

*Environmental exposure
Environmental pollution -
adverse effects*



UNITED NATIONS ENVIRONMENT PROGRAMME



WORLD HEALTH ORGANIZATION



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GLOBAL ENVIRONMENT MONITORING PROGRAMME

REPORT OF A CONSULTATION ON THE HUMAN EXPOSURE ASSESSMENT
LOCATION (HEAL) PROJECT

Geneva, 20-21 May 1986

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1. INTRODUCTION

The consultation was opened by Mr G. Ozolins, Manager, Prevention of Environmental Pollution Unit, who welcomed the participants on behalf of UNEP and WHO. It was noted that the HEAL project had been under development for some four years and it was necessary now to take the appropriate steps to make the project operational as soon as possible. This consultation was expressly called to try to resolve a number of problems which had arisen in the implementation of the project. A suggested list of points of discussion had been prepared prior to the meeting. The meeting was chaired by the secretariat. A list of participants (Annex I) and list of points of discussion (Annex II) are attached.

2. PURPOSE OF THE CONSULTATION

The purpose of this consultation was to review management/administrative issues and problems regarding the implementation of the HEAL project and to decide on the remedial measures to be taken. In particular, the consultation served to:

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- (i) inform the representatives and the secretariat of the current status of project implementation in each of the participating countries and in WHO;
- (ii) identify existing problems regarding project implementation and decide how best to resolve them;
- (iii) identify longer term issues and implications regarding the project and outline management/coordination mechanisms to deal with them;
- (iv) prepare and agree on a work plan and schedule for the remainder of 1986.

3. CONCLUSIONS OF THE DISCUSSION

Organizational and financial questions

- (i) The representatives of the participating countries and WHO affirmed their interest in having the HEAL project as a vehicle to promote further development and wider application of environmental and exposure monitoring procedures.
- (ii) Certain problems were noted as to the difficulties in some of the participating countries to identify resources for the work foreseen under the HEALs project. Not all countries have yet fully developed budgetary provisions for the years to come, but it was felt that the situation can be managed provided that the HEAL effort does not expand too rapidly. In order that the requisite resources can be garnered for participation in the short-term, it was necessary to link the HEALs work with on-going or planned activities within the countries. In some instances this may require greater flexibility as to which HEALs programme components were to be emphasized, e.g. methods development versus collection of monitoring data.
- (iii) All four countries involved in the HEALs project reported that inter-departmental/agency coordinating committees have been established and that the infrastructure for implementing the HEAL project was reasonably well in place. Annex III provides information on the established structures in each of the countries identifying the responsible individuals and institutions which are expected to perform the necessary sampling and analyses.

Programme orientation

The technical programme design was reviewed and a number of decisions were taken to effect certain changes.

- (i) Concern was expressed over the ambitiousness of the HEAL project and the consultation recommended that the project, at least initially, focus on the exposure monitoring component with the environmental monitoring component serving largely as a screening and "umbrella" activity. If the exposure monitoring for a particular pollutant should indicate levels of concern, then the environmental monitoring would be stepped up for the appropriate media. It was thought that this approach would reduce much unnecessary monitoring of "zero" levels and improve cost-effectiveness.
- (ii) The participants of the consultation also recommended that greater flexibility be built into the project to respond better to different situations associated with different pollutants. Initially this is to be achieved by considering the three current project activities, i.e. metals, organochlorine compounds, and certain air pollutants, as being somewhat separate endeavours. This would mean that the approach for each of these can be somewhat different from one another. It was important, however, that all these activities should be in line with the general aims and objectives of the overall HEAL project.

- (iii) The consultation also recommended that the HEAL project, where appropriate, give increased attention to the development and utility of exposure monitoring methodology and to the promotion of its wider application, rather than strictly concentrating on obtaining results in a few countries.
- (iv) The consultation discussed the selection of pollutants for the HEAL project. It was recommended that in the future greater flexibility in the selection be permitted to enable groups of countries within the HEAL project to work on pollutants that are of immediate and high interest and concern to them.

Technical Coordinating Centres

The experience with the functions and the work of Technical Coordinating Centres (TCCs) was reviewed and a few suggestions were made for improving their functioning.

- (i) It was agreed that the Technical Coordinating Centres be given more explicit responsibility for the preparatory work and the implementation of activities. To this end a revised terms of reference was prepared, a copy of which is attached as Annex IV.
- (ii) It was recommended that the responsible TCCs would make their own proposals regarding the selection of population groups which were to be considered in the exposure study. This is to be dealt with in each protocol. In order that they would be made as compatible as possible, the subject of selection of population groups for the three project components is to be discussed further by the participating countries at the forthcoming meeting in Chattanooga.
- (iii) The consultation noted that the financial implications of the functions assigned to the TCCs would be considerable and that this will need to be considered.

Protocols

At the present stage of the development of the HEAL project, the preparation of the protocols is the most important. The consultation agreed to the following schedule:

- (i) DDT/HCB - Prepared by the USA. A draft is to be sent out to participating countries by 26 May 1986. The relevant institutions in these countries will then review the draft and compile comments for presentation at the Chattanooga meeting. It is expected that final agreement will be reached at the meeting and that the necessary changes would be incorporated and the final version would be available by September 1986. It was further agreed that some quality assurance exercises would be started in the autumn of this year.
- (ii) SOx/BaP - Prepared by Japan. A progress report on the status of the SOx/BaP protocol preparation will be presented at the Chattanooga meeting. A complete draft is to be ready and sent for review in early September 1986. A meeting to finalize the protocol is to be held later this year.
- (iii) Pb/Cd - Prepared by Sweden. A preliminary draft will be available and will be presented and discussed at the Chattanooga meeting. The draft protocol will be sent to the participating countries by the end of August and a review meeting is to be held in Stockholm from 13-17 October 1986. If resources allowed, possibly two participants from each country should be invited with one being a food specialist.

Increasing the number of participating countries

The goal is to have eventually 12 to 15 countries participate in the HEALS programme. The meeting was informed that three additional countries had already agreed in principle to take part in this activity. They are: Brazil, China and India. This matter was reviewed briefly with the following conclusions:

- (i) The countries represented at the consultation cautioned against expanding the HEAL project too quickly. The main concern was that the monitoring procedures to be used should first be adequately tested. Also, the addition of new countries would put an additional strain on the available resources.
- (ii) It was felt that the next three countries should be brought into the project gradually; they could begin participating in certain aspects of the programme as soon as they had the capability to do so.
- (iii) Further discussions on this matter will be taken up at the Chattanooga meeting where representatives of the three countries mentioned above will also be in attendance.

Information

Although the HEALs project has been in preparation for at least 3 years, there is essentially no information (aside from drafts of the technical design) available. The meeting recommended the following:

- (i) The responsibility for action to be taken should rest with WHO who either themselves or after agreement with one or more of the participants in the programme should arrange for the dissemination of all necessary information.
- (ii) Consideration should be given to the publication of the wealth of information on the technical design of the HEALs programme. It was noted that there are numerous requests for this information and consequently its publication could make a major contribution to exposure assessment in general.

Coordination

With respect to coordination, the meeting noted the following:

- (i) There are other activities and projects which are related to HEALs and efforts need to be made to establish more active coordination with them. The environmental monitoring and epidemiology project being carried out by the WHO European Office was mentioned as an example. Another is the exposure assessment component of the OECD chemicals programme which is currently being developed. Since some of the countries participating in the HEALs programme are involved in this and other activities, closer coordination should be achieved with the view that the HEALs programme may better contribute to these activities.
- (ii) It was agreed that the countries participating in other exposure assessment related activities, such as the OECD programme, should take it upon themselves to adequately brief those involved in these programmes in their countries about HEALs in order that coordination is better served.

HEALs programme management

A number of difficulties, as explained above, regarding the implementation of the HEALs programme were discussed. The meeting recommended that greater care should be taken to achieve a better means for coordinating and planning activities. It was recommended that WHO consider convening regular (perhaps at six-monthly intervals) consultations with the coordinators of the programmes in the participating countries. A possible date for the next such consultation was 17-18 November 1986.

Next events

As already mentioned above, the next major events are the following:

- | | |
|-------------------------------------|----------------------|
| (i) Meeting in Chattanooga, USA | 14-18 July 1986 |
| (ii) Meeting on Pb/Cd in Sweden | 13-17 October 1986 |
| (iii) Meeting in Geneva (tentative) | 17-18 November 1986. |

LIST OF PARTICIPANTS

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World Health Organization
Geneva

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Office of Environmental Technology
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Washington

Professor M. Saric
Director
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Zagreb

(1) unable to attend

POINTS OF DISCUSSION

(i) Organization and financing of the HEALs project nationally

What are the organizational structures developed in the countries? What arrangements have been made for coordination? What arrangements have been made for financing? What are the problems? What steps are being taken to deal with outstanding problems? Can WHO/UNEP help? etc.

(ii) Functioning of Technical Coordinating Centres (TCCs) (Terms of Reference attached)

What is the experience so far? Is it clear what the functions of TCCs do? Are there funding and/or coordinational problems? What can be done to improve their functioning? etc.

(iii) Preparation of protocols

What are the outstanding problems? What needs to be done to remedy them? Can we make a plan and adhere to it? etc.

(iv) Obtaining the support for Quality Assurance and data storage and handling

What needs to be done? Who will do and when? etc.

(v) Planning for the start up of monitoring phase

What has been done in the countries and WHO? What needs to be done and how can this best be arranged? etc.

(vi) Exchange of information

There have been difficulties keeping abreast of what is going on. How can it be improved? etc.

(vii) Coordination of project implementation internationally

What arrangements can be made to improve performance and keep the project "on track"? Would some sort of a more official coordination mechanism be helpful? Can this be arranged with "right level" representation? Would periodic meetings help? etc.

(viii) Addition of additional countries to the project

Where do we stand? How should we proceed? What are the financial implications? etc.

(ix) Addition of other pollutants and studies

Should this be considered at this stage? How could this best be accommodated? etc.

(x) Financing of project implementation

What can be done to improve the resources best? Can additional extra budgetary resources be obtained? What mechanisms would be helpful for fund raising? etc.

(xi) Image of the project

The aims of the project should be better explained to the scientific community. Can this be achieved through publication of articles in scientific journals and who would prepare

Annex II (cont'd)

these? Should the guideline documents prepared be given wider dissemination and how is this to be accomplished?

(xii) Relation with other organizations' projects

How does the HEAL programme best fit in with other activities including those planned by the expanded chemicals programme of OECD and the monitoring and epidemiology project in EURO for example?

Organization of the Swedish HEALAnnex III

The Swedish TCC is organized as a committee with the following participants:

National Institute of Environmental Medicine and Karolinska Institute (NIEM and KI)

P.O. Box 60400	Per Camner, M.D., Assoc. Professor
S-104 01 Stockholm	Lars Friberg, M.D., Professor
Tel. No: 08/23 69 00	Elisabeth Kessler, B.A., Technical Editor
Telex: 19530 KIENV S	Birger Lind, Chem. Engineer
Telefax: 08/33 69 81	Marie Vahter, Dr.Med.Sci., Assoc. Professor

National Board of Health and Welfare (SoS)

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Telefax: 08/783 03 19	

National Environment Protection Board (SNV)

Air Pollution Section (SNV)	Odd-Hroar Killingmo, M.Sc. Agric., Assoc. Professor
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National Food Administration (NFA)

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P.O. Box 60500	Karl Fredrik de Ron, M.D., Ph.D., Senior Medical Health Officer
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Tel. No: 08/737 25 00	
Telex: 16666 KARO S	
Telefax: 08/736 30 10	

Chairman:	Lars Friberg
Secretary:	Elisabeth Kessler

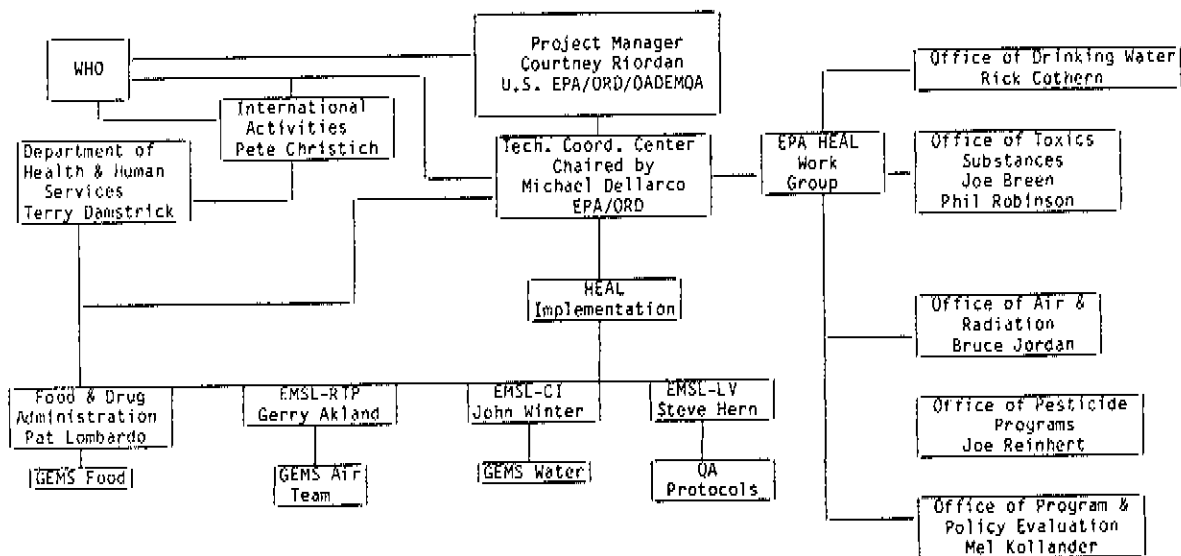
NIEM and KI have scientific responsibility for biological monitoring under the direction of Marie Vahter.

SNV has scientific responsibility for monitoring of air under the direction of Odd-Hroar Killingmo.

NFA has scientific responsibility for monitoring of food and water under the direction of Stuart Storach.

Annex III (cont'd)

USA HEAL ORGANIZATION CHART



INFORMATION FOR SENDING FACSIMILE MESSAGES TO EPA HEADQUARTERS		
EQUIPMENT	FACSIMILE NUMBER NUMBER	VERIFICATION NUMBER
RAPICOM	(202) 382-7883 (auto)	(202) 382-2078
PANAFAX	(202) 382-7884 (auto)	(202) 382-2078
PANAFAX	(202) 382-7886 (auto)	(202) 382-2078
MANUAL	(202) 382-2078	

The EPA Communications Center has the capability for sending and receiving facsimile messages to CCITT Group I, II, and III Equipment.

Organization of the Yugoslav HEAL

Institute for Medical Research and
Occupational Health, Zagreb

Director: Marko Saric

Mose Pijade 158
P.O. Box 291
41000 Zagreb
Telegr: INSTMED, Zagreb
Telex: c/o Institute "Ruder Boskovic"
21383 irb Zg YU

Units involved in the implementation of the HEAL:

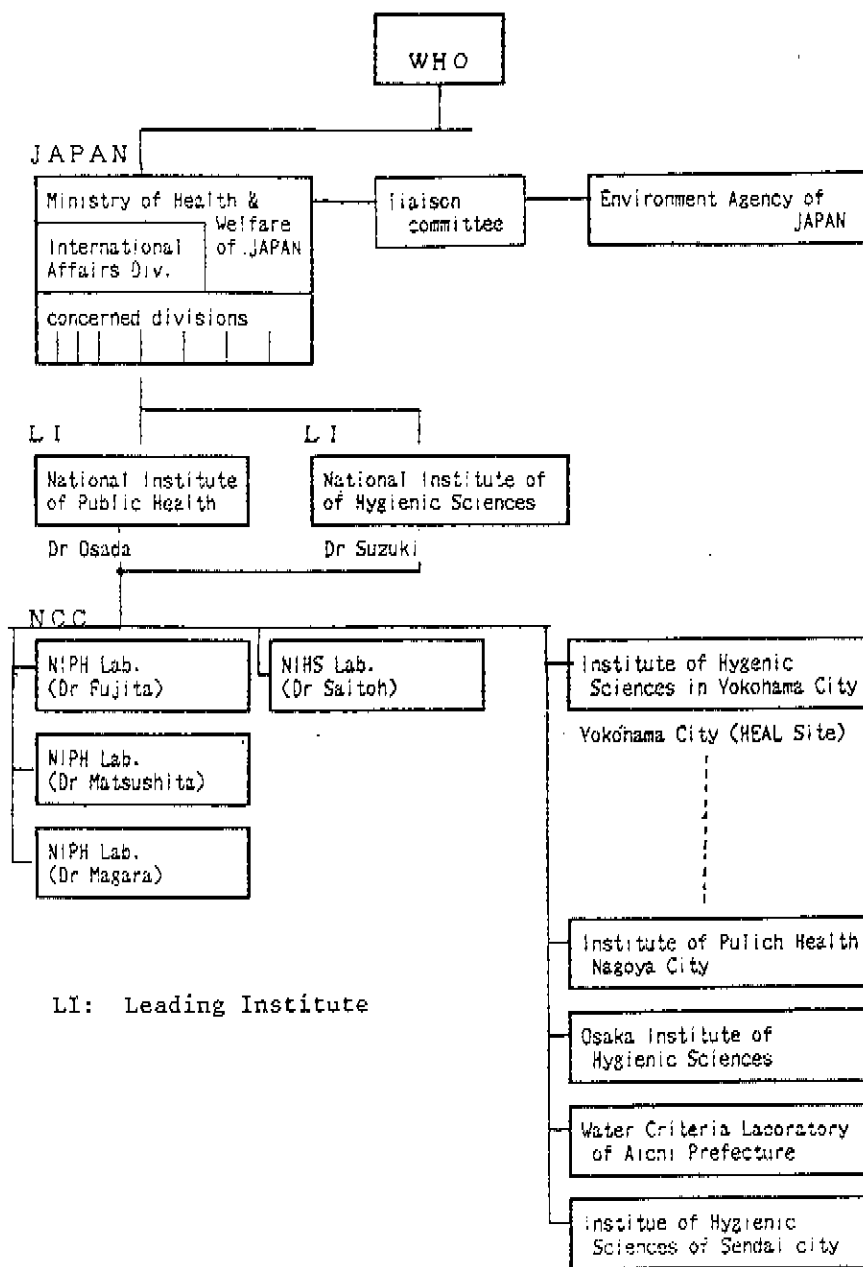
Laboratory for Environmental Hygiene	Head: Mirka Fugas
Laboratory for Analytical and Physical Chemistry	Head: Vlado Simeon
Laboratory for Gas Chromatography	Head: Vlasta Drevenkar
Laboratory for Biochemistry	Head: Elsa Reiner
Laboratory for Mineral Metabolism	Head: Krista Kostial
Laboratory for Clinical Toxicology	Head: Danica Trpic-Majic

Institute for Public Health of Croatia

Department of Food Hygiene Head: Davorin Bazalic

Annex III (cont'd)

Japan HEAL Organization Chart



LI: Leading Institute

Telex: For Sato, Director
International Affairs Division
022 22209 MHWJPN

Telefax: 008 13 5012532

Telephone: 008 13 5918983

Technical Coordinating Centre (TCC)

Terms of Reference

A TCC is designated as the "lead" institution(s) which has a major responsibility for developing and implementing a specified activity (monitoring and human exposure assessment of selected pollutant(s)) within the HEALS programme. Its functions are:

General

1. to develop the technical design and schedule of the activity in collaboration and in agreement with the relevant institutions in the other participating countries;
2. to provide technical supervision and quality assurance and other support during the implementation of the activity;
3. to compile, evaluate and prepare for publication the results of the activity;
4. to organize and chair working groups constituted for carrying out above named functions;
5. to carry out the above functions in consultation with the WHO Secretariat.

In respect to "environmental monitoring" functions being developed as part of the activity, the TCC will:

- (i) prepare sampling and analytical protocol for compounds to be monitored; including specification of siting criteria, number of sites, frequency of measurement, and quality assurance programme;
- (ii) develop QA system and arrange for its operation, including costs; establish data quality acceptance criteria; arrange for data collection, storage and retrieval with usual data banks;
- (iii) review results of environmental monitoring pilot studies; provide immediate recommendations for continuing level of effort, if any, in environmental monitoring as a result of first year's results. Produce a report.

With regard to "exposure monitoring" functions being developed as part of the activity, the TCC will:

- (i) As chair of the technical work group, develop in cooperation with participating countries a consensus with regard to objectives and scale of exposure monitoring pilot; raise in a timely fashion to the WHO/UNEP Secretariat critical issues that cannot be resolved at the technical work group level.
- (ii) Prepare exposure monitoring study protocol that is to be implemented by each of the participating HEALS countries; include selection criteria for type and number of individuals to be monitored; sampling and analytical protocols and quality assurance protocol.
- (iii) Design QA system; operate the quality assurance programme; arrange to cover costs of QA materials and operations; establish data quality acceptance criteria; establish and operate data collection storage, and retrieval system.

Annex IV (cont'd)

- (iv) Analyse and interpret study results and produce reports; develop recommendations for incorporating results into environmental monitoring programme; recommend continuation if appropriate of exposure monitoring and/or environmental monitoring activities for substance of concern.
- (v) Develop with participating countries a detailed schedule and work plan for completion of the exposure monitoring study.

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