planning of an irrigation project and the most commonly encountered position of a health impact assessment consultant.

## Question

In your project, which agency was the client of the consultant for the HIA ?

*Construct a diagram to indicate the relationships in your project.*

*Write a paragraph for the appraisal report with your judgement of the level of independence of the consultant's assessment.*

*Then, turn to page 8.*

# Timing

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

If an HIA is requested after the concrete has been poured, the analyses will be limited to questions related to the operational phase of a project. As a consequence, its outcome will focus on remedial rather than preventive health measures.

More optimistically, if the assessment is initiated during the general planning surveys or feasibility studies of a project, then there is an opportunity to determine the most cost-effective way to reach both the economic and the health objectives during the entire project cycle.

The timing of an HIA in relation to other planning and design activities in the project cycle crucially determines its value. Often this is out of the consultant's control. Inappropriate timing may easily render the entire study useless. In many instances, timing in relation to cyclical events is another essential determinant of the value of an assessment. For example, the seasonality of disease transmission needs to be considered when planning the direct collection of field data.

## Questions

When was the HIA carried out in relation to the rest of the planning process? Were there opportunities for the consultant to interact with the planners in the early stages of planning?

How much time do you estimate the consultant spent on the project site and how much interaction could the consultant realistically have had with planners, other consultants and the community?

Planning calendar for the Project

Year (in quarters)			
Surveys			
Feasibility study			
Project preparation and final design			
Construction			
Operation			
EIA			
HIA			

*Fill in the above bar chart, indicating when the HIA was probably undertaken.*

*Write a paragraph for the appraisal report. Indicate any reservations about the HIA due to problems with the appropriateness of its timing and the time available for interactions with the planners.*

*Then, turn to the next page.*

# Budgeting

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

Next, consider whether sufficient money was spent on the HIA for your project. Poor budgeting can have important repercussions for the objectivity of the HIA report.

The cost of an HIA ought to be a reasonable percentage of the total planning cost of the project. This is illustrated by the example below:

<b>Construction and planning costs of the Jubba River dam, Somalia</b>			
Construction of concrete dam, irrigation and flood control	US\$	100,000,000	of which
feasibility and final design	US\$	15,000,000	of which
socioeconomic, environment and health impact assessment	US\$	3,500,000	of which
health and water quality impact assessment	US\$	200,000	

## Questions

US\$ or local currency

What are the expected construction costs of the project whose HIA you are appraising? .....

What was the cost of the feasibility study and final design? .....

What was the cost of the HIA?  
*(Base your estimate on the number of staff, time, salaries, expenses)* .....

What was the cost of the HIA as a percentage of the total planning cost? .....

Considering its relative cost, was the HIA adequately funded ?

*Write a paragraph in the appraisal report on the adequacy of the budget for the HIA.*

*Then proceed to the next page.*

# Access to information

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

How can you be sure that the information in the HIA report is sufficiently comprehensive and credible ? There may be many obstacles to obtaining information. Informants from different ministries may have been reluctant to share reports and data with the consultant. There may have been prejudices, for instance associated with gender or race. Communication may have been hampered by language barriers. Local communities may have provided the consultant with information reflecting their expectations rather than reality.

The issue of reliability of data will be addressed in the next section on procedural rigour.

In the HIA report itself, you may find direct or indirect indications of lack of access to information. You may also know from your own experience of sources of information that have been missed.

## Questions

Does the HIA report indicate that

- existing reports from relevant ministries or other authorities were obtained and cited ?
- Information was cross-checked ?
- Local consultants were employed ?
- A wide range of key informants were interviewed ?
- All sections of the community were consulted and considered ?

*Write a paragraph in your report about the comprehensiveness and credibility of the information obtained, before going on to the next page.*

# Procedural rigour

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

Whatever health impact assessment method the consultant used, it must have sufficient breadth and depth. In one form or another, it needs to include information on the components considered in Task 2:

- (i) Health hazards.
- (ii) Vulnerable communities.
- (iii) Community risk factors.
- (iv) Environmental risk factors.
- (v) Institutional risk factors.
- (vi) The overall health risk assessment, with conclusions.
- (vii) Recommended measures for health risk management and health promotion.

Points (i) to (vi) are individually covered in the following pages. The technical adequacy, social acceptability and economic feasibility of the recommended measures will be appraised in the next Task.

*Examine the structure of the HIA report to ensure all essential components are covered and note down your observations.*

*Then turn to the next page, for a detailed appraisal of the first component.*

# Health hazard identification

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

The health hazards associated with a development project can be grouped conveniently as follows:

- Agents of communicable diseases.
- Agents/causes of non-communicable diseases.
- Causes of malnutrition.
- Causes of injury.
- Causes of psychosocial disorders.

It is likely that examples from each of these categories can be identified for any development project.

## Questions

What health hazards are identified in the HIA report ?

Consider the data used to support the identification of the most important health hazards. Are they recent ? Are they reliable ?

In your judgement, do you consider that the consultant identified all the important health hazards that could be associated with the project ?

*Write a paragraph for the appraisal report on the adequacy of health hazard identification.*

*Then turn to the next page.*

# Vulnerable communities

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

Vulnerable communities include any community group that is affected by the project.

Development projects change the size and composition of the community through changed birth and death rates, displacement, resettlement and/or migration. The change in composition may be reflected in the gender balance, age composition and/or ethnicity.

The health risk management recommendations that will be appraised in the next Task need to take these changes into account.

## Questions

Did the report identify all the vulnerable communities ?  
Were current size and composition of these communities determined and was impact of the project on these characteristics estimated ?

*Write a paragraph for the appraisal report as to whether the issue of vulnerable communities was adequately handled.*

*Then proceed to the next page.*

# Community risk factors

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

Some community groups are more vulnerable to specific health hazards because of their initial health or immune status, or because of their occupation, poverty, educational status, age or gender.

## Questions

Does the report identify how different community groups would be affected by the project ?

Does the report identify the risk factors associated with each vulnerable community group ?

*Write a paragraph for the appraisal report on the adequacy with which community risk factors were discussed.*

*Then move on to the next page.*

# Environmental risk factors

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

The project may create new hazardous environments or modify existing ones.

Examples may include faulty chemical storage facilities, contaminated drinking water, new habitats promoting disease vectors, industrial sites as sources of pollution, unguarded machinery, contaminated food supplies, poor siting of human settlements, social environments conducive to promiscuity, alcoholism and violence.

The associated environmental risk factors may vary geographically and temporally. You will find more examples in the resource materials listed at the beginning of the Task.

## Geographical changes

The effect of physical changes can extend over considerable distances away from the project, especially downstream or downwind. The construction of a dam, for example, may affect the flood patterns downstream, with repercussions for agricultural production and nutritional status.

## Temporal changes

Exposure to health hazards can vary seasonally and over a longer time scale. Many vector-borne diseases, such as malaria, constitute a seasonal health risk with transmission associated with certain climatic conditions (see also Task 2, page 11).

## Questions

Does the report describe the geographical distribution of health risks ?  
In this connection, does it discuss downstream effects ?

Does it identify potential zones of transmission or exposure ?

Does the report give details of the seasonal distribution of health risks ?

Does the report distinguish the risk factors in construction, early operation (first five years) and late operation (5-20 years) ?

*Write a paragraph for the appraisal report commenting on the adequacy of the predictions regarding exposure to environmental risk factors, taking into account geographical and temporal variation.*

*Then turn to page 16.*

# Institutional risk factors

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

Many different institutions have a responsibility for health. In the specific context of your project, a number of government and non-governmental institutions are concerned with health. Their capacity, capability and jurisdiction is variable.

## Questions

Does the report identify all the relevant institutions ?

Does it identify their strengths and weaknesses ?

Does the report identify needs for extra health services that could arise from the project ?

*Write a paragraph for the appraisal report on the adequacy of the description of existing services. Then turn to the next page.*

# The overall health risk assessment

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

The one-but-last-step in the health risk assessment procedure is a synthesis of the findings for each health hazard into combined health risk factors.

These findings need to be weighted for their relative importance. Some risk factors related to an individual hazard may re-inforce one another (for example, migration of non-immune resettlers into an area where irrigation development has boosted malaria vector populations), others may cancel each other out (the risk of injury due to the introduction of agricultural machinery will be reduced if there is sufficient capacity within the agricultural extension services to launch an effective training programme).

A correct synthesis will depend on the capacity of the consultant to weight the various risk factors attributed to each hazard and to consider the ways in which these risks may interact in an integrated picture.

## Questions

Does the report provide sound arguments to support the synthesis of risk factors for each hazard ?

Is the report transparent about the weighting and integration of risk factors for each hazard ?

And, does the overall health risk assessment provide a solid basis for accurate conclusions concerning the health impact of the project ?

*Write a paragraph on the adequacy of the final synthesis of health risk factors.*

*Next, examine the conclusions of the HIA report and consider the criteria that can be applied to appraise whether the results of overall health risk assessment have been translated adequately into conclusions.*

*Then turn to the next page.*

# Conclusions

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

The HIA report should acknowledge that different community groups will be affected in different ways. It should present changes in health risks for each community group whose health status will be significantly affected by the proposed project.

The report should also acknowledge that risks will vary for each community group during the different project phases.

The final conclusions should sum up the risks and rank them for each project phase.

## Examples

During the construction phase of an agricultural development project the construction workforce and the camp followers will be especially exposed to sexually transmitted infections (STIs). It is expected that during the operational phase this community group will have dispersed and will have been replaced by a community of intended project beneficiaries. The stable family structure of this farming community will result in a reduced exposure to STIs. They may, however, be especially exposed to agricultural pesticide poisoning.

In large projects, temporary health facilities may be constructed for ex-patriate workers. The availability of these facilities will counterbalance certain health risks identified to affect the project beneficiaries during the operational phase, provided they can be kept operational by the local authorities.

In addition to specific health risks, the conclusions should also highlight the health benefits and opportunities for health promotion that are associated with each project phase.

## Question

To what extent have the conclusions been correctly justified and are they based on solid evidence ?

*Discuss this question and formulate your observations for your report.*

*Then turn to the next page.*

# Justification and evidence base

1. Terms of Reference
2. Objectivity
3. Procedural rigour
4. Conclusions

In the earlier part of your appraisal, you considered whether the assessment of community risk factors, environmental risk factors and institutional risk factors was sufficiently justified.

To complete your appraisal, you need to make sure that the process of drawing up final conclusions is equally justified and based on solid evidence. Even if the procedure up to this point has been flawless, this final step may still allow bias, prejudice or convention to creep in.

Sound statistics, reference to experience in previous projects (with a clear indication of the similarities and the differences) and a list of assumptions made will permit you to appraise this part of the procedure. This is the moment to test how variations in the assumptions affect the final conclusions. If variations in the assumptions do not significantly alter the conclusions, then they can be considered robust. You will revisit the assumptions at the end of Task 4 for a sensitivity analysis of the overall assessment, including its recommendations.

## Questions

Does the report clearly list the assumptions made in reaching its conclusions ?

Are the assumptions reasonable and to what extent will changes in the assumptions affect the conclusions ?

*Now, write a paragraph on the robustness of the conclusions.*

*Then turn to the last page.*

# Outcome of the first part of the appraisal

Go back to the list you made at the beginning of this Task (page 3) and look at the items you originally thought most important for the TOR.

How does your original list look now, after completion of this Task?

You may now summarize your findings concerning the assessment procedure and conclusions in a final paragraph in the appraisal report. Don't forget to justify the outcome of your appraisal.

Also, prepare a preliminary recommendation concerning the rejection, the need for improvement or the acceptance of the HIA based on the appraisal of procedure and conclusions. Should you have encountered major flaws that warrant rejection or the need for a major improvement of the HIA, then there would obviously be little point in appraising the consultant's recommendations.

*Summarize your appraisal report for a brief presentation of not more than ten minutes in the next plenary session.*

*This concludes Task 3.*

## TASK 4

# Appraisal of a Health Impact Assessment Report

Technical, Social and  
Economic Aspects  
of Recommended Measures

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TASK GUIDE FOR THE TRAINING COURSE

**Health Opportunities  
in Water Resources Development**

# Appraisal of a Health Impact Assessment Report

## Technical, Social and Economic Aspects of Recommended Measures

Task 4

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# Timetable

A total of eleven hours and thirty minutes is available for Task 4, starting with the briefing.

Briefing on Task 4		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary session		30 minutes
Group work	3 hours	
Plenary session		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary session	2 hours	
Group presentations (10 minutes of presentation followed by 20 minutes of discussion per group)		

## Resource material

**Jobin, W.R. 1999.** *Dams and disease: ecological design and health impacts of large dams, canals and irrigation systems.* E & FN Spon, London / Routledge, New York

**Oomen, J.M., de Wolf, J. and Jobin, W.R. 1990.** *Health and Irrigation: Incorporation of disease control measures in irrigation, a multi-faceted task in design, construction, operation.* ILRI publication 45, Volumes 1 and 2, International Institute for Land Reclamation and Improvement, Wageningen, Netherlands

**Phillips, M. , Mills, A., and Dye, C., 1993.** *Guidelines for Cost-effectiveness Analysis of Vector Control Programmes.* PEEM guidelines 3. Document WHO/CWS/93.4. World Health Organization, Geneva (referred to as *PEEM 3*).

**WHO, 1982.** *Environmental Management for Mosquito Control, with special reference to malaria.* WHO Offset Publication 66, World Health Organization, Geneva

# Task 4

## An overview

### Aim of the task

In the previous Task you appraised the assessment procedure and conclusions, and reached one of four positions on these:

1. Acceptable.
2. Requires minor revision.
3. Requires major revision.
4. Unacceptable.

In the current Task you will learn how to appraise the recommendations made in a Health Impact Assessment (HIA) report by considering the technical, social and economic aspects.

In principle, you will only undertake this part of the appraisal, if the HIA procedure and the conclusions in the HIA report have been found to provide reliable evidence on which to base recommendations.

Take a look again at the letter of remit you have received.

Also, consider where you are in the comprehensive development framework that you prepared in Task 1. It will help you to anticipate the needs of the next phase in the project cycle at this stage of the appraisal.

### Output

The output of Tasks 3 and 4 together will be an appraisal report.

The first part of this report was formulated as you worked on Task 3 and should therefore be ready by now, possibly with some adjustments resulting from the plenary discussions.

In Task 4 you follow the same procedure (write a paragraph on completing each step in the Task). This time, however, you should address the recommended measures for health risk management and health promotion.

### Questions

HIA reports should result in recommendations for health safeguards, mitigating measures and health promotional measures.

How would you distinguish between these three ?

Anticipating the needs of the next phase in the project cycle, which of the three aspects, mentioned above, should be emphasized ?

*Discuss these questions, then turn to the next page.*

# Health Risk Management and Health Promotion

Too often, HIA reports simply state that "the project is acceptable if health services are improved". Such a general recommendation provides no useful information for planners to improve the project design or operation. It places the responsibility for dealing with the additional burden of disease entirely on the health services.

Specific recommendations should address the health risks that have been identified, for a particular project phase and for a particular community or community group:

- Health safeguards divert the risk entirely and prevent a negative health impact to occur.
- Mitigating measures minimize, to the extent possible, any predicted adverse health effects.
- Health promotional measures add value to a project by making use of health opportunities offered by the project.

The recommendations that achieve these outcomes may be:

- Technical design and operational changes.
- Regulations.
- Economic tools (subsidies, taxes, incentives).
- Strengthening of health services.

The first three types of recommendations are unlikely to be sufficient, so strengthening of health services will normally be required, taking into account the new community health status that is forecast.

In this part of the appraisal you will pay a great deal of attention to the economic evaluation of recommended measures, in anticipation of the next phase in the project cycle, when negotiations will take place. In these negotiations economic arguments are likely to carry a lot of weight.

*Now, in general terms, appraise the level to which recommendations for the strengthening of health services take into account the impact of project development and the effect of recommended risk management and promotional measures. Write a paragraph for your report.*

*Then, list the recommendations made in the HIA report in the first row of the Table on the next page.*

*The Table will facilitate a step-by-step appraisal of each recommendation.*

*Then, proceed to page 5 and start the appraisal exercise.*

# Table 1

## Summary of recommendations

Expand this Table for recommended measures as appropriate. The next sections of the guide elaborate on the issues of technical adequacy, social acceptability and economic soundness

Recommendation	1.	2.	3.	
Safeguard or health promotional measure				
Project stage				
Community addressed				
Technical adequacy				
Social acceptability				
Economic soundness				

# Design

1. Technical adequacy
2. Social acceptability
3. Economic soundness

The technical adequacy of the recommendations depends on:

- Design.
- Operation and maintenance implications.
- Geo-physical setting.
- Climate.
- Local availability of materials.

For example, cement lining of irrigation canals can prevent seepage and the formation of stagnant pools where mosquito vectors breed. Cement may, however, crack if it is of low quality or stressed by seismic activity.

Experience has shown that mosquito breeding sites resulting from cracked cement-lined canals are more localized and more limited in number, but their average surface area tends to be larger.

Some species of *Anopheles* mosquitoes prefer to breed in rock pools that appear in rivers during the dry season or in canals during periods when irrigation is interrupted.

Flushing small rivers and canals has proven effective in eliminating vector breeding. Managing malaria risks in this way is, however, only possible in areas where there is enough water available even in the dry season.

The design of flushing devices (e.g. automatic syphons) should therefore allow for an optimal flushing schedule within the limitations of water availability.

## Questions

Is the design of the proposed risk management and/or health promotional measures technically adequate ?

Could there be other reasons why the technical adequacy of the design might be doubtful ?

*Write a paragraph on the technical adequacy of the design of the recommended measure you are appraising and add a brief note in the relevant box of the summary table.*

*Then go on to the next page.*

# Operation and maintenance

1. Technical adequacy
2. Social acceptability
3. Economic soundness

The design of recommended measures may be excellent, but their performance can still be jeopardized by poor operation and maintenance or poor estimation of resources needed.

## Examples

- Water contact patterns are an important behavioural determinant of infections with water-based parasites such as schistosomal worms. Electric pumps for irrigation water distribution can reduce water contact and, thereby, infection risk. They depend, however, on a reliable supply of electricity.
- An unreliable supply of piped drinking water can lead to domestic storage in recipients that support breeding of *Aedes* mosquitoes that transmit the dengue virus.
- Ambulances can strengthen health services, but only if properly maintained and if fuel availability is guaranteed.

## Question

Are the recommendations for operation and maintenance adequate ?

*Write a paragraph on the technical adequacy of the operation and maintenance aspects of the measure under appraisal and add a brief note in the relevant box of the summary table.*

*Then go on to the next page.*

# Community characteristics

1. Technical adequacy
2. Social acceptability
3. Economic soundness

The technical adequacy of measures recommended in the HIA report becomes irrelevant if the measures meet with resistance from the local or affected communities.

Community characteristics may change as a result of the project. The acceptance level for certain interventions may be different in a changed community.

## Example

- Residual spraying of houses for vector control has suffered as much from decreasing social acceptance as it has from technical problems such as insecticide resistance.
- Improvement of the socio-economic status of the community will result in increased buying power including access to health services, medicine and personal protection measures.

## Question

Were demographic changes explicitly considered in the formulation of HIA recommendations ?

*Write a paragraph on your findings in your appraisal report.*

*Then, turn to the next page.*

# Knowledge, attitude, practice and belief

1. Technical adequacy
2. Social acceptability
3. Economic soundness

A first indicator of whether or not the consultant has considered social acceptability in the formulation of his recommendations is the performance of a Knowledge, Attitude and Practice (KAP) study of affected communities as part of the HIA.

Based on the information resulting from KAP studies and on demographic forecasting, specific social issues can be tackled in detail, and the social acceptability of recommended measures can be appraised.

## Knowledge

Did the consultant investigate the knowledge of the community when designing certain measures? For instance, there is little point in relying on the labelling of pesticides as a safeguard against poisoning if the illiteracy rate in a community is high.

## Attitude

In rural communities in many parts of the world, the attitude towards sexuality hampers open discussions on sexual issues. This reduces, for example, the effectiveness of promoting the use of condoms among groups at risk from sexually transmitted infections (STIs).

## Practice

Agricultural practices may be based on deep-rooted traditions. They may also imply important health risks. To change these practices with the objective of reducing exposure to health hazards, it is essential to understand their background. Also, the identity of the person proposing the changes is important: an agricultural extension worker is likely to have more credibility with local farmers than the community health worker when it comes to recommending changed agricultural practices aimed to reduce health risks.

## Belief

Religious convictions may hamper the impact of health safeguards and health promotional measures. For certain religious groups, for example, western medicine is not compatible with their beliefs. Strengthening of health services along the principles of western medicine will not have significant impact as long as this belief persists.

## Questions

Was a full KAP study of affected communities performed as part of the HIA and was the outcome used in support of the design of recommended measures?

*Add your observations and findings as a paragraph to your report.*

*Then proceed to page 10.*

# Participatory action

1. Technical adequacy
2. Social acceptability
3. Economic soundness

Affected communities should be involved in a health impact assessment. This can have a beneficial effect on the sense of ownership and on social acceptability of measures that are subsequently recommended for health protection and promotion.

Designing measures in such a way that the community can also participate in their implementation will contribute to the success and the sustainability of the interventions.

It is good practice to involve an anthropologist or cultural geographer in the process to ensure a professional approach to participatory action.

Community members can play an important role not only in the implementation of recommended measures, but also in the monitoring of health risk indicators during the construction and early operation phases.

## Questions

Was there an input from appropriate social scientists into the development of recommended measures ?

Are the recommended measures participatory in nature ?

*Write a paragraph about participatory action as part of your appraisal report.*

*Now consolidate your observations on social acceptability in a final statement and add an abbreviated note in the summary table.*

*Then proceed to the next page.*

# Economic evaluation

1. Technical adequacy
2. Social acceptability
3. Economic soundness

Economics is the third aspect that needs attention in the appraisal of recommended measures. The HIA report should contain a section in which the economic evaluation of the recommended measures is properly presented.

Appraisal of the economic aspects will help ensure that

- The cost estimate of recommended measures is complete.
- The recommended measures are affordable.
- The most cost-effective option has been chosen and there are no hidden costs.
- The costs of the recommended measures are significantly offset by the cost that would have been incurred to the health sector in case no measures were taken.

The next pages will guide you through a brief appraisal of the economic evaluation contained in the HIA report. You would need the help of a health economist to look at it in more detail.

For a comprehensive economic evaluation of the various options for health risk management measures, cost-effectiveness analysis is the preferred method.

Other sectors, such as the irrigation department in the agriculture sector, will use cost-benefit analysis in their project planning. In that case the benefit is always expressed in monetary terms.

In the case of measures with dual (health and agricultural) benefits, it is acceptable to make the two methods compatible by estimating their agricultural benefits in monetary terms and to deduct this amount from the costs incurred by the measures, before completing the cost-effectiveness analysis.

For more information refer to *PEEM 3*.

## Questions

Does the HIA report include an economic evaluation of the recommended measures ?

Which of the above points is covered by the economic evaluation ?

*Write a paragraph about the comprehensiveness of the economic evaluation contained in the HIA report.*

*Then, go to page 12.*

# Cost estimation

1. Technical adequacy
2. Social acceptability
3. Economic soundness

You are probably familiar with the estimation of financial costs of project activities. Financial costs are actually incurred by an activity and are paid for from funds contained in a budget and earmarked for that activity.

For example, nurses' salaries are paid for from the health sector budget.

It is important to check whether the budget accompanying the recommended safeguards, mitigating measures and health promotional activities adequately covers all cost items.

A list of financial cost items is likely to include:

- Salaries for professional and support staff.
- Buildings: construction and/or maintenance.
- Other infrastructural work.
- Vehicles: purchase, maintenance, fuel.
- Equipment and materials.
- Energy, water and other operational costs.

The costs of not including measures also needs to be estimated. The absence of adequate health safeguards can incur direct costs (e.g. the expenditures of the health sector for health services delivery) as well as indirect costs (productivity or development losses associated with illness, typically valued by using a proxy such as loss in income earnings, or the level of school absenteeism).

## Questions

Are the cost estimates of the recommended measures sufficiently complete ?

Has the cost of non-compliance with the measures been raised in the report ?

*Write a paragraph on cost estimation for your appraisal report and add your view in the summary table.*

*Then turn to the next page to consider affordability.*

# Affordability

1. Technical adequacy
2. Social acceptability
3. Economic soundness

The affordability of recommended measures is to a large extent, but not exclusively, dependent on their direct costs. The financial costs should, therefore, be considered in the context of the overall project budget, the national budget for health services and the national foreign debt and annual debt payments.

Measures of an infrastructural nature (environmental modification) involve mainly capital costs (costs for goods with a useful life longer than one year), while measures that require regular and repeated operations incur recurrent costs (costs for goods and services that are used or replaced within a twelve month time span).

This differentiation of costs is relevant in relation to the economic concept of the discount rate. This concept is explained in more detail in *PEEM 3*. It means that future expenditures can be discounted at very much the same rate at which money saved in the bank gains interest. The implication is that at a low discount rate, capital investments in risk management measures of an environmental modification nature are economically more attractive than a commitment to recurrent expenditures for on-going environmental manipulation measures (or health services, for that matter). The opposite is true at high discount rates.

Many countries have limited foreign (hard) currency reserves which they need to buy essential commodities (such as oil or medicine) on the world market. The foreign currency requirements of the recommended measures need to be evaluated in this context, and the appraisal should pay attention to this aspect.

## Questions

Did the consultant(s) place the cost of the recommended measures in the context of the project, national budgets and the foreign currency reserves ?

Was the discount rate considered in the evaluation of recommended measures ?

*Write a brief section for the appraisal report on how the issue of affordability of recommended measures is dealt with in the HIA report.*

*Then turn to the next page.*

# Value for money

1. Technical adequacy
2. Social acceptability
3. Economic soundness

As a solid basis for the ensuing negotiations, the HIA report should contain a cost-effectiveness analysis comparing the recommended measures with feasible alternatives.

An appraisal of that analysis had best be done with the help of a health economist, but two key issues are mentioned on this page and the next: economic costs and estimating effectiveness.

## Economic costs

Economic costs reflect the real value of all resources used, not just the value of the financial inputs. An important concept in this connection is that of opportunity costs. This covers, for example, the value of voluntary labour involved in the implementation of recommended measures. People providing voluntary labour forego the opportunity of other production-related activities. The cost of this lost opportunity should be reflected in the overall economic picture.

Market prices of certain goods or services may be distorted because of government policies (fixed exchange rates, food subsidies, taxation on imported vehicles). In order to overcome such distortions and arrive at the real economic costs of these goods and services, economists adjust these to "shadow prices".

Donated items do not incur a financial cost, but they should still be given a value in terms of economic costs.

## Questions

Does the HIA report provide a cost-effectiveness analysis of at least the most important recommended measures ?

Does the cost part of the analysis only consider financial costs or does it elaborate on economic costs as well ?

*Discuss these questions, write a paragraph for your report and proceed to the next page to finish your appraisal of the cost-effectiveness analysis of alternative measures.*

# Effectiveness indicators

1. Technical adequacy
2. Social acceptability
3. Economic soundness

Each intervention aimed at safeguarding or promoting health has an output that leads to an outcome. The outcome, in turn, leads to an impact on community health status. The choice of an effectiveness indicator from this sequence of events is important for the sensitivity of the cost/effectiveness analysis. For very similar interventions, output can be the indicator, while for more disparate interventions the impact on community health status may be the first common denominator. The further down the chain of events, the greater the risk of confounding factors.

For example, in a malaria vector control programme based on indoor spraying of houses with a residual insecticide, the output is the number of houses sprayed, the outcome is the reduced vector lifespan and the impact is a reduced incidence of malaria.

## Question

Considering the effectiveness indicator selected, has the estimate of effectiveness been carried out satisfactorily ?

*Now, write a paragraph on the cost-effectiveness analysis applied on the recommended measures.*

*Then, proceed to page 16.*

# The cost of risk management versus the costs of health services

1. Technical adequacy
2. Social acceptability
3. Economic soundness

One of the main goals of HIA is to ensure that "hidden" costs for the health sector, incurred by a development project, are eliminated by the incorporation of health safeguards and health promotional measures in the project design and operation. It is therefore worth checking whether the consultant(s) investigated to what extent the costs of recommended risk management measures are offset by the reduction in health services costs.

Sometimes, the assessment overshoots its target – it may be possible that the resources required to carry out the recommended measures allow for important improvements and efficiencies in the health services to be achieved, particularly if synergies or economies of scale are brought into the equation. There have also been cases where project designers disguised project components (for instance, a drainage system) as externalities such as health safeguards, in order to boost the Internal Rate of Return of a project.

The HIA report should provide a final check of this point, if only to exclude that this could be used as a counter argument in the negotiations.

*Once again consider to what extent the costs of the health safeguards mirror the savings made in health service delivery and add a paragraph on this to your report.*

*Then proceed to the last step in your appraisal: a synthesis of your findings.*

# Synthesis of your findings

You have concluded the appraisal of the measures recommended in the HIA report for health risk management and health promotion.

You have written your findings in a series of paragraphs that, together with the text you produced in Task 3, make up your appraisal report.

The summary Table with the comments on the technical, social and economic aspects of each individual recommendations will facilitate the synthesis of your findings.

Remember that there is no such thing as a perfect HIA report with water-tight recommendations. Your appraisal serves as much to improve the current report and recommendations as it does to ensure that flaws in the framework for the present report (for instance, inadequate TOR) are corrected in future assessments.

You will now have to come to your final verdict:

- Rejection of the HIA as inadequate.
- Demanding major improvements in the HIA.
- Acceptance of the HIA with minor corrections.
- Acceptance of the HIA as it stands.

*This completes the appraisal exercise of Tasks 3 and 4.*

*Please complete your report and prepare your oral presentation.*

## TASK 6

# Health Risk Management Measures and Monitoring - A plan for intersectoral action

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TASK GUIDE FOR THE TRAINING COURSE

**Health Opportunities  
in Water Resources Development**

# Health Risk Management Measures and Monitoring - A plan for intersectoral action

Task 6

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# Timetable

Task 6 is the last in this course. While it assists your learning, it also identifies how successful the course has been. Your group will be working without its tutor. A total of fifteen hours is available for this Task. In addition, a field trip may be made to a development project in operation. On completing the Task, you will present your Plan of Action and Memorandum of Understanding in a final plenary session, where they subsequently will be discussed.

Briefing for Task 6		30 minutes
Group work	3 hours	
Plenary session (possibly including a briefing for next day's field trip)		45 minutes
Group work	3 hours	15 minutes
<hr/>		
Field trip (if possible)	8 hours	
<hr/>		
Plenary session (may include a de-briefing of previous day's field trip)		45 minutes
Group work	2 hours	45 minutes
Plenary session		30 minutes
Group work	3 hours	30 minutes
<hr/>		
Plenary session - presentation of reports from four groups	2 hours	30 minutes

## Resource materials

**Tiffen, M. (1991).** *Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation.* PEEM guidelines 1. Document WHO/CWS/91.2. World Health Organization, Geneva. (Referred to as *PEEM 1*)

**Hunter, J.M., Rey, L., Chu, K.Y., Adekolu-John, E.O. and Mott, K.E. (1993).** *Parasitic diseases in water resources development.* World Health Organization, Geneva.

# Introduction

Your appraisal of the HIA report has resulted in the endorsement of a final list of measures for health risk management and health promotion. A structured list of activities, designating responsibilities and allocating resources (including a realistic and transparent budget) will now be needed. This is intended for submission to the appropriate authorities, so that it can be considered at the negotiation phase.

You have received a letter of remit requesting you to assist in the formulation of an intersectoral Plan of Action. This should specify for each sector the obligations and expected benefits and the synergies that can be derived from intersectoral collaboration.

At the end of Task 6, the group is expected to present the Plan of Action. Ideally, this should cover:

1. A list of agreed activities for health risk management and health promotion and the allocation of responsibilities and resources for their implementation.
2. Verification of compliance with the specifications for the measures and agreement on the authorities responsible for verification.
3. Monitoring of the health status of vulnerable communities both for identified health hazards and for new, unexpected health problems, and agreement on which authority is to be responsible for monitoring.

Once your Plan of Action has been formulated, you will prepare a Memorandum of Understanding (MoU). This is a formal document setting the legal framework for the arrangements between institutions involved in the implementation of the Plan of Action.

In the final plenary session, your group will make a brief oral presentation covering your Plan of Action and your Memorandum of Understanding. Both documents are to be handed over at the end of your presentation.

## Question

Which sub-tasks are involved in formulating the Plan of Action ?

*Discuss this question and then turn to the next page.*

# An overview

In formulating the Plan of Action, you will want to consider each of the following sub-tasks:

1. Prepare an inventory of the activities to be carried out in order to implement the agreed health risk management and health promotional measures.
2. Do the same for the activities related to verification and monitoring.
3. Annotate each activity in the inventories with the responsible ministry or other authority (or, in some cases, the ministries/authorities sharing responsibility).
4. Agree on a timetable for the activities.
5. Decide on the allocation of resources that each ministry or authority needs for carrying out its agreed responsibilities.

Once the Plan of Action has been formulated, you can draft the Memorandum of Understanding.

*Complete the first of the above sub-tasks, then proceed to the next page.*

# Inventory of verification and monitoring activities

1. Inventory of tasks
2. Timetable
3. MoU

## Crucial activities

Two crucial types of activities during the construction and early operational phases of the project include:

- Verification that the specifications of health risk management measures and health promotional measures are complied with; and
- monitoring the changes in the health status of vulnerable communities.

The purpose of verification and monitoring is to allow for corrective adjustments to the project to be made.

## Verification

Verification involves the following activities:

- Report on compliance with agreed measures and standards.
- Evaluate the effectiveness of the recommended measures.
- Consult with the relevant parties to remedy unforeseen health effects.
- Review the adequacy of arrangements, resources and cash flows for appropriate implementation of the measures.
- Review operational plans and adjust legislation, if necessary.

## Monitoring

Monitoring the changes in health status involves measuring:

- Health indicators (such as infant and child mortality, incidence and prevalence of communicable diseases, the nutritional status).
- Environmental indicators (such as the disease vector densities, concentration of chemical pollutants, the coverage for adequate sanitation).
- Socioeconomic indicators (such as income levels), which will provide information on the affordability of health services for vulnerable groups.

*Now complete the inventory of activities related to verification and monitoring of your project. Then proceed to the next page.*

# Timetable

1. Inventory of tasks
2. Timetable
3. MoU

For some of the activities, the execution will be limited in time. Others may have to be carried out continuously or on a recurrent basis. This will have important implications for the resources that are needed. This is therefore the correct moment to decide on the timetable for the implementation of the activities.

In order to design a timetable for health risk management and health promotional measures, for verification and for monitoring you will need to:

- Decide on the time when each activity should start.
- Decide on the time period over which each activity should be carried out.
- Relate the timetable to the phases of the project cycle.

*Now, develop a comprehensive time table, based on the above decisions, and attach it to the Plan of Action.*

*Next, you should allocate responsibilities and resources for the individual activities in your inventories to each ministry or other authority.*

*Then the responsibilities and allocation of resources can be formalized in a Memorandum of Understanding.*

# Memorandum of Understanding

1. Inventory of tasks
2. Timetable
3. MoU

It is important to decide on the administrative arrangements and procedures that formalize the contact between ministries and other authorities that are involved in the project. A Memorandum of Understanding provides a legal tool to formalize such arrangements.

A Memorandum of Understanding may contain any of the following elements:

- A list of collaborating partners.
- The rationale for collaboration in the project concerned.
- The objective(s) of the collaboration.
- A list of the main health risk management, health promotion and monitoring activities, with allocation of responsibilities and obligations to each ministry and authority, and resources needed for each activity.
- A mechanism to allocate external funds and other resources to various ministries and agencies.

*Now draft the Memorandum of Understanding and prepare your presentation for the plenary session.*

*That will complete your final Task !*

# 3 Generic Letters of Remit

## Introduction

As explained in chapters 6 and 7 of Part II, the letters of remit are an essential instrument in creating a realistic and authentic context for the groups to carry out their tasks.

On the following pages generic letters of remit are presented for Tasks 2, 3 and 4 combined, 5 and 6. Bracketed texts presents options to adapt the letters to specific needs. The purpose of each letter and the possible originating authorities are presented as an introduction.

Ideally, letters of remit are prepared on authentic stationary of the originating authority. Examples of such letters used in the Ghana and Tanzania courses are included in the material and also included on the accompanying CD-ROM.

# Letter of Remit for Task 2:

## Rapid Health Impact Assessment, a Preliminary Step

Purpose of the letter of remit:

- 1) To inform the person addressed of the establishment of an intersectoral group/committee and of his/her appointment as a member, representing the ministry/authority with which he/she is affiliated.
- 2) To briefly explain the nature of the group's task and the broader context within which this task, a preliminary rapid health impact assessment, has to be performed.
- 3) To define the expected output(s) of the group's work.
- 4) To set a deadline for the submission of the group's report.

Possible originating authorities (whose stationery should ideally be used), in order of desirability:

- A national authority operating intersectorally, such as a National Economic Planning Council, or a National Environmental Protection Authority.
- The Prime Minister's Office.
- The proponent ministry of the development project in question.
- The Ministry of Health.

Proposed text:

Dear Sir/Madam,

In a recent meeting of <the National Economic Planning Council> <the Environmental Protection Authority> <the Ministers of Health, Environment and –name of project proponent> it was agreed that an intersectoral group be established to assess the health impact of the <name of the project>.

The <name of the project> in <location> has been proposed in the framework of <insert relevant macro-economic policy objectives, for example: the 7<sup>th</sup> Five-Year Development Plan, which aims at improved food security and sustainable livelihoods of rural populations>.

In accordance with <relevant policy, regulation, legislation>, this project will be submitted to environmental impact assessment procedures. Past experience shows that this type of development project, in addition to possibly causing environmental degradation, can contribute to an important decline of the health status of affected communities. At the same time, it is also clear that projects of this kind provide opportunities to implement measures which actually help improve the health status of these communities in an efficient manner.

The Ministry of the Environment has given general directives that the possibility for separate health impact assessments should be explored whenever appropriate, in connection with technical feasibility studies and environmental impact assessments. This led to the afore-mentioned agreement, by all parties concerned, to establish an intersectoral working group to address this question. The group is expected to present its conclusions concerning the desirability of a health impact assessment of the <name of the project>.

I take pleasure in inviting you, herewith, to become a member of this working group. Your designation as a representative of <relevant ministry/authority> has been cleared by <your Minister/the executive head of the authority you work for>. I furthermore wish to inform you that the group will start its activities on <date, in accordance with dates for Task 2 in the course programme> at <course venue>. At the start of the first meeting of the group, you will receive more detailed information concerning the Task the group is asked to undertake.

Your conclusions should provide a concise evidence base for the group's final recommendation whether or not a full and in-depth health impact assessment of the <name of the project> should be carried out.

Members of the group are asked to present the outcome of their work at a special session on <date, in accordance with dates for Task 2 in the course programme> and to submit a full written report on that occasion.

Your efforts and inputs into this important assignment will be greatly appreciated.

Yours sincerely,

<Signed by head of the authority>

# Letter of Remit for Task 3 and Task 4:

## Appraisal of a Health Impact Assessment Report:

Purpose of the letter of remit:

- 1) With reference to the proposed project, to acknowledge and give credit for the work carried out by the group on Task 2.
- 2) To summarise the status of the various assessment activities scheduled for the project's feasibility phase.
- 3) To briefly explain that the present assignment consists of two distinct tasks, what they are and to provide concise terms of reference for them.
- 4) To set a deadline for the submission of the group's report.

Possible originating authorities (whose stationery should ideally be used), in order of desirability:

- A national authority operating intersectorally, such as a National Economic Planning Council, or a National Environmental Protection Authority.
- The Prime Minister's Office.
- The proponent ministry of the development project in question.
- The Ministry of Health.

Proposed text:

Dear Sir/Madam

The <National Economic Planning Council> <National Environmental Protection Authority> <national environment and health authorities> <has> <have> taken note of the recommendations made by the intersectoral working assigned to consider the need for a comprehensive health impact assessment of the <name of the project>. I should like to thank you once again for your expert contribution to this important work.

In accordance with the main recommendation, an in-depth health impact assessment was carried out as part of the package of feasibility and impact studies of the proposed project. These studies were commissioned from an external consulting firm. The consultants worked jointly with national counterparts and recently submitted their reports.

The report of the feasibility study has been appraised by the appropriate national authorities from an economic and technical viewpoint. The <Environment Ministry> <Environmental Protection Authority> is currently appraising the Environmental Impact Assessment report. I herewith invite the intersectoral working group of which you are a member to reconvene and appraise the Health Impact Assessment report.

A series of sessions is scheduled to start on <date, in accordance with dates for Tasks 3 and 4 in the course programme> at <venue>. To facilitate an efficient, yet comprehensive appraisal, this assignment has been organised in two parts: the appraisal of the assessment procedure and its conclusions, and the appraisal of the recommended measures.

For the appraisal of the assessment procedure and its conclusions, the group will have to decide whether the assessment was carried out in conformity with its Terms of Reference, whether it was objective, accurate and comprehensive, and whether its conclusions are logically and credibly supported by the evidence collected.

For the appraisal of recommended health safeguards, risk mitigating and health promotional measures, it will be critical to review their technical adequacy, social acceptability and economic soundness.

More detailed instructions will be made available at the start of the first session of your group's meeting. A copy of the Health Impact Assessment report and of relevant parts of the feasibility study report <has already been made available> <will be made available> to the members of the group.

The group is requested to present the results of the first part of the appraisal at a special session on <date, in accordance with dates for Tasks 3 and 4 in the course programme> and those of the second part of the appraisal at a special session on <date, in accordance with dates for Tasks 3 and 4 in the course programme>. Written appraisal reports should be submitted on those occasions.

Your contribution to this important task will be greatly appreciated by the Government of <county or state>.

Yours sincerely,

<signed by the head of the authority>

# Letter of Remit for Task 5:

## Construct Generic Terms of Reference for Health Impact Assessment

Purpose of the letter of remit:

- 1) With reference to the proposed project, to acknowledge and give credit for the work carried out by the group on Tasks 3 and 4.
- 2) To announce the government's intention to mainstream health impact assessment into development planning procedures.
- 3) To convey the objectives and scope of the next Task: the formulation of generic HIA terms of reference.
- 4) To set a deadline for the submission of the generic TOR draft.

Note: this is the **only** Task for which no Task Guide is provided.

Possible originating authorities (whose stationery should ideally be used), in order of desirability:

- The National Environmental Protection Authority (assuming they are responsible for EIA Terms of Reference).
- The Ministry of Health.

Proposed text:

Dear Sir, Madam,

I should like to thank you for your recent contributions as a member of the intersectoral working group established to look into the health aspects of the proposed <name of the project>.

The Government has come to realise that health impact assessment should be a standard procedure for all proposed <types of projects, for example medium and large scale water resources development> projects, in conjunction with environmental impact assessment. In anticipation of the formulation of policies and legislation to provide a framework for HIA, we have identified the need for generic terms of reference for health impact assessment of development <policies, programmes and projects – the scope depends on the level of strategic assessment that is required->. The availability of such generic terms of reference is expected to facilitate the introduction of health impact assessment into the development planning process.

After due consultation with relevant authorities, I am now pleased to invite all members of the working group to assist in the formulation of such generic TOR, which should contain the following sections:

Preamble

Describing the rationale for these Terms of Reference within the policy and decision-making framework of <name of the country>.

Terms of Reference

Describing the scope and nature of the activities that need to be carried out by those from whom the assessment is commissioned.

Expected outputs

Providing clear guidance on the expected outcome of the assessment exercise and the timeframe for its completion.

Any annexes as deemed necessary

The draft generic Terms of Reference prepared by the Working Group will be the subject of review and discussion at a meeting on <date; in accordance with dates for Task 5 in the course programme>. You are requested to submit your draft on that occasion.

I should like to take this opportunity to express my gratitude, on behalf of the Government of <name of the county, state> for your continued support of the cause of incorporating health into national strategies for sustainable development.

Yours sincerely,

<signed by the head of the authority>

# Letter of Remit for Task 6:

## Health Risk Management Measures and Monitoring – a Plan for Intersectoral Action

Purpose of the letter of remit:

- 1) To report on progress in the planning of the development project under scrutiny.
- 2) To convey the views of the various sectoral authorities involved, concerning the impacts on health.
- 3) To point out the problems and constraints perceived from the different sectoral perspectives in following up on the HIA recommendations, and the possible solutions to overcome these.
- 4) To reconvene the working group to formulate an intersectoral action plan and to design institutional arrangements for its effective implementation.
- 5) To set a deadline for the submission of the group's outputs.

Note: This is the last Task of the course, culminating in key outputs. It is recommended one or more senior government officials are invited to attend the meeting where these outputs are presented, and to announce their attendance in the letter of remit.

Possible originating authorities (whose stationery should ideally be used), in order of desirability:

- A national authority operating intersectorally, such as a National Economic Planning Council, or a National Environmental Protection Authority.
- The Prime Minister's Office.
- The proponent ministry of the development project in question.
- The Ministry of Health.

Proposed text:

Dear Sir, Madam,

The various government authorities and departments with an interest in the proposed <name of the project> and its health impact recently met to discuss a follow-up to the HIA report appraised by the intersectoral working group.

Representatives of the Ministry of Health voiced their doubts over their capacity to follow up effectively on all recommended safeguards, mitigating measures and health promotional activities. Many of these, by nature, pertain outside of the area of competence of the Ministry of Health. Health sector-specific interventions recommended may, though in principle cost-effective, still require considerable financial investment, and some a long-term financial commitment. Health sector resources are expected to remain very limited and difficulties are therefore foreseen in entering new commitments for the interventions and for intensified health monitoring.

Representatives of the <name of proponent ministry> share the concerns of their health colleagues. Although the <name of proponent ministry> is prepared to collaborate with other ministries and with local community stakeholder groups in safeguarding health in the <name of the project>, the Finance <Ministry, Department> may not agree to authorizing health expenditures from the budget for <type of development>. The Finance <Ministry/Department> may also be concerned that integrated development projects could lead to conflicts over responsibilities and obligations between government departments.

Having taken this into consideration, it is desirable that the various departments involved formulate an intersectoral action plan, with a realistic timetable for the implementation of the recommended measures, to scrutinise compliance with proposed project design and management modifications, and to monitor the health status of affected communities. To ensure that effective institutional arrangements are in place for the action plan to be carried out, a Memorandum of Understanding will also need to be agreed upon. This MoU should specify responsibilities, obligations, logistics, resource sharing and fund allocation.

I should like to call upon you once again, as a member of the intersectoral working group, to carry out these tasks. A special session is scheduled on <date, in accordance with dates for Task 6 in the course programme> at <venue> for the presentation of the action plan and the draft MoU. This session is of critical importance and will therefore be attended by <name (s)> of one or more senior government officials>.

Thank you in advance for your contributions to this important task.

Yours sincerely,

<signed by head of the authority>

## **Examples of Letters of Remit from the Pilot Courses**

in case of reply the number and the date of this letter should be quoted

My Ref. No. \_\_\_\_\_

Your Ref. No. \_\_\_\_\_



REPUBLIC OF GHANA

Ministry of Health

P. O. Box \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ 19\_\_\_\_

Accra, 27 January 1994

Dear Sir/Madam,

The Irrigation Development Authority has successfully secured a loan from the African Development Bank for the proposed Kpong Irrigation Project.

In accordance with our national policies and with those of the Bank, an Environmental Impact Assessment (EIA) procedure must be satisfactorily completed before the loan can be authorized. This includes carrying out the assessment and submitting a report to the Environmental Protection Council for its consideration and approval.

The EPC has asked the Ministry of Health to take charge of the human health component of the EIA. The Minister of Health has decided to establish an intersectoral working group to carry out the initial health impact assessment; all relevant ministries and authorities will be represented in this group.

On behalf of the Minister of Health I take pleasure in informing you that you have been formally designated as a member of this group. The group's terms of reference are:

- To carry out a health impact assessment that comprehensively considers all possible health risks of the Kpong Irrigation Project as well as identifies opportunities presented by the project to actually improve the human health status;
- to report on these risks and outline options for preventive and mitigating measures as well as opportunities to promote better health;
- to recommend whether or not a more in-depth health risk assessment with a focus on specific health issues will be necessary.

Further, more detailed instructions will be handed out at the time of the group's first meeting. Arrangements have been made for a site visit on Saturday 29 January. A library with background information is at the disposal of the group.

The group is expected to present its findings at a special session on Tuesday morning 1 February and to submit its full report at that occasion.

I wish you success in carrying out this important task.

Yours sincerely,

Dr A. Issaka Tinorgah  
External Aid Coordinator  
for the Minister of Health

In case of reply the number and the date of this letter should be quoted

My Ref. No. \_\_\_\_\_

Your Ref. No. \_\_\_\_\_



REPUBLIC OF GHANA

Ministry of Health

P. O. Box \_\_\_\_\_

\_\_\_\_\_ 19\_\_\_\_

Accra, 1 February 1994

**Re: Health Impact of the Kpong Irrigation Project**

Dear Sir/Madam,

The Environmental Protection Council has taken note of the recommendations made by the intersectoral working group on the health impact of the Kpong Irrigation Project. I should like to thank you once more for your expert contributions to the important work of this group.

In accordance with one of these recommendations, an in-depth environmental health opportunity assessment component was included in the feasibility study of the proposed project. This study was commissioned from a consulting engineering firm in the UK, Sir M. MacDonald and Partners. The consultants worked in cooperation with Ghanaian partners and recently submitted their report.

The Irrigation Development Authority has appraised this report from an irrigation technical viewpoint. The Environmental Protection Council is currently appraising the Environmental Impact Assessment section it includes. It has asked the Ministry of Health to reconvene the intersectoral working group to appraise the health impact assessment.

On behalf of the Minister of Health I am therefore pleased to invite you to attend a series of sessions of the group which will start today in Akosombo, with the objective to carry out this appraisal. It will consist of a technical and an economic appraisal.

The group's terms of reference are:

*For the technical appraisal*

- To decide whether or not the report conforms with the original terms of reference given to the consultants, and to detect any bias that may have affected the conclusions they arrived at;

- to decide whether the data and their interpretation are sufficient and credible to support the conclusions;
- to decide whether preventative, mitigating or remedial measures recommended by the consultants are technically sufficient, credible and practical, and, if deemed necessary, recommend alternatives.

*For the economic appraisal:*

- to decide on the economic appraisal methodology that most appropriately applies in this case;
- to define the framework for an economic appraisal of the proposed interventions (and any feasible alternatives) so that the financial analysts of EPC can correctly estimate their costs and their effects.

More detailed instructions will be handed out at the start of the meeting. A copy of Annex 4 of the report of the feasibility study is already in your possession. A library with background information is at the disposal of the group and resource persons will be available for consultation.

The group is expected to present the results of its technical appraisal at a special session on **Thursday morning 3 February** and those of its economic appraisal on **Friday afternoon 4 February** and to submit the respective full appraisal reports at those occasions.

Your efforts and inputs into this important task are greatly appreciated by the Government of Ghana.

Yours sincerely,

Dr A. Issaka Tinorgah  
External Aid Coordinator

for the Minister of Health

In case of reply the  
number and the date of this  
letter should be quoted

My Ref. No. \_\_\_\_\_

Your Ref. No. \_\_\_\_\_



REPUBLIC OF GHANA

Environmental Protection Council  
Office of the Executive Director  
Accra, Ghana

Accra, 7 February 1994

**Re: Formulating generic Terms of Reference for Health Opportunity  
Assessments of development projects in Ghana**

Dear Sir/Madam,

Following your contributions to the appraisal of the Health Impact Assessment report of the Kpong Irrigation Project, the Environmental Protection Council has decided that generic terms of reference for health opportunity assessments of development projects in Ghana need to be formulated. We are seeking your advice on this matter.

The work of the intersectoral group established by the Ministry of Health, of which you are a member, revealed a number of deficiencies in the current health impact assessment procedures. Some of the major shortcomings are: the focus on remedial rather than preventive measures (including modifications in the design), insufficient detail in the terms of reference for health consultants, room for professional bias, inadequate timing of the assessment, lack of opportunity to consult the affected communities and limited funding compared to the budget available for the feasibility study.

It is expected that the development and rehabilitation of small to medium scale irrigation in Ghana will accelerate before the end of the decade. In the light of this forecast a growing need for health opportunity assessments is expected. I therefore invite your group to formulate the generic terms of reference for health opportunity assessment of water resources development projects, including the preconditions and criteria for their successful application. Three other intersectoral groups have been given the same assignment and a Panel discussion will be held on Tuesday morning 8 February to arrive at a definitive version of the generic terms of reference. Thank you for your assistance.

Yours truly,

Dr P.C. Acquah  
Executive Director  
EPC

THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF HEALTH

Telegrams: "AFYA", DAR ES SALAAM.  
Telephone: 20261.  
(All letters should be Addressed to  
the Principal Secretary)  
In reply please quote:



P.O. Box 9083,  
DAR ES SALAAM.

Ref. No. ....

Dar es Salaam, 14 March 1995

**Re: Health Opportunities in the Lower Hai Irrigation Project**

Dear Sir/Madam,

In the context of the National Development Plan of the United Republic of Tanzania which aims at improved food security and better opportunities for income generating activities for the rural population, an irrigation development project, known as the Lower Hai Irrigation Project, has been proposed and is currently under study.

In accordance with the new regulations and environmental legislation, this project will be submitted to environmental impact assessment procedures. Experience in the past has shown that irrigation projects can contribute, in addition to environmental degradation, to a decline of the health status of the affected communities. At the same time, it is also clear that this and other types of rural development projects provide opportunities to implement measures which actually help improve the local health status in an efficient manner.

The National Environment Management Council has therefore decided that the needs for a separate health opportunities assessment should be explored, in connection with the technical feasibility study and the environmental impact assessment. It has therefore requested the Ministry of Health to establish an intersectoral working group which will address this matter and present its conclusions concerning these needs.

I take pleasure in inviting you, herewith, as a member of this working group and wish to inform you that the group will start its activities on Wednesday 15 March 1995 at CEDHA in Arusha. At the start of the first meeting you will receive more detailed information concerning the Task you will be asked to undertake. I should like to draw to your attention that we expect you to consider parameters of the human population, environmental risk factors and the capacity of local health services in this task.

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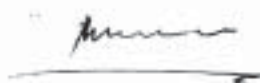
Page 2

Your conclusions and recommendations should clearly indicate whether or not a full health opportunities assessment should be carried out.

You are asked to present the outcome of your work at a special session on Monday 20 March 1995 and to submit a full report on that occasion.

Your efforts and inputs into this important task are greatly appreciated by the Government of the United Republic of Tanzania.

Yours faithfully,



(for the Minister of Health)

# 4 Guidelines for the Group Tutor

## Questions addressed:

- What does this course try to achieve ?
- What is the role of the tutor ?
- What do the tutors do ?

## What does this course try to achieve ?

It does not try to make each of the participants into a specialist in any aspects of the topic of the course.

It does set out to develop a comfortable feeling in collaboration and to develop skills in collaborating with colleagues from other professions in other Ministries.

Feeling comfortable in collaborating depends on:

- Getting to know these colleagues well enough to come to trust them;
- Experiencing that information and advice from others with particular expertise can be very helpful;
- Experiencing that one's own information and expert advice can be very helpful to others;
- Experiencing the excitement of seeing a problem or task quite differently through the perceptions of colleagues from different professional backgrounds and with different expertise;
- Experiencing the satisfaction of completing a task better and more quickly than would have been possible without the collaboration of others with their special knowledge and expertise;
- Reflecting with these colleagues on how collaboration has contributed to the success of the course.

Feeling comfortable in collaborating, and skills for collaborating need to be developed in a relevant context. This course will thus present the participants with a series of tasks, where each new task builds on the previous task.

The participants work in small groups with at least one member from each of the Ministries in each group. Each task has to be completed within a fixed timetable. The results of each task are written up as a report which is also presented orally by each group in front of their colleagues in the other groups. The presentations are discussed with their colleagues, with the course director and with resource persons<sup>1</sup>.

The tasks are made as realistic as possible and relate to a problem which requires decisions and action from several Ministries. The group of officials from the participating Ministries are expected to make reasoned decisions. This they cannot do until they have acquired the necessary understanding, either from each other and/or from documents and relevant literature made available during the course. When the group cannot resolve a particular issue/question/problem in its task, the tutor can invite an appropriate resource person to meet with the group.

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1) A resource person is someone with special knowledge and expertise who has been invited to assist in the course.

A range of skills can thus be developed in the context of a realistic set of tasks. Of immediate benefit for each individual Ministry official will be the ability to apply a systematic, analytical approach to the review of national and more local problems, priorities and proposals against a spectrum of criteria. Further, related skills will include the ability to identify key issues; formulate questions and obtain additional information and new insights through critical thinking; as well as assemble and present conclusions and recommendations in appropriate written and oral form. Of particular benefit to their ministries will be the development of skills for collaborating within groups and with individuals from other professions in other sectors of government.

These skills will include the ability to listen and comprehend a different point of view, based on different expertise and experience; the ability to seek additional information in a non-confrontational manner; to paraphrase, in order to obtain confirmation of understanding of what has been argued or proposed by someone else; the ability to advance a clearly presented argument and to respond constructively to counter-argument; the ability to negotiate, in order to arrive at an acceptable agreement.

Perhaps the most difficult aspect to develop with the participants will be related to their personal image – how confident they feel in their own expertise, and their willingness to give up a part of their personal power – to give information and provide understanding that will empower others to make decisions and to take action which they could not have done before.

## 2

### **What is the role of the tutor ?**

The tutor is not an expert in the main topic of the course.

The tutor should not try to be a teacher or leader of the task group.

The tutor should be a “facilitator” who helps the group to work as a team and who helps the group to manage their work with each of the tasks.

The tutor should also be the friend of each member of the group and of the group as a whole.

### **What do the tutors do ?**

The tutors will be “non-experts”, so that they cannot answer their group’s questions in relation to the outcomes or results of their group’s tasks. However, the tutors will have made themselves familiar with the nature of each task.

The tutors will have discussed the content of the guide of each of the tasks with the course director, so that they will be able to provide guidance if any of the contents appears ambiguous to the group.

The tutors will also be familiar with the overall timetable, so that they can ensure that each task is completed in good time, and that their group is aware of other activities and events, e.g. the daily plenary sessions when any unresolved issues can be discussed with the resource persons.

The tutors are the link between their groups and the course director. This responsibility will include logistics; timetable problems; resources, such as paper and pencils; access to documents or other reference material; and dealing with difficulties or dissatisfaction of any type.

The tutors are also the link between their group and the resource persons. When a specialist has been invited to meet with the group, the tutor will ensure that the resource person responds helpfully to the group's questions, does not lecture the group, and leaves the group as soon as the questions have been discussed satisfactorily!

The tutors encourage the smooth working of their group. This will include:

- Helping members of their group to get to know each other at the start of the first task.
- Helping their group in the use of the guide for each task.
- Ensuring that all members of their group contribute collaboratively, e.g. contribute to the discussion, to information sharing, decision making, allocation of information seeking, and report writing.
- Fostering the "bonding" within the group, where the group develops a corporate identity, works as a team, and comes to rely on every member of the group.
- Being aware of how groups are built up, and aware of group dynamics – the relationship between members of the group, so that the tutors can identify potential problems within the group and take steps to rectify them.

Perhaps the tutor's most important and least easy task is to help in building confidence within the group through personal commitment to the group; encourage sharing of information within the group; fostering productive discussions, and sharing the work within each task.

The tutors will meet for two days immediately before the course starts. This will give them an opportunity to become familiar with their role as tutor and to discuss the content of each task guide with the course director.

The tutors will succeed in their responsibilities if they can show complete dedication to their group, identify themselves entirely with their group – during group meetings, during plenary sessions, during presentation of reports, during field visits, at meal times and leisure times in supporting individuals and making their group feel that its work matters and is valued.

In addition to meeting with the course director to discuss each day's work, you will also be asked to contribute to the evaluation of the course, so that the next course can be

more acceptable for the participants, the tutors, the resource persons and the organizers;  
more effective in achieving its aims; and  
more efficient in the amount of time, effort and resources expended by everyone in the course.

## 5 Guidelines for the Resource Person

### Questions addressed:

- What does this course try to achieve ?
- What is the role of the resource person<sup>1</sup> ?
- What does the resource person do ?

### What does this course try to achieve ?

**It does not try** to make each of the participants into a specialist in any aspects of the topic of the course.

**It does set out** to develop a comfortable feeling in collaboration and to develop skills in collaborating with colleagues from other professions in other ministries.

Feeling comfortable in collaborating depends on:

- Getting to know these colleagues well enough to come to trust them.
- Experiencing that information and advice from others with particular expertise can be very helpful.
- Experiencing that one's own information and expert advice can be very helpful to others.
- Experiencing the excitement of seeing a problem or task quite differently through the perceptions of colleagues from different professional backgrounds and different expertise.
- Experiencing the satisfaction of completing a task better and more quickly than would have been possible without the collaboration of others with their special knowledge and expertise.
- Reflecting with these colleagues on how collaboration has contributed to the success of the course.

Developing a comfortable feeling in collaboration and skills for collaborating need to be developed in a relevant context. This course will thus present the participants with a series of tasks, where each new task builds on the previous task.

The participants work in small groups with at least one member from each of the ministries in each group. Each task has to be completed within a fixed timetable. The results of each task are written up as a report which is also presented orally by each group in front of the colleagues in the other groups. The presentations are discussed with their colleagues, with the course director and with resource persons.

The tasks are made as realistic as possible and relate to a problem which requires decisions and action from several ministries. The group of officials from the participating ministries are expected to make reasoned decisions. This they cannot do until they have acquired the necessary understanding either from each other and/or from documents and relevant literature resources made available during the course. When the group cannot resolve a particular issue/question/problem in its task, the tutor can invite an appropriate resource person to meet with the group.

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1) A resource person is someone with special knowledge and expertise who has been invited to assist in the course.

A range of skills can thus be developed in the context of a realistic set of tasks. Of immediate benefit for each individual ministry official will be the ability to apply a systematic, analytical approach to the review of national and more local problems, priorities and proposals against a spectrum of criteria. Further, related skills will include the ability to identify key issues; formulate questions and obtain additional information and new insights through critical thinking; as well as assemble and present conclusions and recommendations in appropriate written and oral form. Of particular benefit to their ministries will be the development of skills for collaborating within groups and with individuals from other professions in other sectors of government.

These skills will include the ability to listen and comprehend a different point of view, based on different expertise and experience; the ability to seek additional information in a non-confrontational manner; to paraphrase in order to obtain confirmation of understanding of what has been argued or proposed by someone else; the ability to advance a clearly presented argument and to respond constructively to counter-argument; the ability to negotiate, in order to arrive at an acceptable agreement.

Perhaps the most difficult aspect to develop with the participants will be related to their personal image - how confident they feel in their own expertise, and their willingness to give up a part of their personal power - to give information and provide understanding that will empower others to make decisions and to take action which they could not have done before.

## 2

### **What is the role of the resource person ?**

You will **not** be expected to concentrate on giving detailed information. You will act primarily as a **consultant**, and as a wise participant in the discussion session. In both roles you will be more concerned with helping the participants to think **creatively and critically** and to **make reasoned decisions**.

In order to fill this role effectively, you will wish to familiarize yourself with the Guide which participants use in working through their task.

### **What does the resource person do ?**

You will be invited to contribute to:

- The participants' group work.
- The plenary sessions.
- Evaluating the course.

You may also be involved in one or both field visits.

### **During the participants' group work**

You will have been invited to assist in relation to one or more of the participants' tasks in the course. As you familiarize yourself with the relevant task guide(s) you will be able to see how your special expertise can be of benefit to the participants, in order to make **reasoned decisions**.

You will be asked to make yourself available in a specific location, so that the group tutors will know where to find you when their group wishes to consult you. When you have identified the reason for a group's consultation (e.g. clarification of a particular issue or explanation of a particular issue/process/procedure/mechanism), you will want to assist them to think along with you, rather than merely give them the relevant information.

It will help the group significantly, if you would leave the group as soon as the consultation has been concluded. The group does not need a mini-lecture and it will not wish to be observed in its work.

### **During the plenary sessions**

- I. Each day there will be at least one plenary session. This is intended to review briefly what work has been done since the previous plenary session, and what issues/problems/questions remain to be resolved. The course director/anchor will encourage the participants (who will be sitting in their groups) to contribute actively during the session. You may prefer to remain silent until the chairman or the participants invite your comments/suggestions/explanations. The more specifically your response is directed to the discussion, the more you will assist the participants' thinking and subsequent work. The participants come from a wide range of ministries and professions, so that your expertise will be valued primarily for its direct application to the task in hand.
- II. At the end of each task there will be a plenary session when each group presents its results. When the other groups have commented, you will be asked to contribute your observations or corrections. This is intended to be an informal and relaxed occasion, when the participants can develop their self-confidence and their skills in oral presentation and discussion.

3

### **During the field visit**

If you are invited to participate in one of the field visits you may be asked to demonstrate or answer questions at a particular location. It will be worthwhile to remember that this is the first real experience of rural conditions for some of these city-based officials, and that some may have no practical experience in your field of expertise. The field visits are planned to be of direct relevance and help in relation to the tasks in the course. Thus it would be helpful to restrict factual information and explanation to the tasks in hand.

### **Evaluation of the course**

You will also be asked to contribute to the evaluation of the course, so that the next course can be **more acceptable** for the participants, the tutors, the resource person and the organizers; **more effective** in achieving its aims; and **more efficient** in the amount of time, effort and resources expended by everyone in the course.

### ***One last thought***

While your input on all these occasions will be invaluable, and we are indeed grateful for your specialist help, you may find that you will have ample time to pursue your own interests and work. You may, therefore, want to come to the course with some of your journals, books, correspondence and papers and to continue your own work. In this way we hope that you will enjoy your time with us at the course.

## 6 A Generic Schedule for Resource Persons

Task guide	Day																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Task 1																		
Task 2																		
Task 3																		
Task 4																		
Task 5																		
Task 6																		
Resource person	Day																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1																		
2																		
3																		
4																		
5																		

### Task guides

#### Task 1

##### Constructing a Framework for Comprehensive Development Planning

- Agree on planning concepts and definitions.
- Identify types of water resources development projects.
- Identify responsible authorities and procedures in all planning phases.
- Decide when health should be considered in the project cycle.

#### Task 2

##### Rapid Health Impact Assessment - A preliminary step

- Acquaint yourself with the basic concepts of HIA methodology.
- Go step-by-step through rapid HIA procedures.

#### Task 3

##### Appraisal of an HIA report: Assessment procedures and conclusions

- Verify the HIA report against the TOR, using a number of criteria.
- Check the assessment outcome for community, environmental and institutional risk factors.
- Consolidate the findings into a comprehensive appraisal of HIA procedures and conclusions.

#### Task 4

##### Appraisal of an HIA report: Technical, social and economic aspects of recommended measures

- Appraise the recommendations for their technical, social and economic aspects.
- Synthesize findings into a final verdict combining the outcomes of Tasks 3 and 4.

#### Task 5

##### Preparation of generic HIA Terms of Reference

- Discuss the gaps and deficiencies in the TOR used for the HIA appraised.
- Identify all elements essential to a robust TOR.
- Prepare generic TOR that are comprehensive and practical.

## **Task 6**

### **Health Risk Management - formulation of a plan for intersectoral action**

- Agree on a list of health protection and promotion measures.
- Agree on compliance verification mechanisms.
- Agree on health status monitoring.
- Formulate a Plan of Action.
- Draft a Memorandum of Understanding between ministries/authorities.
- Agree respective organizational and financial responsibilities.

### **Resource persons**

1. Senior Planner: a planning expert who is well-informed about the current planning framework and procedures for natural resources development.
2. Ecologist: a senior biologist/ecologist with sound knowledge of environment/health linkages and experience in impact assessment.
3. Hydraulic engineer: a professional with a solid knowledge of his own field and a broader interest in how engineering affects environment and health.
4. Agricultural Scientist: an agronomist or other agricultural scientist who can assess the essential requirements of agricultural production systems and their interface with environmental determinants and community health status.
5. Health Systems Expert: a senior professional who can make judgements about the comparative (dis)advantages of medical/health sectoral interventions in an intersectoral perspective.

# 7 Annotated Generic Programme for Field Trips

## *Safe and comfortable transport arrangements*

- Four-wheel drive vehicles will as a rule be required. There should be space left for guides or local officers to join the field trip on certain stretches. The drivers should have clear instructions concerning directions and on staying together while travelling to be able to assist should one of the vehicles meet with an emergency.

## *To take along*

- Catering should be provided, for lunch, and include plenty of liquid refreshments, as the temperature may rise considerably as the day advances (the key reason for an early departure). Alternatively, arrangements may be made for lunch in a restaurant en-route. Refreshments will in any case have to be carried.
- Depending on local customs, small tokens of appreciation should be taken along for community leaders.
- Equipment needed for direct observations should be carried: dippers and suction tubes in areas where malaria is a health issue, boots and scoop-nets in schistosomiasis infested areas.
- A first-aid kit should be part of the equipment and materials carried.

1

### 1. *Early morning departure (07:30)*

- Breakfast before departure.

### 2. *The trip (07:30 – 08:30)*

- Travel to the selected project site should not exceed one hour (this is one of the criteria in the selection of field trip destinations).
- Members of the course organising team should be distributed over the vehicles and ideally there should be one person in each vehicle who has visited the project so that the participants' attention can be drawn to points of interest on entering the project area.

### 3. *On arrival (08:30 – 09:00)*

- A first, formal arrival event should have been planned, where the group is introduced to local authorities and representatives of the local communities. Formal introduction should be followed by an explanation of the purpose of the visit and a review of the actual programme of the visit. This is also the opportunity of exchanging small gifts or tokens of appreciation, in accordance with local custom.

4. *Focus group discussions/direct observations (09:00-12:00)*

- This part provides “the meat” of the visit, and directly addresses its objective: to demonstrate the value of a structured field visit to strengthen the evidence base for a rapid assessment. Participant groups (with their tutors assuming their customary facilitating role in directing and timekeeping) will be given a programme for a rotational sequence of focus group discussions and direct observations. The programme provides a timetable and the location. At the end of the programme all groups will have covered all focus groups and observation points.

An example of such a programme is presented below:

Programme Element Timing	Health Centre	Irrigation Engineer	School Staff	Community Representation	Transmission Site near Dam
09:30 – 09:50	Group 1	Group 2	Group 3	Group 4	Group 5
10:00 – 10:20	Group 5	Group 1	Group 2	Group 3	Group 4
10:30 – 10:50	Group 4	Group 5	Group 1	Group 2	Group 3
11:00 – 11:20	Group 3	Group 4	Group 5	Group 1	Group 2
11:30 – 11:50	Group 2	Group 3	Group 4	Group 5	Group 1

2

5. *There are a number of practical points in support of this part of the programme:*

- An individual introduction of group members at the start of focus group discussions will set the scene for a conducive discussion climate.
- Timekeeping is critical to avoid stagnation in the rotation process.
- In some cases, a visit to specific sites for direct observations will require transport by vehicle. Where these sites are at a considerable distance, it may be better to take this component out of the rotational part of the programme and take the whole group to the site before or after.

6. *Lunch (12:30 – 13:30) (mid-day)*

- At this stage of the visit, all will be ready for a break with refreshments and lunch.
- The host local authorities or community may extend an invitation for lunch. This issue should have been sorted out at the time of preparation, with sensitivity to local customs. In deciding on the issue, considerations of food safety and the question whether providing lunch would imply a heavy burden on the local community should prevail.

7. *Rapid rural appraisal (13:30 – 14:30)*

- Following lunch there may be an opportunity for the individual course participants to wander into the local settlement to gather information in an unstructured, rapid rural appraisal fashion. The feasibility of this may depend on the local cultural setting and on the overall timeframe.

8. *Return-trip (14:30 – 15:30)*

- An early return will allow the groups to carry out a rapid evaluation of the information they collected, synthesize it and feed it into the Task they are working on. A plenary discussion in the morning will allow a broad reflection on what has been learned and observed.

## 8 List of Books and Documents available in the Course Library

The following list represents books and documents available for course participants during course implementation (in brackets letters referring to availability at courses in Zimbabwe (Z), Ghana (G), Tanzania (T), Honduras (H) and India (I), respectively). An asterisk \* indicates the document is included in the accompanying CD-ROM.

- Anonymous (1983). Man-made lakes and bilharzia: lessons in control from the Volta. *Africa Health* 5, 24-25 (G)
- Barker, D.J.P. & Hall, A.J. (1991). *Practical Epidemiology*. Longman Group, UK (Z)
- \*Birley, M.H. (1989). *Guidelines for Forecasting the Vector-borne Disease Implications of Water Resources Development*, PEEM Guidelines Series 2, PEEM Secretariat, WHO, Geneva (Z,G,T,H,I)
- \*Birley, M.H. (1989). *Directrices para prever las Consecuencias de las Obras de Desarrollo de los Recursos Hídricos en cuanto a las Enfermedades Transmitidas por Vectores*. Serie de Directrices CEOM 2. OMS, Ginebra (H)
- Birley, M.H. and Peralta, G. (1992). *Guidelines for the Health Impact Assessment of Development Projects*. ADB Environment Paper No. 11, Asian Development Bank, Manila (G,T,H,I)
- \*Birley, M.H. (1995). *The Health Impact Assessment of Development Projects*. HMSO, London (T,H,I)
- Central Statistical Office. (1985). *Main demographic features of the population of Zimbabwe: An advance report based on a ten percent sample*. CSO Harare (Z)
- Chimbari, M., Chitsiko, R.J., Bolton, P. & Thomson, A.J. (1991). *Design and operation of a small irrigation project in Zimbabwe to minimize schistosomiasis transmission*. ODI Irrigation Management Network Paper 9 (Z)
- Coyne et Bellier (1991). *Tokwe-Runde Project. Feasibility Study*. Phase Two Report. Preliminary study and first economic assessment. Text and appendices. Republic of Zimbabwe. Ministry of Lands, Agriculture and Rural Assessment; Ministry of Energy and Water Resources and Development (Z)
- Danida (1989). *Environmental Profile: Tanzania*. Ministry of Foreign Affairs, Copenhagen (T)
- Food and Agriculture Organization of the United Nations (1990). *Irrigation subsector review and development strategy*. (Zimbabwe TCP/ZIM/8955). Technical Reports and Annexes. FAO, Harare (Z)
- Cooper-Weil, D.E., Alibusan, A.P., Wilson, J.F., Reich, M.R. and Bradley, D.J. (1990). *The Impact of Development Policies on Health. A Review of the Literature*. WHO, Geneva (Z,G,T)
- Derban, L.K. (1984). *Health Impact of the Kpong Dam in Ghana*. Water, Power and Dam Construction, October 1984 (G)
- Doumengue et al. (1987). *Atlas of the global distribution of schistosomiasis*. CEGET-CNRS/WHO, Bordeaux/Geneva (G)
- Futa, A.B. (1983). *Water resources development – organization of a resettlement programme (a case study of the Kpong resettlement programme in Ghana)*. Water International 8, 98-108 (G)

- Ghosh, B. (ed.) (1991). *Health Implications of Public Policy*. Case studies, modules, methodologies. Indian Institute of Management, Bangalore, WHO, Geneva (Z,G,T,H,I)
- \*Hunter, J.M., Rey, L., Chu, K.Y., Adekolu-John, E.O. and Mott, K.E. (1993). *Parasitic Diseases in Water Resources Development. The Need for Intersectoral Negotiation*. WHO, Geneva (G,T,I)
- \*Hunter, J.M., Rey, L., Chu, K.Y., Adekolu-John, E.O. and Mott, K.E. (1993). *Enfermedades Parasitarias y Desarrollo Hidráulico. Necesidad de una Negociación Intersectorial*. OMS, Ginebra (H)
- Irrigation Development Authority (1989). *Kpong Irrigation Project. Detailed Study, Project Preparation and Design*. Main Report and Annexes 4&5. M. MacDonald and Partners, U.K. (G)
- Japan International Cooperation Agency (1990). *The Feasibility Study on the Nyakomba Irrigation Development Project*. Main Report, Annex Report, Drawings. Republic of Zimbabwe (Z)
- Japan International Cooperation Agency (1990). *The Feasibility Study on Lower Hai and Lower Rombo Agricultural Development Project*. Volume I, Main Report, based on the agreement between the Regional Development Director, Kilimanjaro Region of the United Republic of Tanzania and JICA (T)
- Jobin, W.R. (1992). *Irrigation Planning and Prevention of Bilharzia*. Blue Nile Handbook One. Blue Nile Associates, Foxboro, USA (Z,G,T,H,I)
- Jobin, W.R. (1992). *Bilharzia Prevention and Hydroelectric Reservoirs*. Blue Nile Handbook Two. Blue Nile Associates, Foxboro, USA (Z,G,T,H,I)
- Lipton, M. and de Kadt, E. (1988). *Agriculture-Health Linkages*. WHO, Geneva (Z,G,T,H,I)
- Mahmoud, A.A.F. (ed.). 1987. *Baillière's Clinical Tropical Medicine and Communicable Diseases*. International Practice and Research. Volume 2, *Schistosomiasis*. Baillière Tindall, London (Z)
- Ministry of Health. (1990). *Health Statistics – Annual Report 1990*. Health Information Unit and Health Statistics Unit, Zimbabwe (Z)
- Ministry of Health (1991). *Annual Report 1990*. Epidemiology Division, MOH, Accra (G)
- Ministry of Health (1993). *Annual Report 1992*. Epidemiology Division, MOH, Accra (G)
- Morgan, P. (1990). *Rural Water Supply and Sanitation. A text from Zimbabwe's Blair Research Laboratory*. Macmillan Publishers, London (Z)
- \*Oomen, J.M., de Wolf, J. and Jobin, W.R. (1990). *Health and Irrigation: incorporation of disease-control measures in irrigation, a multi-faceted task in design, construction, operation*. ILRI Publication 45 Volumes 1 and 2. International Institute of Land Reclamation and Improvement, Wageningen, The Netherlands (Z,G,T,H,I)
- \*Organización Mundial de la Salud (1982). *Manual de Ordenamiento del Medio para la Lucha contra los Mosquitos, con especial Referencia al Paludismo*. OMS, Ginebra (H)
- Organización Mundial de la Salud (1991). *Desagües de Superficies Para Comunidades de Bajos Ingresos*. OMS, Ginebra (H)
- Organización Mundial de la Salud (1992). *Informe de la Comisión de Salud y Medio Ambiente de la OMS (Resumen)*. OMS, Ginebra (H)
- \*Phillips, M., Mills, A. and Dye, C. (1993). *Guidelines for the Cost-effectiveness Analysis of Vector Control. PEEM Guidelines Series 3*. PEEM Secretariat, WHO, Geneva (G,T,H,I)
- \*Phillips, M., Mills, A. and Dye, C. (1993). *Directrices Para el Análisis del Costo-Eficacia de la Lucha Antivectorial*. Serie de Directrices CEOM 3. OMS, Ginebra (H)
- Pike, E.G. (1987). *Engineering against schistosomiasis/bilharzia. Guidelines towards control of the disease*. Macmillan Publishers, London (Z)

Rollinson, D. & Simpson, A.J.G (eds.) (1987). *The biology of schistosomes. From genes to latrines.* Academic Press, London (Z)

Salzgitter Consult GMBH, PTA Consulting Services (PVT) Ltd & Stewart Scott NCL. (1991) *Medium Size Dam Study in the Communal Lands and Resettlement Areas of Mashonaland Central Province: Mupfure Irrigation Project. Feasibility Study.* Main Report, Annexes, Drawings. Government of Zimbabwe, Ministry of Energy and Water Resources and Development (Z)

Schorr, T.S. (1984). *Las Represas y Sus Efectos Sobre la Salud.* ECO/Mexico. Organización Panamericana de la Salud (H)

Small, L. (1990). *Irrigation service fees in Asia.* ODI/IIMI Irrigation Management Network Paper 90/1e, London (Z)

Taylor, P., Matanhire, D., Mbaya, G., Makoni, S. & Chandiwana, S.K. (1989). *Community based schistosomiasis control in Zimbabwe.* Ministry of Health, Blair Research Laboratory, Harare, Zimbabwe (Z)

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# 9 CD-ROM with Electronic Files of Course Relevant Documents

Numbers in the list below correspond to the respective file numbers on the CD-ROM.

1. Table of Contents (pdf)
2. Manual Part I and II: Course basics and Course implementation (pdf)
3. Manual Part III: Course materials (pdf)
4. Task Guides (English):
  5. Task 1 (pdf)
  6. Task 1 (HTML)
  7. Task 2 (pdf)
  8. Task 2 (HTML)
  9. Task 3 (pdf)
  10. Task 3 (HTML)
  11. Task 4 (pdf)
  12. Task 4 (HTML)
  13. Task 6 (pdf)
  14. Task 6 (HTML)
15. Guides de Stage (French):
  16. Tâche 1 (pdf)
  17. Tâche 1 (HTML)
  18. Tâche 2 (pdf)
  19. Tâche 2 (HTML)
  20. Tâche 3 (pdf)
  21. Tâche 3 (HTML)
  22. Tâche 4 (pdf)
  23. Tâche 4 (HTML)
  24. Tâche 6 (pdf)
  25. Tâche 6 (HTML)
26. Generic Letters of Remit:
  27. For Task 2 (pdf)
  28. For Task 3 and 4 (pdf)
  29. For Task 5 (pdf)
  30. For Task 6 (pdf)
31. Examples of Letters of Remit from the Pilot Courses (pdf)
32. Guidelines for the Group Tutor (pdf)
33. Guidelines for the Resource Person (pdf)
34. A Generic Schedule for Resource Persons (pdf)
35. Annotated Generic Programme for Field Trips (pdf)
36. List of Books and Documents Available in the Course Library (pdf)
37. Examples of Course Evaluation Questionnaires (pdf)
38. Selected Books, Documents and Slide Set Series in Full Text:
  39. Course Reports from Pilot Courses:
    40. Zimbabwe 1992 (pdf)
    41. Ghana 1994 (pdf)
    42. Tanzania 1995 (pdf)
    43. Honduras 1996 (pdf)
    44. India 1997 (pdf)
45. Engel, C., Birley, M., Bos, R., Furu, P. & Gøtsche, G. (2000). Intersectoral Decision-making Skills in support of Health Impact Assessment of Development Projects. Final Report on the Development of a Course addressing Health Opportunities in Water Resources Development 1988-1998. WHO/SDE/WSH/00.9 (pdf).
46. Tiffen, M. Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation. PEEM Guidelines Series 1: WHO, Geneva 1989 (pdf)
47. Tiffen, M. Lignes directrices pour l'incorporation de mesures de protection de la santé dans les projets d'irrigation par la coopération intersectorielle. Série de lignes directrices TEAE 1: OMS, Genève 1993 (pdf)
48. Tiffen, M: Directrices para la introducción de medidas de protección sanitaria en los proyectos de irrigación a través de la cooperación intersectorial. Serie de Directrices CEOM 1: OMS, Ginebra 1989 (pdf)

## CD-ROM Contents continued

49. Birley, M. Guidelines for forecasting the vector-borne disease implications of water resources development. PEEM Guidelines Series 2: WHO, Geneva 1991 (pdf)
50. Birley, M. Lignes directrices pour prévoir les implications pour les maladies transmises par vecteurs du développement des ressources en eau Série de lignes directrices TEAE 2: OMS, Genève 1993 (pdf)
51. Birley, M. Directrices para prever las consecuencias de las obras de desarrollo de los recursos hídricos en cuanto a las enfermedades transmitidas por vectores. Serie de Directrices CEOM 2: OMS, Ginebra 1991 (pdf)
52. Philips, M., Mills, A. & Dye, C. Guidelines for cost-effectiveness analysis of vector control. PEEM Guidelines Series 3: WHO, Geneva 1993 (pdf)
53. Philips, M., Mills, A. & Dye, C. Directrices para el análisis del costo-eficacia de la lucha anti-vectorial. Serie de Directrices CEOM 3: OMS, Ginebra 1993 (pdf)
54. World Health Organization (1988). Environmental Management for Vector Control. Training and Information Materials, Slide Set Series (HTML)
55. World Health Organization (1997). Agricultural Development and Vector-borne Diseases. Training and Information Materials on Vector Biology and Control, Slide Set Series (HTML)
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57. Birley, M. & Lock, K. (1999). The Health Impacts of Peri-urban Natural Resource Development. Liverpool School of Tropical Medicine (pdf)
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62. World Health Organization (1982). Manual on Environmental Management for Mosquito Control (WHO offset publication 66) (pdf)
63. World Health Organization (1984). Manual de ordenamiento del medio para la lucha contra los mosquitos - con especial referencia a los vectores del paludismo. OMS Ginebra (pdf)
64. World Health Organization (1985). Manuel de l'aménagement de l'environnement en vue de la démoustication eu égard plus spécialement aux vecteurs du paludisme. OMS, Genève (pdf)
65. Oomen, JMV, de Wolf, J. & Jobin, WR (1990). Health and Irrigation. Volume 1. ILRI Publication 45, Wageningen (pdf),
66. Oomen, JMV, de Wolf, J. & Jobin, WR (1990). Health and Irrigation. Volume 2. ILRI Publication 45, Wageningen (pdf)
67. Birley, M.H., Bos, R., Engel, C.E. & Furu, P. (1995). Assessing health opportunities: a course on multisectoral planning. World Health Forum, 16, 420-422 (pdf)
68. Birley, M.H., Bos, R., Engel, C.E. & Furu, P. (1996). Health opportunities in water resources development: a multisectoral task based training course. Education for Health, 9, (1), 71-83 (<http://www.tandf.co.uk>) (pdf)
69. List of useful links (HTML)