

## HEALTH OPPORTUNITIES IN WATER RESOURCES DEVELOPMENT

**A two-week course to promote collaboration between middle-level officials from various ministries for the incorporation of health safeguards and health promotional measures in water resources development projects**

**Akosombo, Ghana  
26 January-11 February 1994**

**organized by**

**the joint WHO/FAO/UNEP/UNCHS Panel of Experts on Environmental Management for Vector Control, the Danish Bilharziasis Laboratory and the Health Impact Programme of the Liverpool School of Tropical Medicine**

**In collaboration with**

**the Ministry of Health, the University of Ghana and the Environmental Protection Council**

**PEEM Secretariat  
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## TABLE OF CONTENTS

	page
<b>SUMMARY</b>	6
<b>REPORT OF THE COURSE</b>	9
Introduction	9
The course programme	11
Preparations for the course	12
Innovative features	13
Evaluation	15
Follow-up	18
<b>ANNEXES</b>	
Annex 1      List of participants, tutors, organizers, resource persons and observers	21
Annex 2      Course programme and materials	31
Annex 3      Planning and preparations	41
Annex 4      Advice for contributors	47
Annex 5      Guide for Task 4	55
Annex 6      Evaluation	73
Annex 7      Generic Terms of Reference for health opportunity assessments	87

## **About PEEM**

The joint WHO/FAO/UNEP/UNCHS Panel of Experts on Environmental Management for Vector Control (PEEM) was established in 1981 to create a framework for inter-agency and inter-institutional collaboration with a view to promoting the extensive use of environmental management for disease vector control as a health safeguard in the context of land and water resources development projects and for the promotion of health through agricultural, environmental, human settlement, urbanization and health programmes and projects. The collaboration originates from memoranda of understanding between three agencies (WHO, FAO and UNEP) covering the areas of prevention and control of water-borne and water-associated diseases in agricultural development, rural water supply and waste water use in agriculture, forestry and aquaculture. In 1991 the three agencies were joined by UNCHS and PEEM's mandate was expanded accordingly to include human settlements, urbanization and urban environmental management including urban water supply, sanitation, drainage and solid waste disposal. The current Medium-term Programme of the Panel covers the period 1991-1995 and contains activities under three headings: promotion, policy modification and technical cooperation; research and development; and, training of various target groups.

The Secretariat of the Panel is located at WHO headquarters in Geneva, Switzerland.

## **About DBL**

Established in 1964, the Danish Bilharziasis Laboratory (DBL) is a private foundation working on water-related, vector-borne parasitic diseases that prevail the tropics. It specializes in training, research and technical cooperation and offers its expertise in these areas in collaboration with partner institutions in the developing countries. Today DBL is officially associated with the Faculty of Natural Sciences of the University of Copenhagen and is financed primarily by the Danish International Development Assistance (*Danida*) of the Ministry of Foreign Affairs. The core of DBL's training programme consists of its course activities, including Diploma courses offered in Denmark and Certificate courses organized in a number of countries in Africa.

## **About HIP**

The Health Impact Programme was established in 1990 at the Liverpool School of Tropical Medicine with the financial support of the Overseas Development Administration. Its objectives are to promote health impact assessment of development projects as part of environmental impact assessment.

The Liverpool School of Tropical Medicine is a charity established in 1898 to provide education and training, and technical assistance and to carry out research with a view to promoting improved health, particularly for peoples of the less developed countries.

It is affiliated with the University of Liverpool and it is a post-graduate centre of excellence in the field tropical medicine. Each year it welcomes over 500 students from more than 50 countries. Research at the School is funded by many bodies including ODA, MRC, WHO, EU and Wellcome Trust. It is involved in field research throughout the tropics.

### **ACKNOWLEDGEMENTS**

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They would also like to express their appreciation for the significant inputs by the local course coordinators, Dr E. Laing, Emeritus Professor of the University of Ghana and Dr A. Issaka-Tinorgah of the Ministry of Health, and their respective staff, and for the support received from the WHO representation in Ghana.

The field visit was made possible thanks to the cooperation of Dr Victor Okoh, Volta River Authority, the staff of the Akuse Hospital, the management of the Kpong Irrigation Project and members of the community at Ato-Binya.

## **SUMMARY**

The second PEEM/DBL/HIP training course "Health opportunities in water resources development" was held at Akosombo, Ghana from 26 January to 11 February 1994 for 24 middle level managers from seven different Ghanaian ministries/authorities. Over a two-week period, the participants worked on four tasks considered crucial to ensure the incorporation of human health considerations into the planning of water resources development projects.

The objective of this trial course was to develop the capacity of each participant, irrespective of his/her sectoral affiliation, to adequately participate in the intersectoral decision-making process of water resources development projects, in particular: to contribute to the decision on the need for a health opportunity assessment, determine the adequacy of the assessment report, including recommendations on health protective and promotional measures, assist in the formulation of terms of reference for a health opportunity assessment and prepare for the intersectoral monitoring of the project. These four capabilities had been identified by the organizers as essential if sustainable development of natural resources is to be ensured from a human health perspective.

The long-term objective of the collaboration between PEEM, DBL and HIP in this area is to develop a training course aimed at building the capacity of all public sectors with a view to their participation in and contribution to intersectoral decision-making in the planning and design of natural resources development projects. This will allow governments to adequately address the human health dimension of sustainable development in a coordinated and integrated way. As a consequence, the burden on the health sector resulting from adverse health effects of development will be minimized and opportunities offered by projects to improve people's health will be more effectively used.

The final product of this collaboration will consist of guidebooks for the organizers, non-expert tutors and local experts and task guides for the participants.

The course aims at professionals of relevant public sectors working at the level where policy is translated into action. Efforts are directed towards making the course easily replicable without the need to mobilize substantial external resources. It should also be sustainable in case local or regional training centres want to institutionalize it and its scope should be broad so it can be adjusted to local conditions and locally perceived needs.



Based on the evaluation of the first course (Zimbabwe, September 1992) the programme of the second course was completely redesigned. Passive knowledge transfer (which had resulted in information overload) was replaced by active, problem-oriented learning. Costs were reduced and methods of running the course were further developed in such a way that at the end of the trial period its country-level replication may be carried out independently of major external inputs.

There was, in other words, a major shift from the content-oriented approach of the first trial course to a process-oriented approach of the one reported on here.

Three preparatory meetings were held to define the new course concepts and structure, prepare instructions for the authors of task guides and review the task guide drafts, develop a detailed course programme and decide on logistics. The local organization was the responsibility of the Ministry of Health and under the patronage of the University of Ghana and the Environmental Protection Council. Two separate visits to Ghana, by DBL and HIP staff respectively, served to select the course venue and assist in local arrangements, and to select the irrigation project in the context of which the tasks were to be carried out.

Major innovations included the introduction of a completely task-oriented, participant-driven approach together with the elimination of formal lectures; the involvement of non-expert tutors to guide the group processes; a minimum reliance on external experts combined with a greatly enhanced input of local experts; integration of course effectiveness assessment in the final task rather than through separate evaluation exercises; and, a closer integration of the field visit and the tasks to be performed.

After proper induction, a non-expert tutor was assigned to each group to guide the process of working through the tasks. Plenary sessions at the beginning of each morning and afternoon provided an opportunity to raise issues that had not been satisfactorily resolved within the groups. Resource persons clarified such issues on an *ad-hoc* basis and expanded on them, if necessary, in discussions with the participants. On completion of each task, each group prepared a report, which was graded by the organizers, and presented their findings for discussion in a plenary session. The programme of task-work and presentations was complemented by field visits (to the Kpong Irrigation Project and the Akosombo dam), technical videos and a debate at the end of the first full week.

In carrying out their tasks, the groups generated valuable outputs. With the exception of the output of Task 3 (generic terms of reference for health opportunity assessment) these were specific to the Kpong Irrigation Project.



With the help of the tutors, a consolidated set of generic terms of reference was prepared which will be submitted to the appropriate Ghanaian authorities for their consideration and possible incorporation into new policies and legislation for environmental impact assessment.

Course evaluation (in terms of acceptability, effectiveness and efficiency) was performed throughout the duration of the course. Local and external resource persons were debriefed by the education expert on the organizing team and daily debriefing sessions were held with the non-expert tutors. The acceptability to participants was assessed twice: mid-course through a nominal group exercise and at the end by means of a questionnaire. The approaches tested in this course were very well received by the participants; the role of local resource persons, on the other hand, needs further consideration.

Possible follow-up to the course had been discussed during the preparatory meetings and was actively pursued at the time of the course. There is an excellent chance of institutionalizing the course for the whole of anglophone West Africa at the Ghana Institute for Management and Public Administration (GIMPA). There is also room for initiatives for policy review, strengthening of institutional arrangements and the incorporation of some of the outputs in national legislation, and further health impact studies and the incorporation of environmental management measures in the Kpong Irrigation Project. Progress in follow-up activities and a longer-term assessment of course will be the subject of a seminar late 1994/early 1995.

## **REPORT OF THE COURSE**

### **Introduction**

The second training course "Health opportunities in water resources development" was held in Akosombo, Ghana, from 26 January to 11 February 1994. It was organized, on a trial basis, by the WHO/FAO/UNEP/UNCHS Panel of Experts on Environmental Management for Vector Control, the Danish Bilharziasis Laboratory and the Health Impact Programme of the Liverpool School of Tropical Medicine. The local counterpart in the organization of this course was the Ministry of Health of Ghana, and the University of Ghana and the Environmental Protection Council shared its patronage.

The first training course was held in Zimbabwe in 1992. For information on its origin, fundamental concepts, structure and programme reference is made to the report of the first course, published as a WHO document under reference number WHO/CWS/93.2. Copies may be obtained from the PEEM Secretariat at WHO in Geneva.

The course had a dual purpose. It was first and foremost intended as a capacity building exercise for Ghanaian professionals; at the same time it provided a next step in the development of a training course package which PEEM, DBL and HIP have set out to put together. In the Ghanaian context, the course aimed to develop the capacity of each participant, irrespective of his/her sectoral affiliation, to adequately participate in the intersectoral decision-making process of water resources development projects. Several international fora have arrived at a consensus that human health should be taken into account from the early planning and design stages of water resources development onwards. The recommendations contained in Agenda 21 also emphasize the need to make the protection and promotion of human health a precondition for sustainability.

The organizers specified four moments in the project cycle which require an intersectoral dialogue: the initial rapid health impact assessment which will lead to a decision on the need for a full health opportunity assessment, the formulation of terms of reference for a full health opportunity assessment, the technical and economic appraisal of the assessment report, which will be the basis for the allocation of funds for health safeguards and the preparation of an action plan for the intersectoral monitoring of the project. The tasks described below relate to these project cycle events.

The long-term objective of the collaboration between DBL, PEEM and HIP is to develop a training course package aimed at building the capacity of all public sectors to participate in and contribute to intersectoral decision-making in the planning and design of development projects, so as to ensure that the human health dimension of sustainable development is adequately addressed, the burden on the health sector resulting from adverse health effects of development

are minimized and the opportunities offered by the project to improve people's health are effectively used. The characteristics of such a package will be its focus on developing skills rather than transfer of knowledge, its easy replicability without requiring major external resources and its broad scope allowing it to be adjusted to local conditions and locally perceived needs. It will not aim to turn participants into "mini specialists" in all the relevant technical areas covered by the course. Instead, it should lead to the formation of self-sustaining, informal networks, whose members rely on a free and open exchange of information between sectors, and to an awareness among participants whom to contact in other public sectors for which information at which point in time during the planning and design of development projects.

The final product will consist of guidebooks for the organizers, non-expert tutors and local experts, and task guides for the participants. The course will aim at professionals of relevant public sectors working at the level where policy is translated into action. While the focus of the course package will be on incorporating human health considerations in the planning and design of water resources development at the national level, it will be possible to adapt it to the development of other natural resources or to the planning processes at the level of local government such as municipalities.

Twenty-four middle-level managers (in other words, public sector professionals operating at the interface where policy is translated into action) from seven different ministries/ authorities in Ghana participated in the course. They were divided over four groups, ensuring a diverse sectoral representation in each group. Annex 1 contains a list of participants in alphabetical order and a list of participants per group, with their sectoral affiliation.

The groups were given four tasks during the two-week period, to be carried out within a well-structured schedule, and for every task each group had to complete a report and to present their results in a plenary session.

Based on the evaluation of the first course, which had suffered from information overload, a focus on the development of essential skills had been agreed. The second course was therefore less content-oriented and more process-oriented. The organizers identified four points in the planning and design stages of the project cycle for water resources development when intersectoral decision making is crucial. The four related tasks were

- An initial health examination at the project identification/prefeasibility stage requiring a rapid assessment (including a site visit)  
*Output: a recommendation whether or not a full Health Opportunity Assessment is necessary.*
- Appraisal of a health opportunity assessment report. This included the technical appraisal of a completed HOA report and the economic evaluation of intervention options proposed therein. This appraisal would provide the basis

for negotiations with external donors. It would also be the starting point for the development of an action plan on intersectoral monitoring and surveillance.

*Outputs: an appraisal report presenting plausible and justified options for the implementation of health protective and promotional measures to be included in the development project.*

- Formulation of model terms of reference based on the experience gained from the technical and economic appraisal carried out in Task 2. The focus should be on the translation of hazards related to community vulnerability and environmental factors into perceived risks that take into account the capacity of the health services to deal with them; TORs should also include a health opportunity assessment.

*Output: generic terms of reference (TORs)*

- Design of the intersectoral organization, major logistics and resource sharing needed for the monitoring of the project during construction and subsequent early operations.

*Output: a plan that outlined the intersectoral organization and major logistics arrangements, and the text of a Memorandum of Understanding which governed the sharing of resources*

Task 2 consisted of two sub tasks (technical and economic appraisal), each with their own reporting. Task 4 also served as the effectiveness test for the entire course. Tasks 1, 2 and 4 were carried out in the context of an existing plan for irrigation development in the lower Volta River area, the Kpong Irrigation Scheme, which is situated downstream from the Akosombo and Kpong dams.

### **The course programme**

The day-to-day programme of the course is presented in Annex 2, with brief accounts of the opening and closing ceremonies. The opening ceremony consisted of an informal part where participants and resource persons introduced themselves, and a more formal part with statements on behalf of the various organizing agencies.

Right from its very start and further throughout the course the participants worked on their tasks in groups. No formal lectures were included in the programme. Each morning and afternoon started with a plenary session of maximum 45 minutes, during which groups could raise questions that had remained unresolved in their discussions. The external and local resource persons were asked to address these issues and discuss them with the participants in the plenary session. A list of external and local resource persons is included in Annex 1, and the schedule of local resource persons, who were invited in accordance with the relevance of their area of expertise to specific components of the course programme, can be found in Annex 2.

The programme of the first morning of the course was intended to be a stage-setting exercise, with an introduction of the objectives and structure of the course and the way participants would be working during the two-week period. The institutional framework in Ghana for the planning of water resources development was discussed and a summary organogram developed. Also, types of development and their possible health impacts were discussed in general terms.

Group work on the tasks followed a rigid schedule: each task started with a plenary session for a briefing, after which groups started their assignment assisted by their tutor. During this phase, every morning and afternoon started with a plenary session to share issues that had come up in the groups' discussions with all participants and consult the resource persons as necessary. This schedule also imposed a discipline of keeping to the times foreseen in the schedule. On completion of a task, the groups presented their findings during a two-hour plenary session where each group had 15 minutes for presentation followed by 15 minutes of discussion. Group reports were submitted, commented on by the appropriate resource persons and returned to the groups within three days. At the end of each day, a debriefing of the tutors was arranged.

No compulsory course activities had been included in the programme for the evenings, but groups tended to carry on beyond scheduled working hours voluntarily, especially when they had to prepare their final report and presentation for the next day.

The first Saturday a fact finding visit to the Kpong Irrigation Project was part of Task 1. The second Saturday, the participants visited the Akosombo dam and the Akosombo sewage treatment ponds. On the two Sundays no course activities took place.

In order to break the monotony of this schedule, voluntary activities were scheduled for some evenings. These included the showing of technical videos and the organization of a debate. For the latter, participants were divided over two groups and prepared three rounds of arguments to support or argue against the thesis "Intersectoral collaboration is too difficult in practice". The debate served not only to give the participants an opportunity to show how their concepts of the subject had developed during the first half of the course, but also to lift the participants' and resource persons' spirits at a point in time when this tends to reach a natural low during a two-week course.

Following the final course evaluation by the participants a plenary session was included to reflect on the significance of the course experience for their daily work and philosophize with them over possibilities for follow-up to the course.

### **Preparations for the course**

A detailed account of the preparations for this course is given in Annex 3. In brief, three preparatory meetings were held in London, Charlottenlund and Liverpool, to define the new course concepts and structure, to prepare instructions for the authors of task guides

and review the task guide drafts, to develop a detailed course programme and to decide on logistics. DBL, HIP and PEEM staff paid separate visits to Ghana in May, July and November, respectively. The local course coordinators carried out preparations in Ghana as agreed at the meeting in Charlottenlund, over the period March 1993 to January 1994.

With the four tasks at the core of this course, the drafting, review and completion of task guides was a major component of the preparatory work. An abridged version of the instructions to authors is presented in Annex 4. As Task 2 consisted of two sub tasks, five Task guides had to be prepared. One could be completed fairly rapidly, as it had, to a large extent, already been developed for the Zimbabwe course. Two others were prepared according to schedule, but for the preparation of the two remaining ones time constraints developed as the identification of suitable and available authors proved more difficult than foreseen. Apart from the technical scope and the structure imposed by the method used, the need to make the guides generic rather than focused on a specific country or project situation was emphasized, in view of the objective to work towards the independent replicability of the course.

Selection of the venue (in May) and of the irrigation development project that would serve as the context for three of the four tasks (in May and July) was smooth.

The major constraint on the local organization related to the nomination of participants by the various ministries and authorities. The lack of response to the initial letter inviting nominations and subsequent approaches was only overcome by personal visits by the local organizers. Recruitment of tutors and local resource persons went smoothly.

The team of external organizers arrived in Ghana on 22 January to assist in the final logistical arrangements, the setting up of the Secretariat and detailed preparations for the field visit. On 24 and 25 January two full-day sessions were held with the non-expert tutors to introduce them to the course objectives, structure and methodology, and prepare them for their role.

### **Innovative features**

The main innovative features of this course included the orientation on four specific tasks, a learning process actively driven by participants and a functional field visit integrated in the first task.

**Tasks.** Four tasks were selected for this course based on the criterion that they represent crucial decision-making procedures during the planning and design phases of any water resources development project. Intersectoral consultation is an essential element in these procedures for the incorporation of environment and health issues. The authors of the task guides were asked to break down the decision-making process for each task into key questions, which would be subject of discussion in the groups. This inter-active process is designed for the participants to become aware of the vast

knowledge base available in a multidisciplinary group, to acquire reliable, fundamental information from each other, to collectively develop a broad conceptual framework in which to fit their sectoral interests and concerns and to develop skills in intersectoral negotiation.

The assignments were given by means of a letter of remit, which was prepared as authentic as possible, using official stationary. Most tasks were given by the Ministry of Health, but for Task 3 (formulating generic terms of reference) a letter of remit originated from the Environmental Protection Council.

The structure of the task guides was identical: feedback is presented to question(s) raised on the previous page, additional information is given relevant to the question at the bottom of the page, questions are then raised to identify what needs to be learned in order to manage the task at hand and finally, at the bottom of the page a question is raised that prompts the group to discuss the next step to be made in the process. As an example, the task guide for Task 4 (which also served to evaluate the course effectiveness) is presented in Annex 5.

All task guides were deliberately formulated as generic documents that can be used in different countries, under different institutional arrangements and for a range of development and health situations.

The sequence of tasks had been arranged in what was assumed to be a logical order, which was proved correct by the fact that in some instances groups already started on components of the next task unwittingly. This was particularly the case for Task 2, part 1, the technical appraisal of the health impact assessment: groups already started to formulate ideal generic terms of reference for HIA, their assignment for task 3.

**Participant-driven approach.** In contrast to the Zimbabwe course, the course organized in Ghana was, within the limits of the basic programme structure, completely controlled by the participants. There was no conventional transfer of knowledge through lectures, and the resource persons were individually briefed to ensure that they would primarily respond to questions from the participants, when needed expand the discussion in an interactive fashion with the group and not elaborate on new issues that had not been raised by the groups.

Between the presentation of the letter of remit and the completion of the task the groups were left free to tackle the tasks in their own way, but they had to meet the deadline for presentation of their report. The tutors received a two-day induction on how to assist their group in proceeding with its task without interfering with the technical aspects of the work to be carried out. The organizers received daily reports from the tutors on group processes, obstacles and conflict situations. There was never a need to use this information to correct any of the groups in their proceedings.

The discussions following the presentations of Task reports were also largely driven by the groups themselves. The organizers reviewed the reports, gave feed-back on their technical contents and advised the groups on techniques for effective presentation.

For their task work the groups relied to a large extent on the knowledge, experience and ingenuity available among its members, and other than during the scheduled plenary sessions, they made little use of the local resource persons.

**Functional field visit.** The visit to the Kpong Irrigation Project was organized as an integral part of the training course. The planning of the one-day survey was included in Task 1 (initial health impact assessment) and the analysis of the information collected completed this Task. The objectives was to demonstrate the importance of proper survey planning to optimize the quality and quantity of information collected and the range of information that can be obtained by direct observation or from a variety of sources.

These sources included the local hospital, the workshop at the irrigation scheme and the local community. Direct observations were made at the ancillary hydraulic structures in the scheme. At the hospital the four groups rotated between four heads of department for general introductions, followed by questions and answers. Similarly, at the irrigation scheme the groups rotated between four sites, with a local resource person standing by at each site.

The scheduling of a field trip in the initial stage of the course also proved useful to accelerate the group bonding process. A second field visit to a part of the irrigation scheme that is fully operational had originally been scheduled, but was cancelled as a final preparatory visit found the scheme to be in that part of its cycle when no agricultural activities are taking place.

**Practical outputs.** In the original course concept the outputs of tasks should in principle be useful to the national authorities, in support of policy reform, institutional arrangements or development programmes. In the case of the Ghana course, the generic terms of reference developed by the groups in Task 3 were considered particularly suitable. The tutors were asked to consolidate the four reports into one complete set of terms of reference for a health opportunity assessment of development projects in Ghana. The consolidated version was presented for discussion by all participants and agreed on with some final amendments. This entirely Ghanaian product will be presented to the appropriate authorities for possible incorporation into the policy framework or legislation for environmental impact assessment.

## **Evaluation**

The purpose of the evaluation was to establish whether the overall approach should be continued, substantially changed, or discontinued. Evaluation was also to provide



evidence for improving any future courses. The protocol for evaluation (Annex 6.1) related to acceptability, effectiveness, and efficiency.

- Acceptability to the participants

*An open-ended questionnaire* (Annex 6.2) was designed to compare the participants' perceptions of intersectoral collaboration at the beginning and end of the course. The responses revealed a significant gain in the recognition of both advantages and difficulties of such collaboration.

*The Nominal Group Process* was used half way through the course to elicit the participants' views on both positive and negative experiences so far (Annex 6.3). Ten positive and seven negative aspects were nominated by more than 50% of the participants. The first five good aspects related to mixing ministries, working in small groups, relevance of field trip, cooperation among participants, and intellectually taxing course. The first four negative aspects related logistics of funding, accommodation, meals; the next three aspects were concerned with constraints of time for learning and resting.

*An end of course questionnaire* (Annex 6.4) asked for the participant responses to what they perceived as gains from the course; actual personal financial outlay before/after the course; time spent in direct relation to the course -- before, during, after the course; perception of acceptability of the course; how the course might be improved; more specific praise or reservations in relation to the non-expert tutors, expert resource persons, the guides to tasks 1, 2 and 4 and resource materials.

Apart from gain in technical knowledge, the participants emphasized insights into the importance of team work, intersectoral collaboration, appreciation of other organizations, need for considering health in development projects, need for monitoring projects, importance intersectoral planning for holistic development, and the intellectual stimulus offered by the course.

Lack of privacy due to sharing accommodation, lack of time for reading, consulting experts and completing the tasks, and the wish for more *per diem* instead of three meals and two coffee/tea breaks were mentioned most as aspects that could be improved.

Specific comments related particularly to the role of the non-expert tutors where some were perceived to be too passive. Some of the questions in the guides would need to be made less ambiguous.

- Acceptability to the providers

*The local course coordinators* (Annex 6.5) provided a very useful overview of experiences and recommendations. Their main recommendations were concerned with

the difficulties of intercommunication at a distance prior to the course and ensuring that everyone is fully informed and aware of the allocation of responsibilities.

*The non-expert tutors*, young academics at the University of Ghana, had been briefed on content and process of the course, as well as in their role during a two day session just before the start of the course. They were seen by one of the organizers during morning and afternoon breaks, and they were debriefed at the end of every day. The main concern was the morale of the tutors and the early diagnosis and management of any group dynamic pathologies. The former remained high, and the latter, in relation to one participant, was well managed by the tutor and the group. The outstanding value of one of the four tutors highlighted the need to recruit the best possible personalities.

*The local resource persons* expressed great interest in the general purpose and structure of the course, but emphasized the need for full briefing on their role. They had expected to participate more frequently and should have brought some of their own work to do when not called by a group. Arrangements with and for local experts will merit further discussion.

*International resource persons* felt generally pleased with the course and their contributions, mainly because they had been closely involved with the assembly of the Task Guides.

- Effectiveness

There can be little doubt that the level of maturity, intellectual quality and genuine interest of the participants were a major factor in the success of the course or judged by the results of the work produced by the four inter-ministerial groups. Much of this work was accomplished under pressure, a deliberate device to encourage early fusion of the intersectoral teams.

The written task reports and their oral presentations, together with related discussions were judged to be of a good professional standard and were seen to demonstrate the value and, indeed, success of intersectoral collaboration, not a little encouraged by supply engendered rivalry between the groups.

Perhaps the most valuable evidences rests in the Task 4 reports where the participants from different ministries had to agree on a distribution of responsibilities for the monitoring during construction and subsequent running of the irrigation project, as well as the allocation of resources and identification of the fund holders. The contributions by the groups to generic Terms of Reference for a Health Opportunities Assessment (Annex 7) must be accepted a valid evidence for the success of the course in relation to expertise and competence in collaboration that were acquired during the course.

The participants requested a list of names, addresses and telephone numbers, so that they could maintain an informal network, an intention clearly echoed by their comments in the end-of-course evaluation questionnaire.

- Efficiency: time, effort, cost expended by the participants

*Actual cost, not covered by the organizers.* The estimates recorded by the participants ranged from nil for the majority to as high as 80,000 cedis, mainly related to cost of having children taken to and from school and visiting family at the weekends.

*Time spent* or estimated as yet to be spent on pre-course preparation and post-course catching up with work respectively ranged from nil for a few to 15 hours for many and 100 hours or more for a few participants.

- Efficiency: providers

*Local resource persons* clearly felt that their time was not appropriately used, an issue that will require further consideration, in part how their expertise can be used more effectively by the task groups. Alternatively, such experts need to be advised to use spare time for their own purposes.

*International resource persons*, fewer in number than was the case for the Zimbabwe course, also had spare time while the groups were working on their tasks. However, at least two of the four were also involved in day to day organization and liaison with resource persons, other officials and hotel staff.

*The tutors* felt that their time was well used without becoming too stressed. They expressed the view that the experience would stand them in good stead in their academic career and that it would contribute to their *curriculum vitae*.

*The organizers* indicated that the total expenditure had been considerably less in comparison with the two week course in Zimbabwe. Savings were made by reducing the number of external consultants from twelve to four, avoiding the distribution of "prizes," and limiting the distribution of books and papers to participants. The significantly higher cost-level in Ghana did, however, to some extent offset the savings made.

### **Follow-up**

Possibilities for a follow-up to this capacity building activity were explored by the organizers during the course and further defined at the evaluation meeting. They are listed below and their implementation will be actively pursued by PEEM, DBL and HIP, in cooperation with national institutions and involving as much as possible the course participants.

**Institutionalization.** Considering the locations of the first three trial courses (Zimbabwe, Ghana and, as foreseen for March 1995, Tanzania), institutionalization of the course in these three countries would allow coverage of southern, West and East Africa, respectively. The Ghana Institute for Management and Public Administration (GIMPA) was identified as a suitable location to institutionalize the course to cover the countries of anglophone West Africa. GIMPA has an institutional set-up and facilities geared towards this type of course, it has a good reputation in West Africa, it has run for several years a course on Primary Health Care and its teaching staff is aware of problem-based learning techniques.

Discussions with the Institute's Director of Training and its Director-General covered mechanisms to assist GIMPA in gradually establishing the course as part of its programme in a way that would ensure its sustainability without external inputs, and possible sources of funds for the start-up phase. It was agreed that GIMPA would send a formal letter of interest to the PEEM secretariat and subsequently formulate a proposal for the institutionalization of the course.

**TORs.** The generic terms of reference for health opportunity assessment prepared by the participants will be formally presented to the Ghanaian authorities as a contribution to the process of national policy formulation in the area of environmental protection and environmental impact assessment. If possible, a meeting will be organized with highlevel officials from the relevant ministries to discuss the terms of reference and recommend how they can best be introduced in the overall policy framework. On the medium-term, their practical value as a tool to include health issues in development projects should be assessed.

**Health impact assessment and policy studies.** There is room for carrying out health impact assessments of irrigation and other water resources development projects in Ghana. Such studies would help strengthen awareness among planners and decision-makers in the various sectors involved, of the need to consider human health in the early planning and design stages of development projects. They would also give the course participants a chance to apply, under realistic conditions, the knowledge and skills they developed, and to maintain the intersectoral contacts they established in Akosombo. Complementary to this, policy studies would aim to identify opportunities for policy reform which would create a more enabling environment for the permanent incorporation of health aspects in the planning of the natural resources development. Assessments and studies could be carried out in partnership with DBL and HIP, involving graduate students from Denmark and the UK.

**MoUs.** The Memoranda of Understanding prepared by the four groups as part of Task 4 (the formulation of an action plan for intersectoral monitoring of human health during project implementation) will be distributed to the various ministries involved and may serve as a model for the establishment of formal institutional arrangements on this and related topics. Such arrangements need to be compatible with the existing sectoral policies and should be updated regularly as policy reform takes place. Bilateral and

multilateral donor agencies operating in Ghana should also be made aware of such institutional arrangements once they have come into effect.

**Seminar.** Late 1994-early 1995 a seminar could be organized, which would serve to review the experience of the course participants following completion of the course, to assess the course's value and its limitations retrospectively in the light of this experience and to make recommendations for further improvements of the course. The occasion of such a seminar could also be used to present the results of impact assessments and policy studies, and its programme could include a short session for which high level policymakers of the relevant ministries and other government bodies would be invited to attend.

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## **ANNEX 1**

### **LIST OF PARTICIPANTS, TUTORS, ORGANIZERS, RESOURCE PERSONS AND OBSERVERS**

#### **LIST OF PARTICIPANTS (In alphabetical order)**

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## ANNEX 2

### COURSE PROGRAMME AND MATERIALS

#### **The Course Programme**

#### *Wednesday, 26 January*

In the morning: transport from Accra to the Volta Hotel in Akosombo.

15:00-16:00 Official registration participants

17:30-21:00 Formal inauguration of the course

17:30-18:30 Drinks and introduction of participants

18:30-19:30 Official opening (see next section of this annex)

19:30-21:00 Dinner

#### *Thursday, 27 January*

08:30-12:30 Plenary session

08:30-08:50 Introduction of the course:

objectives, scope, structure and method of working

08:50-09:10 Video: *Disease and development: a critical connection*

09:10-10:00 Groups to list: (a) diseases

(b) projects

(c) environmental components

followed by a discussion on the links between water resources development, environment and health in Ghana.

10:00-10:20 Break

10:20-10:40 Introductory presentation on planning procedures, the project cycle concept and health opportunities, followed by group work on the planning framework in Ghana and the various actors involved

11:30-11:45 Break

11:45-12:30 Briefing on Task 1

12:30-14:00 Lunch

14:00-17:30 Group work on Task 1

In the evening: presentation of video *Our Common Future*

*Friday, 28 January*

08:30-09:15 Plenary session

09:15-12:30 Group work on Task 1

12:30-14:00 Lunch

14:00-14:45 Plenary session, including briefing on next day's field trip

14:45-17:30 Group work on Task 1

*Saturday, 29 January*

Field trip to Kpong Irrigation Project, including a visit to the local hospital, one of the villages, various hydraulic structures in the scheme and the engineers responsible for the scheme operations.

*Sunday, 30 January*

Holiday

*Monday, 31 January*

08:30-09:15 Plenary session, including de-briefing of field trip

09:15-12:30 Group work on Task 1

12:30-14:00 Lunch

14:00-14:45 Plenary session

14:45-17:30 Group work on Task 1

In the evening: completion of reports and presentations

*Tuesday, 1 February*

08:30-11:30 Plenary session

08:30-10:30 Presentation reports on Task 1 and discussion

10:30-11:00 Break

11:00-11:30 Briefing on first part of Task 2

11:30-12:30 Group work on Task 2

12:30-14:00 Lunch

14:00-14:45 Plenary session

14:45-17:30 Group work on Task 2



***Wednesday, 2 February***

08:30-09:15 Plenary session  
09:15-12:30 Group work on Task 2

12:30-14:00 Lunch

14:00-14:45 Plenary session  
14:45-17:30 Group work on Task 2

In the evening: mid-course evaluation

***Thursday, 3 February***

08:30-11:30 Plenary session  
    08:30-10:30 Presentation technical appraisal prepared for Task 2 and discussion  
    10:30-11:00 Break  
    11:00-11:30 Briefing on second part of Task 2  
11:30-12:30 Group work on Task 2

12:30-14:00 Lunch

14:00-14:45 Plenary session  
14:45-17:30 Group work on Task 2

***Friday, 4 February***

08:30-09:15 Plenary session  
09:15-12:30 Group work on Task 2

12:30-14:00 Lunch

14:00-14:15 Brief plenary session  
14:15-15:00 Group work on Task 2  
15:00-15:30 Break  
15:30-17:30 Presentation economic appraisal prepared for Task 2 and discussion

In the evening: Debate on the subject: Intersectoral collaboration is too difficult in practice.

***Saturday, 5 February***

Visit to the Akosombo dam and the Akosombo sewage treatment ponds

*Sunday, 6 February*

Holiday

*Monday, 7 February*

08:30-09:15 Briefing on Task 3  
09:15-12:30 Group work on Task 3

12:30-14:00 Lunch

14:00-14:45 Plenary session  
14:45-17:30 Group work on Task 3

*Tuesday, 8 February*

08:30-11:30 Plenary session  
    08:30-10:30 Presentation terms of reference prepared for Task 3 and discussion  
    10:30-11:00 Break  
    11:00-11:30 Briefing on Task 4  
11:30-12:30 Group work on Task 4

12:30-14:00 Lunch

14:00-14:45 Plenary session  
14:45-17:30 Group work on Task 4

*Wednesday, 9 February*

08:30-09:15 Plenary session  
09:15-12:30 Group work on Task 4

12:30-14:00 Lunch

14:00-14:45 Plenary session  
14:45-17:30 Group work on Task 4

*Thursday, 10 February*

08:30-10:00 Group work on Task 4  
10:00-10:30 Break  
10:30-12:30 Presentation reports Task 4 and discussion

12:30-14:00 Lunch

**Thursday, 10 February (continued)**

14:00-16:00 Assessment by participants

16:00-17:00 Reflection on the overall course and options for follow-up

In the evening: Official closing dinner, with presentation of certificates (see last section of this annex)

**Friday, 11 February**

Departure from the Volta Hotel

**Schedule for local resource persons**

Resource persons	Jan						Feb									
	26	27	28	29	30	31	01	02	03	04	05	06	07	08	09	10
Dr M.A. Odei	_____						_____		_____							
Dr V. Okoh	_____						_____		_____							
Mr D. Ohemeng	_____						_____		_____							
Mr K.A.A. de Graft-Johnson	_____															
Dr K. Asenso-Okyere							_____									
Mr E. Martey							_____									
Dr J.D. Otoo							_____									

**Opening ceremony**

An informal introduction of all participants, tutors and resource persons was followed by the official opening ceremony. Statements were made by representatives of the different organizations and agencies involved. The course was formally opened by an inaugural address on behalf of the honorable Minister for the Environment, Dr Christina Amoaka-Nuama.

On behalf of the Director-General of the World Health Organization, and also on behalf of the other three UN agencies collaborating in PEEM, the representative of WHO in Ghana, Dr Brian C. Dando called attention to the need to emphasize the health dimension of sustainable development. Agenda 21 had been agreed on by Heads of State at the UN Conference on Environment and Development in June 1992 as the blue print for action to ensure that by the beginning of the 21st century all development initiatives and processes will be based on the concept of sustainability. WHO's new Environment and Health Programme

aimed at achieving the goals contained in chapter 6 of Agenda 21. There would be a new, strong focus on health impact assessment and the health implications of global environmental change. In the wake of UNCED, there was a growing interest in capacity building in the health sector to ensure effective intersectoral collaboration in development planning, with tangible inputs from the national environmental health unit. The course now about to start was a good example of relevant capacity building efforts in this context.

The Ambassador of the Kingdom of Denmark was represented by Ms Jette Bukh, Counsellor, who recalled the historical links between Ghana and her country, which dated back to the 17th century. Ghana was one of the countries in Africa which received substantial and increasing support through the bilateral aid programmes of the Danish Ministry of Foreign Affairs. In connection with the PEEM/DBL training course it was relevant to single out the Danish support for the Guinea Worm Eradication Programme in Ghana, with a technical cooperation component that also involved staff of the Danish Bilharziasis Laboratory.

On behalf of the Vice-Chancellor of the University of Ghana, one of the patrons of the course, Professor Ebenezer Laing expressed the special interest of his University in this course. Through the Volta Basin Research Programme the University of Ghana had been actively involved in studying the many aspects related to the construction of the Akosombo and Kpong dams. Where health aspects were concerned the research efforts of a sister institute, the Institute of Aquatic Biology, under the Council for Scientific and Industrial Research, also had to be mentioned. Professor Laing drew attention to the need for participants to optimally use the opportunity offered by this course to establish lasting working relationships with their professional counterparts in other ministries, so as to ensure effective intersectoral communication in their future work.

Dr Victor Okoh, Director of Health and Safety, addressed the group on behalf of the Volta River Authority. He had been associated with the prevention and control of water-borne diseases in the Volta River Basin for more than a decade, and he hoped this course would contribute to more lasting solutions to some of the critical health needs of the Ghanaian people. The story of the dams on the Volta River was well known: pre-impoundment prevalence rates for schistosomiasis of 10% rose to an average of 60-70%. Efforts to control this problem met with success; in particular the drug treatment campaigns using Praziquantel led to notable reductions in infection rates, also in more remote lake shore communities which were reached by the hospital ship Onipanua.

Mr Edwin P.D. Barnes, Director PPME, delivered the inaugural address on behalf of the Minister of the Environment, Dr Christina Amoako-Nuama. The case of the Akosombo Dam illustrates how development with a focus on socio-economic gains was at the expense of human health, biodiversity and environmental change in the Lower Volta Basin. The important lessons learned had to be brought to bear on new water resources development. The establishment of a solid legal and institutional framework was essential in this connection. Water was an important issue on the agenda for the formulation of Ghana's National Environmental Action Plan. At the level of rural communities, the provision of safe drinking water was of paramount importance: only 30 % of the people living in rural communities sized between 500 and 1500, and only 15% of those living in such communities smaller than 500 inhabitants have access to safe drinking water. One way of ensuring that environmental and health issues were considered in the planning of development projects was to make an Environmental Impact Assessment compulsory. Environment and health issues are multi-disciplinary and cross-sectoral by nature and therefore required close cooperation between policy makers, professionals from various sectors, research and teaching institutions and the donor agencies. Mr Barnes expected that as a result of the course, the process of developing and formulating

policies and regulations on water resources development and management, a major task of his Ministry in 1994, would be facilitated and strengthened. Expressing his Minister's gratitude to the organizers, the Ministry of Health, DBL/DANIDA and the UN agencies involved in PEEM, Mr Barnes officially opened the training course.

### **Closing ceremony**

The closing ceremony took place on Thursday evening 10 February and was attended by the Ghanaian course coordinators, Professor E. Laing and Dr A. Issaka-Tinorgah and by the Director-General of the Ghana Institute for Management and Public Administration. On behalf of the course organizers Mr Robert Bos thanked all the Ghanaian nationals who had provided an input into the course and reflected on the follow-up of the course. The participants themselves were faced with the challenge to keep the contacts that had been established alive as an informal network. The organizers would investigate whether suitable activities could be developed or supported, such as more health opportunity assessments, and studies that would lead to policy reform. Possibilities for the institutionalization of the course at the Ghana Institute of Management and Public Administration (GIMPA) would be further explored with the staff of the Institute and representatives of the ministries involved.

Professor Laing spoke on behalf of the local organizers and patrons and pointed out the highlights of the course. He had been particularly impressed with the serious approach of all participants, not in an academic sense, but rather in tackling a real life problem affecting the lives of Ghanaian communities. He quoted Saint Augustine: *Man has no reason to philosophize, unless it is to improve the quality of life.* This was of immediate relevance to further thoughts on how to achieve and improve intersectoral collaboration.

The closing session ended with the presentation of certificates of successful completion of the course: Dr Issaka-Tinorgah handed out a certificate to the individual participants. On behalf of the participants, a vote of thanks to the organizers was adopted.

## **COURSE MATERIALS**

### **List of documents provided to each participant**

Birley, M.H. (1989). Guidelines for Forecasting the Vector-Borne Disease Implications of Water Resources Development. *PEEM Guidelines Series 2*, PEEM Secretariat, WHO, Geneva.

Birley, M.H. and Peralta, G. (1992). Guidelines for the Health Impact Assessment of Development Projects. *ADB Environment Paper No. 11*, ADB, Manila.

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## **ANNEX 3**

### **PLANNING AND PREPARATIONS**

#### **Three preparatory meetings**

Three preparatory meetings were held in London (5-6 January 1993), in Charlottenlund (17-18 February 1993) and in Liverpool (11-12 October 1993).

At the first meeting general and enabling objectives of the course were reformulated, grouped in the four tasks that the participants of the next course were expected to carry out. The general objectives defined the decision making procedures each participant should be able to contribute to at the end of the course. The enabling objectives defined the essential components of which these contributions should consist, and the questions the groups should ask themselves in order to develop an adequate output.

The general lay-out of the task guides was developed and terms of reference for the authors of the task guides were drawn up (see annex 4).

The second meeting in Charlottenlund reviewed the outputs of the first meeting, sharpened them and reviewed a model task guide. The structure and programme of the next course were determined, and the criteria for the selection and procedures for the recruitment of non-expert tutors and local resource persons were defined. Local arrangements were worked out in detail and a series of activity sheets for the various components of the course were developed with for each activity the person responsible, the expected output and the deadline for completing it. The terms of reference for the field visits by HIP and DBL staff were also drawn up at this meeting.

At the third meeting in Liverpool the status of the four task guides was reviewed; the preparation of one of these had met with delays, because the originally identified author had not been able to take on the assignment; the others needed different levels of modifications and editing. The possibilities for course follow-up in Ghana were discussed and a strategy to prepare for this during the course was agreed on. There were also preliminary discussions about the third trial course, proposed to be held in Tanzania.

The discussions at these meetings have been carefully documented and the minutes are available from the PEEM Secretariat at WHO, Geneva.

#### **Visits to Ghana by DBL and HIP staff**

DBL course coordinators (Mr P. Furu and Mrs G. Gøtsche) visited Ghana in May 1993 to assist in sorting out local arrangements: accommodation, facilities, transport and logistics during the course. Coordination between the Ministry of Health, the Environmental



Protection Council, the University of Ghana and the WHO and FAO representations in Ghana was also established during this visit. In consultation with the Ghana Irrigation Development Authority (IDA) the Kpong Irrigation Project was selected as the local context in which the course tasks would be performed. The selection of the Kpong Irrigation Project was based on the following considerations:

- **accessibility:** the scheme is a 45 minute drive away from Akosombo.
- **variety of conditions:** the scheme is at the pre-construction phase, but includes the rehabilitation of an existing irrigation project.
- **access to a commercial scheme:** the irrigation system is situated close to a commercial irrigation scheme offering the opportunity for comparative observations.
- **feasibility study:** a detailed feasibility study with a health impact assessment and terms of reference is available.
- **clear health situation:** the health problems of the local communities are known to Ghanaian experts who will serve as resource persons to the course.

In July Dr M.H. Birley (HIP/Liverpool School of Tropical Medicine) visited Ghana for a further in-depth review of the Kpong Irrigation Project and the collection of documents on environmental and health issues and on the project's feasibility study.

The feasibility study was obtained from the library of the IDA with supplementary material obtained from international consulting engineers. In addition, national and local health records were available that indicated the relative importance of vector-borne diseases in the region.

### **Local organization**

Comments on the local organization by Drs Laing and Tinorgah are presented in Annex 6.

### **Final preparations**

Other than the final logistical arrangements, the main activity in Ghana prior to the course was the induction of the non-expert tutors. Five post-graduate students had been recruited on the premise that four would be assigned to the groups, while the fifth one would be on stand-by and assist the secretariat. The selection was based on the experience with the five tutors during the two days of induction, major criteria being: motivation, initiative, outspoken-ness and ability to absorb techniques for the management of group dynamics.

The induction sessions started with a general introduction to the course, followed by a detailed review of the task guides. Simulation of the group processes provided an

opportunity to confront the tutors with situations of stagnation or conflict they might be faced with and to induce them into the various techniques to overcome such problems without actually interfering in the decision-making process required to carry out a task.

The non-expert tutors were also briefed about their role in liaising between the groups and the organizers. In order to ensure on-going monitoring of the group work and to streamline the mechanism of feed-back to organizers, meetings of tutors and organizers were instated at the end of each afternoon.

The programme for the induction sessions on 25 and 26 January 1994 follows:

#### **General considerations**

- (1) The main purpose of the course is to create an enabling climate for intersectoral collaboration. The context in this instance is water resources development and associated health opportunities.
- (2) The aim is to evolve a course which can be implemented anywhere in the (anglophone) world, at any time, concurrently in several countries and at minimal cost.
- (3) The minimum external contribution, when the course is first introduced to a country, will be the "anchorman". Any other external consultants should, on this occasion in Ghana, be no more than passive observers during the induction.
- (4) S/he should, therefore, be responsible for induction of the local tutors. However, whenever possible, s/he should be shadowed throughout the induction and the course proper by the person who is to become the local anchorman/organizer for subsequent intersectoral courses within the country/region.
- (5) Again, with continuity in mind, it would be appropriate to see the initial group of tutors as the potential core of tutors for subsequent country/regional courses. It would, therefore, be helpful to engender a corporate pride and sense of ownership in this group of tutors by letting them feel that they are special and highly valued.
- (6) The tutors should not be given a great deal of theory about intersectoral collaboration, health opportunities and the role of tutors. It will be more effective if they were able to experience how the course develops and how it is conducted - step by step. This experience will help them to appreciate the underlying concepts and principles and their role. For this purpose there should be regular reviews of experiences.
- (7) The tutors should be given ample time to study the course materials, to consider each step as they progress - as a group, with the anchorman as their tutor.

**Proposed timetable for induction of tutors***Tuesday 25 January 1994*

- 9:00-9:30 Tutors meet as a group with the anchorman, seated around the group table. Everybody introduces him/herself.
- 9:30-10:00 Anchorman provides a general orientating overview of the course with the use of the course timetable. This will be purely factual. The group will be encouraged to ask for clarifications during and after this overview. The anchorman will then touch (lightly) on the role of the tutors - that each will be assigned to a mixed group; that tutors will act as facilitators, not as teachers, just as the anchorman will function with them during the two induction days; that the tutors will be invited to evaluate every aspect of the course.
- 10:00-10:30 Break
- 10:30- Task 1: the anchorman takes the group of tutors through the Guide for task 1 page by page to allow the tutors to become familiar with the contents (including the reference materials that they will give either to their group as a whole or to each of the individual participants, and materials that will be available in the "library").
- At the same time the tutors will become familiar with the "process": what their group will be expected to do, what individual members should do and what the tutors should do (and not do). All aspects of the process should become self-evident; at appropriate points the anchorman should invite the tutors to reflect on what they have just experienced, so that the tutors themselves will come to recognize these aspects of the process, as well as how step by step progress through the guide will help their group to accomplish its task and learn how to work together by sharing their expertise (from the different sectors).
- The tutors should not feel that they themselves need to become experts in all aspects of the task; they should not spend time on trying to learn as their group will be expected to.
- The whole of the first day should be devoted to Task 1. The reason is twofold. First the tutors need to get to know each other and become familiar with the "process" and the nature of the content of the course. Second, task 1 is quite heavy in its own right.
- The tutors will need to be given quite a general introduction to the purpose and activities of the field trips and other programme components, as and when these dovetail with the particular Task the tutors are working through (e.g. the field trip that fits in the middle of task 1, the debate, evening discussions with local expert resource persons etc).
- Dinner This should be a special occasion when the tutors can meet informally with all the external resource persons and be made to feel they are special and valued.

*Wednesday 26 January 1994*

At a somewhat accelerated pace Tasks 2 and 3 are explored by going through the respective Guides, step by step. The second field trip and any other programme activities are discussed as and when they occur in relation to these tasks.

The last session after afternoon tea should be devoted to a "guided discussion" on

(a) the roles of the tutors during the group sessions, field trips, other programme activities, plenary sessions and the Task presentations, as well as evaluators of the course.

(b) the overall task related to health opportunities in water resources development.

(c) the aim to foster intersectoral collaboration.

The aim of this discussion is to encourage the tutors to reflect on what they have experienced during the two days, to think about it by talking about it and thus to arrive at their own conclusions. This session will also provide opportunities for individuals to express any doubts, uncertainties and need for further clarification.

### **Spare tutor**

It is assumed that the four group tutors will be with their assigned groups most of the time, not only during the group discussion sessions (working with the Task Guides).

This makes it necessary to find a specific role for the spare tutor. The suggestion is :

- (1) S/he should participate in the induction as if s/he were one of the four tutors.
- (2) S/he should act as the librarian.
- (3) S/he should assist in conducting the evaluation of the course.
- (4) S/he should assist in the organization/running of the field trips and other programme activities.

The spare tutor becomes the potential indigenous anchorman - a special person and one to be selected/recruited with special care, and someone who would require special attention throughout the course.

## **ANNEX 4**

### **Advice for contributors**

#### **HEALTH OPPORTUNITIES IN WATER RESOURCES DEVELOPMENT**

**A two-week course to promote collaboration  
between middle level officials from various ministries  
for the incorporation of health safeguards and health promotional measures  
in water resources development projects**

**Ghana, 27 January-11 February 1994**

**Purpose** The organizers hope this guide will assist you in assembling information that will help the course participants when they look for knowledge and understanding, in order to carry out a number of tasks related to **health opportunity assessment**.

**Please send your contribution to:**

**PEEM Secretariat  
World Health Organization  
1211 Geneva 27  
Switzerland  
Fax: +41 22 788 4226**

**by the date agreed with you.**

**What the  
course  
participants  
will do**

- The 24 participants will work in four intersectoral groups over a period of two weeks.
- They will be invited to complete four Tasks that relate to the project cycle of a proposed water resources development project:
  1. decide whether a full Health Opportunity Assessment (HOA) is necessary;
  2. appraise the technical and financial aspects of a completed Health Impact Assessment report;
  3. formulate generic Terms of Reference for HOA;
  4. plan the organization for intersectoral monitoring of the project.
- The groups will work in separate rooms and, in trying to complete their tasks, they will discuss questions that will lead them to acquire the knowledge, understanding and skills defined in the course objectives. A specially prepared Guide will facilitate the discussions in the groups, their learning and the completion of the four Tasks.

- Each group will have a non-expert tutor who does not teach, but who will give guidance to the participants in the exploration and completion of their Tasks in a logical order.
- There will be no lectures and no formal presentations by visiting experts. However, the groups will meet regularly in plenary sessions to discuss unresolved issues with local and visiting experts.
- The work in groups will be supplemented by field visits and other activities.
- Each task will culminate in a written group report and an oral presentation.

Your  
contribution

1. You are invited to contribute to the Guide that will help the course participants

- to consider the nature of their Task and how to accomplish it;
- to identify what they do not know or understand;
- to access the required learning; and
- to apply to their Task what they have learned.

2. The Guide should, therefore, contain for each step in the Task:

- a sentence or two on how the Task can best be tackled; note that the groups will have received a formal letter of remit for the task;
- an overview of the components of the Task;
- for each of the components, how this might be tackled and the questions that would help identify what needs to be learned in order to progress with the Task;
- as it may occur that no-one in the group is able to provide an adequate answer, your contribution should include a brief, explanatory answer for each question;
- and then, a sentence or two to lead the group on to the next component or sub-task;
- finally, a sentence that signals the completion of the Task.

3. The organizers have listed the essential components of the Task (i.e. the "sub-tasks"). Have they been presented in a logical order order? What ought to be added/deleted/modified?

[Please remember: the participants should merely be able to make reasoned decisions, they are not expected to become "mini-specialists".]

**Please concentrate on the Task that we have highlighted in annex 2.**

**4. Please bear each of the following points in mind when developing your material:**

- As a group begins to tackle the Task (they will be given a "letter of appointment" with a specific remit), the participants will need an overview of the sequence of sub-tasks and the "objectives" given in Annex 2.
- Next, you might provide a sentence or two to indicate how the group can begin to tackle the first sub-task.  
What question(s) might the group address first?
- Please ensure that your Guide indicates how the group can progress from one step in its work to the next, and from one sub-task to the next.  
[Annex 3b will here be of special help to you.]
- A typical page in your Guide will contain:
  - Feedback (resumé answers) to questions raised on the previous page.
  - Feedback on how to tackle the task raised in the main question(s) at the bottom of the previous page.
  - Further questions, related to the task in hand, to identify what needs to be learned in order to manage the task.
  - In the box at the bottom of the page: questions that identify the next task for the group.

**5. Please write in the first person singular and use words that can be readily understood by those who are not familiar with your discipline or specialty. This may well require the addition of explanatory footnotes (rather than a separate glossary).**

- Let your writing reflect how you reasoned in answering the question. [No lecture or textbook chapter, please.]
- Be as brief as possible by concentrating on principles.

**6. Any reading matter in addition to the standard list should be kept to an absolute minimum.**

## **Tasks-objectives-outputs**

### **Overall objective**

*Irrespective of his/her sectoral affiliation, after completing the course each participant will be able to contribute to the decision whether or not a health opportunity assessment is needed, assist in the formulation of terms of reference for a health opportunity assessment, determine the adequacy of the assessment report, including recommendations on health protective and promotional measures, and prepare for the intersectoral monitoring of the project.*

This overall objective translates into the following main objectives:

By the end of the course, the participants will be able to contribute to

1. the decision whether a full Health Opportunity Assessment (HOA) is necessary ;
2. the technical and financial appraisal of the completed report of the HOA ;
3. the formulation of Terms of Reference (TORs) for an HOA ;
4. the organization of intersectoral monitoring of the project.

### **First task**

- An initial health examination at the project identification/prefeasibility stage requiring a rapid assessment (including site visit)  
*Output: a recommendation whether or not a full Health Opportunity Assessment is necessary.*

### **Main objective (1)**

By the end of this task, the participants will be able to contribute to the decision whether a full Health Opportunity Assessment (HOA) is necessary .



**Enabling objectives:**

In order to decide whether a full Health Opportunity Assessment (HOA) is necessary, the participants will be able to:

- 1.1. Establish criteria
- 1.2. Apply these criteria

**Second task:**

- Appraisal of a health impact assessment report. This should include a technical appraisal of the completed HIA report and an economic evaluation of the intervention options proposed therein. This appraisal will provide the basis for negotiations with external donors. It will also be starting point for the development of an action plan on intersectoral monitoring and surveillance.

*Output: an appraisal report presenting plausible and justified options for the implementation of health protective and promotional measures to be included in the development project.*

**Main objective (2)**

By the end of this task, the participants will be able to contribute to the technical and financial appraisal of the completed report of a HIA.

**Enabling objectives**

In order to carry out the technical and financial appraisal of the completed report of the HOA, the participants will be able to:

- 2.1. decide whether or not the report conforms with the TORs;
- 2.2. decide whether the report has a bias and if so identify these;
- 2.3. with due consultation, decide whether the data and their interpretation are sufficient and credible to support the conclusions;
- 2.4. decide whether the recommendations are sufficient, credible and practicable.

**Third task:**

- Formulation of model terms of reference based on the experience gained from the technical and economic appraisal carried out in Task 2.

The focus should be on the translation of hazards related to community vulnerability and environmental factors into perceived risks that take into account the capacity of the health services to deal with them; TORs should also include a health opportunity assessment.

*Output: generic terms of reference (TORs)*

### **Main objective (3)**

By the end of this task, the participants will be able to contribute to the formulation of detailed Terms of Reference (TORs) for an HOA .

#### **Enabling objectives:**

In order to formulate Terms of Reference (TORs) for an HOA, the participants will be able to:

- 3.1. decide what the assessment should investigate in the context of the feasibility study as a whole;
- 3.2. decide what should be considered in the conclusions;
- 3.3. decide what should be considered in the recommendations;
- 3.4. decide the format for the presentation of the assessment;
- 3.5. decide the conditions for undertaking and completing the assessment.

#### **Fourth task:**

- Design the intersectoral organization, major logistics and resource sharing needed for the monitoring of the project during construction and subsequently.

*Output: a plan that outlines the intersectoral organization and major logistics arrangement, and the text of a Memorandum of Understanding which governs the sharing of resources*

[Note: as this Task will assess the ability of the participants to act intersectorally in relation to health, the groups will work without a tutor and with a simplified guide raising key issues and providing essential definitions. Their written reports and presentations will be judged by an external assessor.]

### **Main objective (4)**

By the end of this task, the participants will be able to contribute to the organization of intersectoral monitoring of the project .

### **Enabling objectives**

In order to contribute to the intersectoral monitoring of the project, the participants will be able to:

- 4.1. develop a plan for the organization of intersectoral monitoring.
- 4.2. make a reasonable estimate of the resource implications.
- 4.3. contribute to the formulation of a memorandum of understanding between relevant ministries and other agencies.

### **How assignments are given**

The assignment for each of the above tasks and the expected outputs were defined as follows:

#### ***1. Deciding whether a full Health Opportunity Assessment (HOA) is necessary.***

Each group of participants receives a written assignment with instructions to carry out a rapid assessment of a proposed project. The assessment will include a site visit. Participants will have to prepare a programme to use this visit optimally for the collection of relevant information.

At the end of this assignment each group will present a report with criteria to determine the desirability of a Health Opportunity Assessment and guidance how to apply them.

#### ***2. Technically and financially appraising the completed report of the HOA.***

The participants will be given the Health Impact Assessment report of the Kpong Irrigation Project with the original tender document and terms of reference, and will be given a letter of remit to appraise it technically and economically and to comment on the recommendations.

The resulting appraisal report will be the basis for the next task, i.e. the formulation of model or generic terms of reference.

#### ***3. Formulating Terms of Reference (TORs) for an HOA.***

A letter of remit is given to each group which outlines their assignment to develop detailed Terms of Reference for a Health Opportunity Assessment. The outcome of this assignment will be generic Terms of Reference for the Health Opportunity Assessment.

#### ***4. Organizing intersectoral monitoring of the project.***

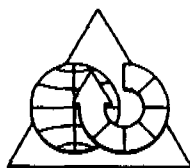
Again, a letter of remit will define this task.

The assignment to develop an action plan for monitoring/surveillance will ask the participants to define the activities that need to be performed, the roles different sectors will play, the allocation of resources and a timetable, with appropriate justification and costing (costing checklists that appear in WHO Expert Committee reports for the control of leishmaniasis and for the control of Chagas disease could be provided to assist the participants).

The task will be used to assess to what extent the participants have achieved the aim of the course: an intersectoral collaborative approach to health opportunities in water resources development. The group will, therefore, be given only minimal assistance and limited reference material.

**ANNEX 5**

**GUIDE FOR TASK 4**



**HEALTH OPPORTUNITIES IN WATER RESOURCES DEVELOPMENT**

**A PEEM/DBL/HIP Training Course  
in collaboration with the Ministry of Health, Ghana**

**Under the patronage of the University of Ghana  
and the Environmental Protection Council, Ministry of Environment, Ghana**

**Akosombo, Ghana  
27 January - 11 February 1994**

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**TASK 4**

**Development of a plan for intersectoral monitoring**

**Prepared by H. Verhoef**

## Introduction

**Welcome to the fourth and last task!**

As in the previous Tasks, you will be given a letter of remit which will tell you what is expected of you upon completion of this task.

The total time that is available for Task 4 is 15 hours (½ hour briefing, a total of 8 ¼ hours group work with 2 ¼ hours of plenary discussions in between, 3 ¼ hours presentations).

Make the following decisions now:

- who will check that the work of your group is making enough progress to accomplish the task in time?
- who will write down the group decisions and the reasons for these decisions? (you will need these notes for the preparation of your group presentation)

**How to complete the task quickly and easily.**

During this task you will receive less assistance from your tutor than in previous tasks. The reason is that, with this last task, the course organizers want to see how well your group performs when it is left to work as independently as possible (as in real life).

Remember from the previous tasks:

- during the group work, you will be guided in your task by a number of pages that will be given to you by your tutor.
- with every page, ask yourself what you must know in order to be able to accomplish the task, and find out from your group partners if they can fill these gaps in your knowledge.
- when you have gone as far as you can within the group to answer your questions, turn to the next page.
- if needed, you may ask your tutor to help you to find additional information.
- unresolved questions will be discussed during plenary sessions. Be prepared as a group and bring your questions with you.
- you will receive instructions for presenting your group work at the end of the task.

## Timetable

Tuesday	8 February	12h00-12h30	(½ hour)	Plenary session	briefing
		14h00-16h45	(2 ½ hours)	Group work	
		16h45-17h30	(½ hour)	Plenary session	
Wednesday	9 February	08h30-11h45	(3 ½ hours)	Group work	
		11h45-12h30	(½ hour)	Plenary session	
		14h00-16h45	(2 ½ hours)	Group work	
		16h45-17h30	(½ hour)	Plenary session	
Thursday	10 February	08h30-10h00	(1 ½ hours)	Plenary session	presentation of reports
		10h30-12h30	(2 hours)	Plenary session	presentation of reports

Total time available: 15 hours (½ hour briefing, 8 ½ hours group work, 2 ½ hours plenary discussions, 3 ½ hours presentations)

## Resource material

**PF Beales, S Goriup, S Litsios, L Molineaux, E Onori and JH Pull (1988)** The planning of malaria control. In: *Malaria. Principles and practice of malariology, Volume II* (WH Wernsdorfer and I McGregor, eds).

Edinburgh, etc: Churchill Livingstone.

**M Tiffen (1991)** *Guidelines for the incorporation of health safeguards into irrigation projects through intersectoral cooperation*. PEEM Guidelines series 1, Ref. No. WHO/CWS/91.2

Geneva: World Health Organization.

**H Verhoef and L Clarke (1993)** *Intersectoral collaboration for the incorporation of health safeguards into development projects*. Paper presented at the National Seminar on Agricultural Development and Health (Benin, 23 - 26 November 1993).

Geneva: PEEM Secretariat, World Health Organization.

## Letter of remit

From: The Chairman, Environmental Protection Council (EPC)

Subject: Intersectoral monitoring of irrigation projects

Sir/Madam,

On behalf of the EPC, I wish thank you for your recent report on appropriate Terms of Reference (TORs) for Health Opportunity Assessments in integrated irrigation projects.

Following receipt of your report, we have had several meetings with the Ministry of Health (MOH) and the Ministry of Agriculture (MOA) concerning the planning of such projects in the future. The representatives from both ministries concurred with our view that the Model TORs that were contained in your report will be very useful in the preparations leading to the integrated Kpong project, but they raised several important issues about the implementation of the project.

The representatives from the MOH voiced their doubt that the MOH would be able to follow up on the recommendations of these HOAs, which, although in principle cost-effective, may still require considerable financial investments. Also, some of the proposed health risk mitigation measures are recurrent in nature, and will therefore require a long-term financial commitment. They pointed out that the MOH has lately been very short in funding, and that this situation is likely to aggravate in the coming years. The MOH therefore foresees difficulties in committing itself to participation in the Kpong project, particularly at the time of its construction and onwards.

The representative from the MOA shared his concern that, although his ministry was prepared to collaborate with other ministries and farmer interest groups in safeguarding health in the Kpong project, funding agencies might not be willing to spend money on

(... please turn over)



(... see previous page)

health issues on agricultural projects. He had also informally discussed this matter with an official from one of the agencies with which they are currently in negotiation about funding. This official had told him that his agency was concerned that integrated projects would only lead to conflicts over financial issues between the various ministries concerned and that no ministry might have the overruling power to take decisions in such situations.

As we did not yet contact other ministries about this matter, we don't know what concerns they may have, if any.

Having taken these concern into consideration, we think it necessary that the various ministries concerned in the Kpong project agree on a Memorandum of Understanding which provides an plan for collaboration. In our view, this Memorandum should present the intersectoral organization, the major logistics and resource sharing needed for implementation and monitoring of the project from the construction phase onwards. The practical aspects arising from this Memorandum should be worked out in a Plan of Action, which should minimally contain a list of the responsibilities that will be assigned to each ministry, a time table of activities, and a list of resources and contributions that are required from the various ministries and external support agencies.

In view of your previous valuable contribution, we would now like to ask you to prepare a draft versions of aa) a Memorandum of Understanding, and bb) an outline Plan of Action. We would appreciate receiving your reports by **Thursday 10 February at 08h30**.

With regards.

Yours Sincerely,

The Chairman of EPC

cc.: Ministry of Health  
Ministry of Agriculture

How will you tackle this request?

As you know, you have limited time available. At the end of this Task, the group is expected to have prepared a draft Memorandum of Understanding and an outline Plan of Action, and to make a brief oral presentation in a plenary session. The questions below may help you to make a start.

Between you all, there may be someone who has already experience in getting various ministries to collaborate.

**Questions to help you get started:**

- 1 What is meant by *project monitoring*? Why should a project be monitored?
- 2 What are the questions that are raised in the above letter and which should be addressed in the Memorandum of Understanding?
- 3 Which ministries and authorities are *not* represented in your group, but will be involved in project monitoring?

Discuss these questions and then turn to the next page.

## What does the task consist of?

*Project monitoring* can be defined as a continuing process of comparing the effects of the project with the predictions and plans that were made before implementation, and to make adjustments if needed. It comprises a *technical* (and sometimes *social*) evaluation of the health effects of the project and the health mitigation measures that were carried out, as well as an assessment of the adequacy of the *institutional, financial and legal* arrangements in support of the implementation of these measures.

Later on, we will examine all of these aspects in more detail. Let us first look at the main sub-tasks:

### 1 design a timetable for these project activities that must be carried out

The implementation of the recommendations of the health opportunity assessment will result in a number of *activities that must be carried out during project execution, operation and maintenance*. You must decide which activities should be taken up in the Memorandum of Understanding.

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, and you must therefore decide on the *timetable* for the implementation of the activities.

### 2 allocate the resources that each ministry needs for carrying out their tasks

The MOH should not be the only party involved in health promotion. Other ministries or authorities are often better suited to carry out certain tasks. Think for example about a possible recommendation that weeds should be removed from irrigation canals for the control of snail intermediate hosts of schistosomiasis. You must decide which ministry is most suited for each task, and you should foresee a budget which will enable them to carry out these tasks.

### 3 design a plan for monitoring of project construction and implementation

Reality typically refuses to behave as you have planned. The resources that you have allocated may therefore prove inadequate, or some may feel that, in retrospect, they were allocated to the wrong ministry. Remember that ministries tend to have self-centred perception of priorities. Anticipate problems. Prepare a plan for checking if the project is progressing as planned (= *monitoring*) and for solving conflicts that may arise during and after project implementation (= *consultation, arbitration*).

#### 1 design a timetable for project activities

- 2 allocate resources
- 3 design a plan for project monitoring



to guide you in your task, each of the following pages will start with a box with the appropriate sub-task marked in a larger font

#### Questions and suggestions:

- 1 How are you going to divide the time that you have left to complete Task 4 over each of these sub-tasks?
- 2 What is the difference between project construction and implementation?
- 3 How would you tackle the first sub-task (*design a timetable for project activities*)?

Discuss these questions and then turn to the next page.

<b>1</b>	<b>design a timetable for project activities</b>
----------	--

2	allocate resources
---	--------------------

3	design a plan for project monitoring
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In order to design a timetable for project activities you will need to:

- a) decide on indicators to be measured during project monitoring
- b) decide on what activities should be carried out in the course of project implementation, operation and maintenance.

Try to be as complete as possible. Failing to identify activities now will result in shortages of resources later. Consider also that activities do not necessarily involve government bodies or semi-government bodies only, but that they may also be focused on training or education of target groups (e.g. farmers or farmer interest groups, people who are exposed to increased health risks as a result of your project), activities that are jointly undertaken with non-governmental organizations etc.

Also include activities which are already carried out routinely by ministries or (semi-)governmental bodies. It will help all parties concerned to determine who is responsible for these activities and it demonstrates who contributes to the project and in what way.

- c) decide on the time period over which each activity should be carried out.
- d) decide on the time when each activity should start.

**Questions and suggestions:**

- 1 Use your evaluation of the health opportunity assessment as the basis for deciding on the main indicators to be measured and the activities that must be carried out (Task 2). What is your justification for choosing particular indicators?
- 2 Ask yourself for each activity: should it be carried out continuously, recurrently, or is it just a one-time event?

Now take a look at the second sub-task (*allocate resources to appropriate ministries and authorities*).

- 3 Which different categories of resources can you list?
- 4 When you think of it, why is it that we cannot arrange for all the funds to be channeled to the MOH, which would then take on the responsibility for implementation of all activities?
- 5 Do you understand what is meant by the terms *sector* and *intersectoral* collaboration?
- 6 What information do you need to tackle this sub-task?

Discuss these questions and then turn to the next page.

- 1 design a timetable for project activities
- 2 allocate resources**
- 3 design a plan for project monitoring

Health, agriculture, natural resources, economic planning, etc. are all different *sectors*. Some people count sub-areas as separate sectors; for example water resources, irrigation, livestock, etc. For administrative reasons. Each ministry is usually organized on an sectoral basis.

In practice, many problems cannot be divided on sectoral lines. Nutrition, for example, contains aspects of food consumption (health, finance) as well as food production (agriculture, natural resources). Such problems must be addressed through *intersectoral collaboration*. This may be defined as the process of joint planning, construction, and monitoring by various ministries and authorities, as well as sharing resources in order to enable each ministry or body to carry out their responsibilities.

Resources can be subdivided into the following categories: human resources (including temporary workers and consultants), means of transport, funds, physical infrastructure (buildings, laboratories, materials and equipment, etc).

There are two good reasons for intersectoral sharing of resources:

- 1 it avoids duplication of effort and is therefore more cost-effective
- 2 some sectors are directly involved in production, and therefore in a way generate their own finances. Other sectors, like health, do not. To carry out its programmes, the MOH must receive funds from other sectors, either at governmental level or at project level. Agricultural projects which create a health risk carry a particular responsibility, because good human health is a condition for optimal agricultural production.

Now let us return to our sub-task of **allocating resources to appropriate ministries and authorities**. You will need to:

- a) decide for each task which ministry is most suited to carry it out
- b) decide on the resources that are required for implementing each task (do not forget to consider resources that may be needed for coordination of activities, administration, training that should be carried out, etc.!).

#### Questions and suggestions:

- 1 The idea of intersectoral project implementation and monitoring may not appeal to certain ministry officials and external support agencies (multilateral and bilateral development agencies, banks and funds). Yet you will need their collaboration and funding. How will you draft your Memorandum of Understanding to make these ideas more acceptable to them?

Now take a look at the third sub-task (*design a plan for project monitoring*).

- 2 Can you list some objectives of project monitoring?
- 3 How would you tackle the third sub-task?

Discuss these questions and then turn to the next page.

- 1 design a timetable for project activities
- 2 allocate resources
- 3 design a plan for project monitoring**

Possible objectives of project monitoring are:

- to inspect and report on compliance with agreed measures, standards and norms
- to assess the effectiveness of the health measures that are implemented, as well as the feasibility and sustainability of recommended practices during project construction, operation and maintenance
- to measure changes in the health status and capacity of the local health services, as well as implementation of farmer practices and the enforcement of guidelines and standards
- to consult with other parties to remedy unforeseen health effects
- to review the adequacy of arrangements and resources, to arrange for local coordination, information exchange and health education when operations are passed on to local authorities
- to check on cash flows which are needed for proper maintenance of the system
- to review operational plans and to adjust legislation, if needed

Intersectoral projects have the potential to end in conflict, particularly if no contingency plans are made which outline effective ways of conflict-resolution. It is therefore important also to decide on appropriate *institutional arrangements*. This term refers to the ministries and (semi-)governmental bodies that are involved in the project and the administrative arrangements and procedures that formalize the contact between these bodies. Institutional arrangements should be enforced from the highest level of executive power. Of importance is furthermore the legal status and the means to execute the tasks that are allocated to each of the collaborating bodies. Effective institutional arrangements are not generated spontaneously. They tend to be the outcome of a process of trial and error.

Experience in a number of countries has shown two models for the ways in which different sectors can collaborate and make joint decisions: a) the establishment of inter-ministerial linkages through Memoranda of Understanding, and b) the establishment of a special body with superior executive powers. The latter should be able to operate in a fully independent and integrated manner, either by itself (e.g. an Integrated River Basin Authority) or through existing structures (e.g. a Council for Integrated Rural Development or a National Water Council which coordinates activities of other government agencies). *The creation of such a body is only useful if it is given executive powers, a programme of action and funds to implement its responsibilities.*

**Questions and suggestions:**

- 1 Which of the above objectives should be taken up in your project monitoring? Can you think of other objectives?
- 2 Do you now understand what is meant by institutional arrangements? Which institutional arrangements do you think are appropriate for your project?
- 3 Who do you think should be accountable that activities are carried out well? And whom should they be accountable to?
- 4 Do you think that the two models that are presented above are complementary, or do they exclude each other?
- 5 Are there examples of integrated interministerial bodies in your country? How does the way that they operate compare to what is describes above? Do they operate satisfactorily?
- 6 How will you structure your draft Memorandum of Understanding? And what should be contained in each section?

Discuss these questions and then turn to the next page.

## Presentation of group report

### 1 Draft Memorandum of Understanding

Now that you have discussed the most important issues concerning project monitoring, you should present them in a logical order in the draft Memorandum of Understanding. This draft could possibly contain 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 monitoring activities, with allocation of responsibility and obligations to each ministry and authority
- a key to allocation to various ministries and agencies of external funds and other resources that are expected from external support agencies, including a summary of cash flow mechanisms
- a framework of institutional arrangements

Keep it brief and factual!

### 2 Plan of Action

The Plan of Action should provide:

- a breakdown of monitoring activities, including a division of labour and a summary of the other resources that each party will contribute
- a time frame for collaborative activities

Limit yourself to maximally 3 - 4 typed A4-format pages.

### 3 Oral group presentation

Prepare enough copies of your typed manuscripts for distribution to each of the participants and resource persons during your group presentation in the plenary session. During your presentation, you should give an account of the various opinions that existed in the group and explain how and why the group decided to draft the Memorandum and Plan of Action as they are. Also give an account of your *discussions on topics that you decided not to take up in the Memorandum*. Feel free to voice existing differences in opinions (after all, we want open discussions!).

One last remark about your presentation: it will be more lively if you present your audience with *variety*: variety in the ways you present your work (lecture, different presenters, group discussion, role play, etc.), in your use of audio-visual means (posters, overhead projector, blackboard, etc.), in the way you use your voice, in the way you organize the set-up of the room where you make your presentation, etc.

**Questions and suggestions:**

You may find it helpful to have a critical look at similar Memoranda of Understanding that were prepared in the Philippines (see the following pages). Take your time to thoroughly examine them.

- 1 What are the strengths of these sample Memoranda? What are their weaknesses?
- 2 Can you find back the elements that are listed above? Do you find the Memoranda to be complete, or should other elements have been included?
- 3 Do these Memoranda adequately stipulate the responsibilities of each party? Are the Memoranda specific enough, and do they provide enough flexibility in the foreseen arrangements, to reduce the chance of conflict between Ministries?

Is there any other information you would like before you start your group work?

## MEMORANDUM OF AGREEMENT (I)

This Memorandum of Agreement entered into by and between:

National Irrigation Administration, herein represented by Alfredo L. Junkin, with offices at E. de los Santos Avenue, Quezon City, hereinafter referred to as the NIA

and

Ministry of Health, herein represented by Clemente S. Gatmaitan, MD, MPH, Minister, with offices at San Lazaro Compound, Manila, hereinafter referred to as the MOH;

— WITNESSETH —

Whereas, the Government through the National Irrigation Administration has programmed the implementation of the Second Davao del Norte Irrigation Project in Davao del Norte, Mindanao, with a bank loan from the Asian Development Bank, hereinafter referred to as ADB;

Whereas, in the implementation of the project, the NIA, being the project proponent is agreed to be the principal executing agency and the MOH, as the executing agency for Public Health;

Whereas, there is a need for a coordinative effort between the NIA and the MOH to effectively carry out the implementation of the project;

Now, therefore, for and in consideration of the foregoing premises, the parties hereby agree as follows:

### 1 OBLIGATIONS OF NIA

- 1 In coordination with the MOH, to plan, design and construct the necessary drainage works to achieve the objective of schistosomiasis control;
- 2 To provide financing for the foreign currency requirement for the implementation of the health services and schistosomiasis control programme of the project, out of the loan proceeds from the ADB;
- 3 Procure, on behalf of the MOH, the necessary laboratory equipment such as microscope, vehicles, etc., and necessary drugs and chemicals reimbursable from and to the extent of the loan proceeds allocated to MOH, to effectively carry out the project;

- 4 NIA shall turn over to MOH the equipment, vehicles, and drugs purchased under the loan and such equipment and vehicles shall eventually become MOH property upon completion of the project;
- 5 Provide reasonable incentive/honorarium in accordance with the rates approved by NIA to appropriate number of personnel to be fielded by MOH who will be actually involved in the schistosomiasis prevention and control within the project area to the extent that such incentives shall be allowed only during the prosecution and up to the completion of the Second Davao del Norte Irrigation Project;
- 6 Provide technical assistance for the construction of the necessary health infrastructure and facilities like the rural health services, for the effective performance of the MOH personnel in their assigned tasks.

### 2 OBLIGATIONS OF MOH

- 1 MOH shall prepare and submit to ADB, in consultation with NIA, a detailed implementation plan for the health component of the project and assist or advise NIA in the preparation of its plans for drainage and for the operation and maintenance of canals in the project area in order to increase their impact on schistosomiasis control;
- 2 Provide financing for the local currency requirement of the health component including the construction of health infrastructures and facilities, out of its budget over the implementation period of about five years;
- 3 Provide for the assignment of necessary personnel with adequate pecuniary and other incentives to assure the participation of sufficient personnel as well as to execute and complete the construction of health infrastructures required to meet the health service needs of the population in the project area;
- 4 Provide repair and maintenance services to the health infrastructures constructed including equipment and vehicles procured through this project, out of its own fund;
- 5 Continue to improve personnel, equipment, and drugs and chemicals as necessary for general rural health care in the project area after project completion.

In witness whereof, the parties hereto have set their signatures this        day of 1978.

(Sgd.) Clemente S. Gatmaitan  
Minister  
Ministry of Health

(Sgd.) Alfredo L. Junkin  
Administrator  
National Irrigation Administration



## MEMORANDUM OF AGREEMENT (II)

This Memorandum of Agreement entered into by and between:

National Irrigation Administration, represented by Fiorello R. Estuar, Administrator, with offices at E. de los Santos Avenue, Government Center, Quezon City, hereinafter referred to as the NIA

and

Ministry of Public Works and Highways, represented by Jesus S. Hipolito, Minister, with offices at Bonifacio Drive, Port Area, Manila, hereinafter referred to as the MPWH;

— WITNESSETH —

Whereas, the Philippine Government through the National Irrigation Administration has programmed the implementation of the Third Davao Irrigation Project in the province of Davao del Norte with a bank loan from the Asian Development Bank, hereinafter referred to as ADB;

Whereas, the said loan has been provided on the terms and conditions stipulated in the Loan Agreement dated 3 November 1982 between the Republic of the Philippines and the Asian Development Bank;

Whereas, in the implementation of the project, the NIA being the project proponent has agreed to be the Principal Executing Agency, and the MPWH as the Executing Agency for Rural Water Supply System Component;

Whereas, there is a need for a coordinative effort between the NIA and the MPWH to effectively carry out the implementation of the project;

Now, therefore, for and in consideration of the foregoing premises, the parties hereby agree as follows:

### 1 OBLIGATIONS OF MPWH:

- 1 In accordance with the provisions of Schedule I & 6 of the Loan Agreement, MPWH shall, in coordination with NIA, be responsible for the construction of approximately two hundred seventy four (274) units of Level I tubewells for installation in about 51 Barangays, construction of approximately 1050 Level I shallow wells for installation in the schistosomiasis endemic parts of the project, and construction of two (2) units of Level II systems for Nabunturan Poblacion at depths ranging from 30 m to 100 m;

- 2 MPWH shall submit to the Bank for Approval, within three (3) months of the Effective Date of the Loan, a detailed implementation plan, including site selection, construction schedule and schedule for procurement of necessary equipment for the implementation of Rural Water Supply System Component of the project;
- 3 In accordance with Section 6, Schedule 6 of the Loan Agreement, MPWH shall establish a suitably staffed Project Office at Tagum within three (3) months of the Effective Date of the Loan. This project office shall be headed by an Officer-in-Charge. The Officer-in-Charge shall coordinate with the NIA Project Manager on matters concerning the project;
- 4 MPWH shall be responsible for the procurement of the equipment and materials necessary for the implementation of the Rural Water Supply of the project. Such procurement shall be carried out in accordance with the procedures set forth in Schedule 4 of the Loan Agreement;
- 5 MPWH shall be responsible for providing the local currency requirements of the Rural Water Supply System which shall be included in its yearly budgets covering the implementation period of the project and to assure that such funds shall be made available as and when needed to ensure the successful implementation of the project;
- 6 MPWH shall maintain a separate record and account adequate to identify the goods and services financed out of the proceeds of the loan, to disclose the use thereof in the project, to record the progress and cost of the project and to reflect in accordance with consistently maintained sound accounting practices the operation and financial condition relevant to the implementation of the Rural Water Supply System component. These accounts will be audited annually, in accordance with sound auditing principles, by auditors acceptable to the Bank and certified copies of the audited accounts and the auditor's reports will be furnished to the Bank within six (6) months after the end of each fiscal year;
- 7 All applications for withdrawal of loan proceeds from the loan account for the purpose of financing expenditures on the Rural water Supply System of the project shall be made through NIA. MPWH shall be responsible for the preparation of all the necessary supporting documents. MPWH shall ensure that all goods financed out of such proceeds are used exclusively in carrying out the agency's respective components;
- 8 Pursuant to the provisions of Schedule 5 of the Loan Agreement, MPWH shall in coordination with NIA, be responsible for hiring and engaging the Consultant required for the implementation of Rural Water Supply Systems of the project;

9 Pursuant to the provisions of Section 17, Schedule 6 of the Loan Agreement, MPWH, through its Provincial Office and the Rural Water Works Development Corporation, shall organize water user's groups in the project area and provide assistance to these groups in the operation and maintenance of the water supply systems in the Project Area.

2 **OBLIGATIONS OF NIA:**

1 NIA shall provide assistance, as may be needed, in the implementation of the procedures to be followed relative to procurement of the equipment and materials for the rural water supply systems of the project. Such procurement shall be carried out in accordance with the procedures set forth in Schedule 4 of the Loan Agreement;

2 For the purpose of withdrawal from the Loan proceeds, NIA shall be responsible for the submittal of the applications to ADB for financing of expenditures on the Rural Water Supply System. NIA shall ensure that all goods financed out of such proceeds are used exclusively in carrying out the agency's respective components;

3 NIA shall provide coordination and other technical assistance as may be needed in the execution of the portion of the project for which MPWH is responsible.

*In witness whereof*, the parties hereto have set their signatures this 1st day of February 1983.

(Sgd.) Jesus S. Hipolito  
Minister  
Ministry of Health

(Sgd.) Fiorello R. Estuar  
Administrator  
National Irrigation Administration

### MEMORANDUM OF AGREEMENT (III)

This Memorandum of Agreement made and entered into this        day of June 1980 at Diliman, Quezon City, Metro Manila by and between:

National Irrigation Administration, with principal office at E. de los Santos Avenue, Diliman, Quezon City, represented herein by the Administrator, Fiorello R. Estuar, hereinafter referred to as the NIA;

and

Ministry of Health, with principal office at San Lazaro Compound, Sta. Cruz, Manila, represented herein by the Minister, Enrique M. Garcia, hereinafter referred to as MOH;

— WITNESSETH —

Whereas, the World Bank has granted the NIA on 29 March 1980 a US\$ 71.0 M loan to partially finance the Philippine Medium Scale Irrigation Project which would provide for the construction of irrigation facilities to benefit some 38,000 hectares of riceland in the Provinces of Oriental Mindoro, Occidental Mindoro, and Palawan;

Whereas, the strengthening of the Malaria Control Unit in Palawan is an integral component of the project;

Whereas, the project envisages a provision of US\$ 400,000 to strengthen the anti-malaria campaign in Palawan specifically in the Municipalities of Aborlan and Narra where the Malatgao and Batang-Batang River Irrigation Projects are situated;

Whereas, the Malaria Eradication Service of the MOH which is responsible for monitoring and control of the disease in the affected area would direct the program under the project;

Whereas, provision would be made under the project for an information campaign to alert the population to the dangers of the disease and supply information on prevention and treatment;

Whereas, the NIA and MOH must enter into an agreement acceptable to the World Bank by 31 December 1980, for the implementation of the malarial control component of the Project;

Whereas, the NIA will commence with the implementation of the Philippine Medium Scale Irrigation Project on 1 July 1980;

Now, therefore, for and in consideration of the terms and conditions set forth, the parties have agreed as follows:

#### 1 Project personnel

- 1 Considering the limited tenure of five years and the location of the project, it would be difficult for MOH to attract qualified personnel at the government civil service salaries and to overcome this problem, the Malaria Control Team personnel below the zone chief category would be employed and paid by NIA based on the following NIA standard position and qualification and would be detailed to MOH:

NIA equivalent:

a. Sector Chief	Const. Foreman	College Graduate
b. Med. Lab. Tech.	Lab. Technician	College Graduate
c. Squad Leader	Leadman	High Sch. Graduate
d. Driver	Driver	(Complete primary grades)

- 2 That while on detail, all personnel will be under the administrative control and technical supervision of the MOH;
- 3 That personnel from zone chief category and above will be engaged in the implementation of the programme would be paid by MOH, however, NIA would provide honoraria which would be fixed by the Director, MES, MOH and NIA Project Manager;
- 4 That the recruitment and fielding of personnel would be made in time 1980 start of activities.
- 3 Disbursement of funds
- 5 Payment of salaries, wages, honoraria and travelling expenses of aforesaid personnel will be made through the NIA disbursing officer after approval of MOH and NIA officer. The NIA officer will see to it that expenditures are properly costed. Semi-annual and annual reports of disbursements would be made on evaluation.
- 3 Procurement of equipment, supplies and materials
- 6 Procurement of all equipment, supplies and materials would be made through NIA. MOH would program the uses and submit to NIA requisition and issue voucher in due time.
- 4 Use of vehicles and equipment
- 7 Vehicles and equipment would continue to be used by MOH after the project completion or during the operation and maintenance phase of the irrigation system. Memorandum receipt of all items turned over to MOH would be prepared;

- 8 Since project implementation will start on 1 July 1980 when vehicles, equipment, supplies and materials are still in the procurement process, MOH would furnish priority requirements needed to be replaced when procured stock will be available;
- 9 That NIA would provide the requirements for fuel and oil, maintenance and minor repairs of the vehicles duly assigned by MOH as stipulated in Item 1B-8 of this agreement, based on the NIA rules and regulations in the control of the usage of vehicles;
- 5 **Monitoring and reporting**
- 10 MOH would furnish NIA a program of work picturing target quantities and work schedules as well as materials and supplies needed. In case a revision of the plan has been made, a revised program should be furnished. The implementation schedule in the form of a bar chart would be very helpful;
- 11 A monthly status report of activities and accomplishments would be furnished by MOH to NIA;
- 12 Communications to NIA pertaining to project implementation should be addressed to the Project Manager, Philippine Medium Scale Irrigation Project, and to the Director, Malaria Eradication Service for the MOH and that the communications at the provincial level or the project area should be addressed to the Unit Chief, MES, Puerto Princessa, Palawan, for MOH and to the Division Chief of NIA at Narra, Palawan.
- 6 **Mutual requirement**
- 13 That both parties would designate project coordinators to facilitate monitoring of project activities;
- 14 That NIA and MOH shall regularly inform each other on the latest development concerning the project;
- 15 That this agreement may be modified any time upon subsequent between the parties.

*In witness whereof*, the parties hereto have set their hands and seal this        day of June 1980 at Quezon City, Metro Manila, Philippines.

(Sgd.) Fiorello R. Estuar  
Acting Administrator  
National Irrigation Administration

(Sgd.) Enrique M. Garcia  
Minister  
Ministry of Health

## **Intersectoral monitoring: a summary!**

The incorporation of preventative health measures into rural development projects is primarily a responsibility of the agricultural and water resources sector. It requires close consultations with health experts to assess the possible health impact of a project, to get technical advice on appropriate measures and to monitor the health status of temporary labourers and the beneficiaries of the project. Project monitoring comprises a continuous technical assessment of the effects of the project, and of the adequacy of its institutional, financial and legal arrangements. The health sector can only respond properly and timely during implementation and monitoring of the project when it is involved from the earliest stages of project planning and when it can share resources that are generated by the agricultural and water sectors.

Intersectoral collaboration is often hampered by a self-centred perception of priorities between different ministries and governmental agencies. Experiences elsewhere have shown two models for joint decision-making:

- a) *the establishment of inter-ministerial Memoranda of Understanding* which outline the rationale for collaboration and which state a mutual commitment to reduce adverse health effects of development through early detection of potential problems and resource sharing for their prevention and mitigation. It is of crucial importance that the text of the Memoranda of Understanding gives a clear division of labour and the allocation of (donor) funds.

Such a Memorandum of Understanding should minimally contain the following elements:

- a list of collaborating partners
  - the rationale for collaboration in the project concerned
  - the objective(s) of the collaboration
  - the responsibilities and obligations of each collaborating party, including a division of labour and a summary of the other resources that each party will contribute
  - a key to allocation to various ministries and agencies of external funds and other resources that are expected from external support agencies, including a summary of cash flow mechanisms
  - a time frame for collaborative activities
  - a framework of institutional arrangements
- b) *the establishment of a special body with superior executive powers*, which can operate in a fully integrated manner either by itself or through existing structures. The creation of such a body is only useful if it has a programme of work, funds to implement its recommendations, and overruling executive power in the case that conflicts arise between individual ministries or agencies. Consequently, when setting up such a body, due consideration should be given to its structure, legal authority and the means for implementing its responsibilities.

Health or Environmental Opportunity Assessment are based on *forecasts*. The reality may not always work out as planned. The institutional arrangements should provide procedures for conflict-resolution and provide flexibility that allows for revising procedures or legislation when needed.

## **ANNEX 6**

### **COURSE EVALUATION**

#### **EVALUATION OF ACCEPTABILITY, EFFECTIVENESS, EFFICIENCY**

by Professor Charles Engel

##### **6.1. General considerations**

A framework for the evaluation was agreed by the organizers prior to the course, and the activities within this framework covers a period that started immediately prior to the course, continued during and immediately after the course, and stretches beyond the publication of the course report to the first follow-up activity. The framework is presented in this section, followed by the a presentation of the results of the various evaluation exercises in sections 6.2 to 6.5.

The purpose of the evaluation will be twofold:

- to establish whether the overall approach should be continued, undergo major changes or be abandoned (policy decisions);
- to identify how the approach might be improved.

Three broad questions will be addressed:

- how acceptable is the course to participants and their employers, to the staff of the course (external and internal) and to the organizers?
- how effective is the course in achieving its goals, both short-term and long-term?
- how efficient is the course in terms of time, effort, facilities and resources used by the above stakeholders?

##### **6.1.1. Acceptability and efficiency**

###### **(a) Participants**

The perception of the course by the participants will, in the short term, depend on:

- the intrinsic and extrinsic reasons and expectations for attending the course;
- the overall environment/atmosphere of the course (how they were treated);
- the experiences (aspects of the course) to which they were exposed;
- their personal success/achievement by the end of the course.

Their perception in the long term will depend on:

- the opportunities given to them for post-course intersectoral collaboration;
- the use they will be able to make of knowledge and skills gained from the course;
- the satisfaction gained from real-life intersectoral collaboration.

Methods for assessing short-term perceptions, with a view to improving the course, will include:

- interviews of the groups by the external evaluator at lunch and dinner times;
- end of the first week Nominal Group Process with all participants to elicit "best" and "worst" perceptions on a range of aspects of the participants' first week experiences.
- end of the second week questionnaire to elicit "best" and "worst" perceptions on the same range of aspects of the participants' second week experiences.

This questionnaire will end with requests for responses that relate to the above factors that may have conditioned their perceptions and a brief section related to aspects of efficiency.

Method for assessing long-term perception, as a basis for policy decisions:

- on the occasion of a follow-up meeting (approximately one year later) a questionnaire to elicit "best" and "worst" aspects of the course, as well as experiences with any post-course opportunities for intersectoral collaboration.

**(b) Employers (ministries)**

- When the reports of the course and of the follow-up meeting are sent to the ministries, a request is to be submitted for anticipated use of these staff members for intersectoral activities and the question should be raised whether repeat courses for further members of the staff are desired.

**(c) Staff of the course (external and internal)**

- discussions at the end of the first and second week with the four non-expert tutors;
- discussions at the end of their assignment with the external resource persons, both by the external evaluator and the anchorman.

**(d) Organizers**

open discussion of the course report at an evaluation meeting, with inputs from WHO, DBL and HIP. The various levels of acceptability of the two first trial courses (Zimbabwe and Ghana) will need to be compared.

### **6.1.2. Effectiveness**

#### **(a) Participants**

The effectiveness of the course relates here to the level of enthusiasm and confidence with intersectoral collaboration; and, the level of competence in relation to the tasks that were tackled during the course.

#### **Enthusiasm and confidence**

- A pre-test will include a small number of questions on the meaning, requirements etc. of intersectoral collaboration. The same questions will be posed at the end of the course and, again, at the follow-up meeting.
- Further information will be derived from the in-course "acceptability" enquiries and the group performances during sessions and presentations.

#### **Task-related competence**

- Evidence will be obtained from the written reports.
- The marking schedules, to be completed by the external resource persons.

#### **(b) Outcomes, in addition to demonstration of in-course competence**

These additional outcomes, which can be a measure of course effectiveness, will include:

- Employers' perception of their staff's competence in intersectoral activities. This would be evident in ministerial responses mentioned above under acceptability.
- Proposed or actual intersectoral activities, initiated by ministries and/or outside agencies (e.g. FAO in Zimbabwe).
- Continuation of intersectoral courses within country or region.

Information in relation to the latter two points would provide important evidence for future policy decisions.

### **6.2. Perception of intersectoral collaboration**

At the beginning and the end of the course (26 January and 10 February, respectively) participants were asked a series of questions to assess their perception of the concept of intersectoral collaboration. The respondents represented the following sectors: agriculture (5), energy (2), environment (3), financial planning (2), health (5), local government (2) and works and housing (5). There was a 100% response rate on both occasions.



The time given to respond to six questions at the start, five at the end of the course was 20 minutes each time, in order to obtain immediate reactions. The questions were:

1. Please state the Ministry to which you belong
2. What is your interest in this course; what do you expect to gain from this course? (only at the start of the course.)
3. Please give your definition of what you understand is meant by "intersectoral collaboration".
4. Please give an example that illustrates how you think that intersectoral collaboration can benefit the work of your Ministry.
5. Please give an example that illustrates how you think that intersectoral collaboration can benefit (a) you personally, (b) your work for the Ministry.
6. Please list what you think that is needed in order for your Ministry to collaborate with other sectors.

■ Question 2: interest/gains

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	
<b>Increase personal competence, such as to understand the effect of water resources development on health; to learn about the effective use of resources and about the control of water-related diseases.</b>	1	2	2	8	3	1	2	19
<b>Extend skills of a general potential, such as impact assessment, project planning and the formulation of terms of reference.</b>	1	6	1	9	2	-	5	24
<b>Involvement in intersectoral activities, such as meeting professionals working in other sectors; sharing ideas and information.</b>	2	2	-	-	4	1	2	11

■ **Question 3: understanding of intersectoral collaboration (at the start of the course)**

Responses	Sectors							
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	Total
Sectors working together, e.g. to achieve a common goal, solve common problems, joint policy planning, project planning and implementation.	2	1	2	3	2	1	3	14
Means towards collaboration, e.g. collect ideas, share ideas, interdisciplinary teamwork.	-	2	-	2	2	-	-	6
Agencies within a sector working together, e.g. with related responsibilities, with overlapping functions.	-	-	-	-	-	1	2	3

■ **Question 3: understanding of intersectoral collaboration (at the end of the course)**

Responses	Sectors							
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	Total
Experts from different sectors combine information and ideas to achieve a common goal	2	1	2	4	5	2	4	20
Arrangements for various ministry officials to work together to solve a common problem by pooling human and material resources	2	3	2	2	3	1	2	15
Multidisciplinary team to resolve a conflict amicably	-	1	-	-	-	-	-	1

■ **Question 4: how can intersectoral collaboration benefit work of ministry (at the start of the course)**

Responses	Sectors							
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	Total
Examples of benefits, e.g. water treatment for pollution, clean blocked drains, help rural people, sharing expertise and equipment.	-	1	2	2	-	-	3	8

Examples of avoiding or minimizing adverse effects, e.g. early research collaboration between institutes, consultation with other sectors, reviewing EIAs.	2	2	-	-	3	-	1	8
Misunderstood the intention of the question.	-	-	-	2	1	1	1	5
Example of damage due to the lack of collaboration.	-	-	-	-	-	-	1	1

At the end of the course very similar examples were cited

■ **Question 5 (i): how can intersectoral collaboration benefit you personally (at the start of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvmnt	Works & Housing	
Obtain important information through informal network.	-	2	2	5	4	-	1	14
Misunderstood the intention of the question.	-	-	-	2	1	1	3	7
Early collaboration helps avoid unnecessary work later on.	2	-	-	-	2	1	-	3
Improved ability to participate in teams.	-	2	-	-	1	-	-	3
Improved ability to consult, to be consulted.	-	-	-	2	1	1	3	7

■ **Question 5 (ii): how can intersectoral collaboration benefit your work for your ministry (at the start of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvmnt	Works & Housing	
Give effective advice for policies and programmes.	2	1	1	2	-	1	3	10
Assist in inter-ministerial collaboration/teams.	-	4	-	-	2	-	-	6
Misunderstood the intention of the question.	-	-	2	-	2	1	-	5

■ **Question 5 (i): how can intersectoral collaboration benefit you personally  
(at the end of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	
Share views and information for commitment.	-	1	1	3	5	-	-	10
Develop tolerance in working with others with different backgrounds.	-	2	-	2	-	2	-	6
Make my work more compatible with the needs of other sectors.	1	-	1	1	-	1	2	6
Solicit help from other sectors in teams.	1	-	-	1	-	1	2	5
Design and implement personal projects or in private consultancy work.	-	1	-	1	-	1	-	3

■ **Question 5 (ii): how can intersectoral collaboration benefit your work for your ministry (at the end of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvnmnt	Works & Housing	
My ability to liaise with colleagues from other ministries.	-	1	2	-	1	-	2	6
My ability to design with consideration of holistic needs.	-	-	-	1	1	1	-	3
My ability in project evaluation, report writing and presentation (instead of foreign consultants).	-	1	-	1	1	-	-	3

■ **Question 6: Please list what you think is needed in order for your Ministry to collaborate with other sectors (at the start of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvmnt	Works & Housing	
Organizational arrangements for collaboration, e.g. guidelines, ministerial commitment and support, institutionalization of collaboration, workshop, training	-	4	-	2	2	3	4	15
Information on functions of institutions in each ministry; empathy	1	3	1	1	1	-	1	8
Collaboration from other sectors and mutual confidence, communication networks	-	-	-	2	-	2	2	6
Intersectoral committees with regular meetings	1	2	1	1	1	-	-	6
Misunderstood intentions of the questions	1	-	1	-	-	-	1	3

■ **Question 6: Please list what you think is needed in order for your Ministry to collaborate with other sectors (at the end of the course)**

Responses	Sectors							Total
	Energy	Environment	Finance	Food & Agriculture	Health	Local Gvmnt	Works & Housing	
Facilities, funds to sustain/service group work	1	3	-	2	3	1	1	11
Political will, incentives to motivate intersectoral collaboration	-	1	-	3	2	1	2	9
Opportunities to discover what others have to offer	1	1	1	2	1	1	1	8
Memoranda of understanding for promotion of intersectoral collaboration	-	1	1	3	-	1	1	7
Understanding of the benefits by chief executives and heads of departments	-	1	-	1	2	-	3	7
Releasing the right people for collaboration	1	1	-	-	-	1	1	4

Be prepared to share resources with other sectors	-	1	-	-	1	1	1	4
Training in intersectoral collaboration	-	-	-	-	1	-	-	1

### 6.3. Mid-course evaluation

A mid-course evaluation by the participants was organized on 2 February (20:25 - 21:10 hrs). The method of evaluation was the nominal group process (n=22/24).

**Good aspects of the course to be retained included, in order of priority:**

Participants were invited from a range of sectors	22
Working in groups	22
Field trip was relevant	21
Cooperation between participants	21
The course is intellectually taxing	21
Informal interaction between participants and with course staff, resource persons	19
Relevance of the course contents	17
The innovative approach of the course	16
The plenary sessions	15
All can now undertake an HOA	12
Problem solving	6

**Aspects of the course to be improved:**

<i>Per diem</i> too low in relation to cost level of the hotel	22
Credit participants for meals not consumed	21
Some more Ghanaian meals	20
Avoid two participants per hotel room	21
Allow more time for reading of the literature	19
Logistically allow for more rest time at lunch time	18
In view of the time available there is too much content	15
Content requires more than two weeks	10
Mineral water/soft drinks instead of tea/coffee in the afternoon	9
Gender imbalance	7
Lack of time to make use of resource persons	7
Lectures in morning, group work afternoon	4
Resource persons to be available whenever needed	3
Interpose "consultations" between group work and presentations	1

### 6.4. End of course evaluation

At the end of the course the level of acceptability of the course was again assessed, this time through a questionnaire with the following questions:

1. Please state the Ministry/Authority to which you belong
2. What is your grade in public service

3. Please state briefly what you have gained/achieved by spending the two weeks on this course
4. Please consider what the course has "cost" you: in monetary terms; time-wise
5. In relation to other courses you have attended, was the Akosombo course more/less/equally enjoyable/tiring/beneficial
6. Please list up to three aspects you found particularly good/interesting/beneficial
7. Please suggest briefly how the course could be improved
8. If you have not yet mentioned the following, please indicate what was good and what needs improvement for: the use of non-expert tutors; the use of expert resource persons; guides for tasks 1,2 and 4; books given to you and resource material in the library

■ **Question 3: Please state briefly what you have gained/achieved by spending the two weeks on this course**

Knowledge about EIA/HOA (19)  
 Skills in cooperation with other sectors (19)  
 Knowledge on health aspects (8)  
 Writing memorandum of understanding (5)  
 Working in group (3)  
 Capability building, thinking (3)  
 Capacity to develop generic terms of reference (3)

■ **Question 4: Please consider what the course has "cost" you: in monetary terms; time-wise**

(i) Mainly hiring transport for children to/from school, travel home at weekends

No expenditure	(11)
Cedis 1500- 2000	(1)
Cedis 10000-20000	(4)
Cedis 30000-40000	(2)
Cedis 50000-60000	(1)
Cedis 80000	(1)
Cedis 100000	(1)
no response	(3)

(ii) Time spent before and after the course (preparation/catching up)

Hours 0-9	12	1
10-19	7	3
20-39	2	11
40-59	2	4
80-100	1	3
120	-	2

(iii) Time spent during the course

Hours 40-60	1
80-90	5
100-149	12
150-180	2
200	2
illegible	2

**(iv) Normal weekly working hours**

Hours 20-39	1
40-49	18
50	1
60	1
70	1
illegible	2

■ **Question 5: In relation to other courses you have attended, was the Akosombo course more/less/equally enjoyable/tiring/beneficial**

Less enjoyable (1), no more, no less enjoyable (9), more enjoyable (10), illegible (4)  
 Less tiring (1), no more, no less tiring (6), more tiring (15), illegible (2)  
 Less beneficial (-), no more, no less beneficial (3), more beneficial (20), illegible (1)

■ **Question 6: Please list up to three aspects you found particularly good/interesting/beneficial**

Innovative nature of course-group work, task-based	19
Relaxed presentation and plenary discussions	14
Intersectoral work	10
Field trips	8
Technical and financial appraisals	6
Preparation of TORs	4

■ **Question 7: Please suggest briefly how the course could be improved**

More money (and per diem) instead of the evening meal	7
More time for individual study and consultation	6
More time for rest after lunch and dinner	5
Single room for each participant	5

■ **Question 8: If you have not yet mentioned the following, please indicate what was good and what needs improvement for: the use of non-expert tutors; the use of expert resource persons; guides for tasks 1,2 and 4; books given to you and resource material in the library**

	Good aspects	To be improved
Non-expert tutors	Served as guides and time-keepers on the tasks Coordinated group activities Provided a liaison between group and organizers Made us think, not just ask experts for answers	May not be needed later on in the course Should participate actively Need to know better how to help group discussions Should be more familiar with the tasks



Expert resource persons	Excellent, acted as guides	Need to be more readily accessible to the groups Should be present at opening and closing ceremonies Should be provided with more video tapes and audio-visual aids
Guides for tasks 1, 2 and 4	Very good as guides to the tasks Easy to follow Help to grasp concepts Made us think Helped to develop problem solving and report writing	Some questions, terms and explanations need clarifying
Books and library references	Good for use during the course and for subsequent reference	All the items should be given to each participant Need more on finance and analysis Need more time to use them (?evenings) Some data not in the materials All items should be in every School of Public Health

## NOTES ON THE COURSE BY THE LOCAL COURSE COORDINATORS

Professor E. Laing and Dr A. Issaka-Tinorgah

These notes have been put together to satisfy the requirement in the local coordinators' terms of contract and also in the interest of good practice. All told, the coordinators had very good cooperation from all quarters.

### Beginning of preparations

The lead time of about one year for preparations seemed somewhat inadequate, especially for the exchange of correspondence with various ministries. The coordinators suggest a longer period for preparations, perhaps about two years. More important may be the timely selection of the ministry that will undertake the practical arrangements for the training course. In this case, the good services of the Ministry of Health were used, especially for arranging the receipt and clearance of course materials and official correspondence with sister ministries for the nomination of participants.

This correspondence did not include a timetable for the preparatory stages. This may have given some ministries the impression that they could respond to the invitation for nominations at their convenience. The coordinators therefore suggest that the letters inviting nominations should include a time table as follows:

<b>Limiting date</b>	<b>Action that must have been taken</b>
...	Institutions should have submitted their list of nominations of participants, with the CVs, addresses including telephone and fax numbers.
...	Selection of participants
...	Official invitation of the participants selected for the course.

This may encourage the ministries to respond more promptly. It is still likely, as was the case in this course, that the assistant to the coordinators will need to visit the Directors of Human Resource Development of the various ministries to persuade them to expedite responses. Even with this type of prompting, it was difficult to extract the required number of nominations from some ministries. Some indeed suggested further names only after the selection process had been completed.

### **Gender balance**

The invitation explicitly stated the desirability of encouraging women to participate. The course nevertheless ended up with only two female participants out of the overall twentyfour. Attempts should be made to improve the gender balance in future courses.

### **Time table for field visits**

Considering the tropical climate in which the course will continue to be held, the local coordinators suggest limiting the field visits to the morning hours. Selection of the field location should also be made as much ahead of the course as possible. Detailed arrangements should also be made with the appropriate officers-in-charge as much in advance as possible. The temptation to include site visits on a last minute basis should be resisted - in the case of the Ghana course the usefulness of the visit to the Akosombo sewage treatment ponds and the Aquaculture facility suffered from this, as the responsible officers could not be mobilized in time.

### **Coordination**

Several persons were in charge of coordinating different aspects of the course. The areas of responsibility should be clearly defined and all -participants, tutors, resource persons and organizers- should receive this information. Copies of course material should, as far as possible, be made available to all course organizers. A table showing whom to approach on particular problems may be of use to the participants (eg to obtain permission for absence, how to get reports typed, whom to get in touch with in case of illness etc.)

## **Venue**

Siting the course away from the capital city had the advantage that participants were kept away from their offices and prevented their being recalled for other assignments. The venue also provided opportunities for the participants for more interaction amongst themselves and with the resource persons.

## **References for participating institutions**

Many of the institutions and ministries that participated in one way or the other in the course expressed a desire to obtain copies of all publications used as references for the course. This should be borne in mind for the next course and provisions should be made to the extent possible.

## **Local resource persons**

Most of the local resource persons were identified early in the planning of the course and, in fact, discussed at the preparatory meeting in Charlottenlund, Denmark in February 1993. A few, however, were suggested immediately prior to the course. Early identification is to be preferred if, as was the case for this course, the local resource persons are given a well defined time slot in relation to a particular task. The coordinators feel that the possibility should be explored (in particular, of course, in the light of budgetary implications) of having the local resource persons stay throughout the course so they can learn more about its approach. This will contribute to local capacity building which will facilitate local repetition and institutionalization of the course.

Clear instructions for the resource persons on the approach adopted will be useful. The point that lectures are to be avoided should be made very clear, as well as the course philosophy that the course is not intended to make out of the participants mini-specialists in all disciplines involved. Introductions to the tasks should be prepared in advance and reviewed by the organizers to ensure these do not develop into mini-lectures.

## **Further points**

Letters of acknowledgement should be written to all persons and organizations that assisted in the preparations and implementation of the course. In future courses perhaps more time should be available for library reading by the participants. In the present course, participants depended to a large extent on the particular "expert" in their own group for information on any slightly specialized or professional point and had little time to search the available literature for different views, or even to corroborate the views expressed by their "own" experts.

## ANNEX 7

### GENERAL TERMS OF REFERENCE FOR HEALTH OPPORTUNITIES ASSESSMENT OF WATER RESOURCES DEVELOPMENT PROJECTS IN GHANA<sup>1</sup>

#### PREAMBLE

In the absence of national legislation enforcing an environmental impact assessment (EIA) of water resources development projects in Ghana, many such projects are implemented without due consideration of their environmental impacts and without the incorporation of mitigating measures. In many instances, this has led to a degradation of the environment and the deterioration of the health of affected communities.

There is a need for legislation making it mandatory for EIAs to be conducted for all water resources development projects, to allow the impacts of each project to be fully assessed. Meanwhile, in the absence of such legislation, such EIAs should be integrated in the prefeasibility and feasibility studies of such projects and a health opportunities assessment should be an integral part of any EIA. Recommendations arising from the EIA and HOA should address basic design, construction, and operation and maintenance, as well as preventive environmental and curative measures.

The integration of EIA and HOA procedures will ensure a multidisciplinary approach and foster interaction between all professionals concerned at the planning stage.

Requests for EIAs (including the HOA) shall be made by financiers, the Ghana Investment Centre (GIC) or the District Assemblies, when approached by potential investors for loans or permits to implement water resources development projects. The completed EIA shall be sent to EPC for review and endorsement of its recommendations. It is envisaged that a separate body may be set up to authorize the recommendations endorsed by EPC. The EPC should monitor the implementation of the recommendations.

A summary flowchart with a simplified representation of the procedures for handling EIAs in Ghana is attached.

<sup>1</sup> Prepared by the participants of the training course *Health opportunities in water resources development*, held in Akosombo, Ghana from 26 January to 11 February 1994. The course was organized by the WHO/FAO/UNEP/UNCHS Panel of Experts on Environmental Management for Vector Control (PEEM), the Danish Bilharziasis Laboratory (DBL) and the Liverpool Health Impact Programme (HIP) with the Ministry of Health of Ghana as the local counterpart and under the patronage of the University of Ghana and the Environmental Protection Council. Participants were middle level managers working in the Ministry of Agriculture, the Ministry of the Environment, the Ministry of Finance and Economic Planning, the Ministry of Health, the Ministry of Local Government and Rural Development, the Ministry of Works and Housing and the Volta River Authority

**PRECONDITIONS AND CRITERIA FOR THE SUCCESSFUL APPLICATION OF TERMS OF REFERENCE (TOR) FOR A HEALTH OPPORTUNITIES ASSESSMENT**

1. An initial HOA shall be a requirement for all water resources development projects, whether they be new or involve the rehabilitation/expansion of an existing project. The output should be project categorization and a decision whether or not an in-depth HOA needs to be done during the feasibility stage.

Three categories of projects can be distinguished:

A - significant health impacts; mitigation is difficult or requires a special budget.

B - significant health impacts: mitigation is practicable without a special budget.

C - No significant health impacts.

2. The consultant shall review the existing literature identifying the gaps in information and where necessary redefine the scope of the HOA to fill such gaps.
3. The HOA shall be conducted by a multidisciplinary team of experts. The composition of the team will include local and, when necessary, international experts with a wide and relevant experience.
4. To ensure independence and avoid professional bias, the HOA consultant shall as far as possible be contracted by the sponsoring agency or, where not applicable, by the implementing agency. The HOA must be appraised by the Environmental Protection Council. In the case the HOA consultant is sub-contracted by the consultancy firm from which the feasibility study is commissioned, the full HOA report should be submitted to EPC for review.
5. Financial support for the HOA shall not be less than 1% of the total planning costs.
6. The start of any in-depth HOA shall coincide with the beginning of the feasibility phase of the project and shall span a period of time proportionate to the size of the proposed project and the length of the overall feasibility study, and in any case sufficient to ensure the comprehensive study of relevant issues. For medium to large scale projects a twelve month study period is desirable to observe season-bound phenomena. The consultant should be available for consultation at the final review stage if necessary.
7. Any major changes in project design, construction and operation during the life of the project shall necessitate the execution of a new HOA.

8. In the event of the abandonment of any water resources development project after construction has started, EPC shall review the situation and recommend appropriate measures to prevent health hazards from turning into health risks.

#### **GENERIC TERMS OF REFERENCE (TOR) FOR HEALTH OPPORTUNITIES ASSESSMENT (HOA) OF WATER RESOURCES DEVELOPMENT PROJECTS.**

Following is a list of headings of generic terms of reference and what they should contain.

##### **Introduction**

This section should indicate the purpose of the TOR and should include a brief description of the proposed project indicating its type and the status of the project (new or rehabilitation/expansion of an existing project). It should also describe the project boundary (the project study area and remote areas that may influence/may be influence by the project, in particular upstream and downstream areas). Institutional arrangements and executing mechanisms for the HOA and the overall project should be explained.

##### **Objectives**

This section should provide a summary of the scope of the HOA. Consideration must be given to immediate and long term health impacts of the project. Recommendations for interventions to prevent and/or mitigate the impacts as well as possible health opportunities should be given. Indications must be given as to its timing in relation to the phases of the project cycle.

##### **Scope of work**

In carrying out the HOA the consultant(s) should consider for each project phase:

1. health hazards: identify health hazards and determine whether these will turn into health risks because of the project.
2. important diseases and transmission: identify important diseases and their transmission patterns within the project boundary, with special attention to seasonality.
3. environmental factors affecting disease transmission: assess existing environmental factors influencing disease transmission and predict possible changes that might arise from the project.
4. vulnerable groups: identify all vulnerable groups and pay attention to their socio-cultural practices. The method of assessment must include a public hearing.

**5. demography: predict possible demographic changes and their impacts, including resettlement, migration and changed population growth rates.**

**6. new diseases: prediction of possible new diseases within the project boundary.**

**7. capacity of the health services: assess adequacy of existing health facilities (governmental and non-governmental) in coping with existing and predicted health situations.**

**8. prepare recommendations on:**

- **interventions**  
propose possible changes/modifications to the project design, construction and operation to prevent and/or mitigate possible health risks;  
propose measures to strengthen the capacity of existing health facilities and services.
- **health opportunities**  
identify opportunities for health promotion and improvement the project will offer.

**9. economic analysis: carry out a cost-effectiveness analysis of the recommended options.**

**10. monitoring and surveillance: suggest an intersectoral action plan for monitoring and surveillance and the institutional requirements.**

**11. make recommendations for further in-depth studies where necessary**

**12. outputs: the outputs should include an executive summary and a detailed report on the HOA.**

**13. deadlines: the consultant(s) should be given adequate time to carry out the HOA efficiently.**

**14. composition of the team: a complete list of team members and the professional background/experience of each member of the team should be given.**

