

GEMS: Global Environment Monitoring System

**JOINT UNEP/FAO/WHO
FOOD CONTAMINATION MONITORING PROGRAMME**

GEMS/FOOD REVIEW AND PLANNING MEETING

Challes-les-Eaux, France

20-22 July 1989

Prepared under the joint sponsorship of the



United Nations Environment Programme, the



Food and Agriculture Organization of the United Nations, and the



World Health Organization

Food
Proc/39
C.2

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1. A meeting was held from 20 to 22 July 1989 to review the current activities of the Joint UNEP/FAO/WHO Food Contamination Monitoring Programme, or GEMS/Food, and to plan the future development of the Programme. The list of participants is given in Annex I and the adopted Agenda in Annex II.

Dr Slorach agreed to serve as Moderator for this meeting.

After a detailed review of the GEMS/Food objectives and activities listed in Agenda Items 4.1 to 4.9, the meeting made several recommendations and took a number of decisions concerning the future development of GEMS/Food. These are outlined in paragraphs 2 to 9 below. The meeting also reviewed independent activities of FAO and WHO in the area of food contamination monitoring encouraging both Organizations to continue their cooperation with Member States.

2. The meeting thought it appropriate to revise the objective of GEMS/Food, as follows:

The major objective of the Programme is to inform governments, the Codex Alimentarius Commission, other relevant institutions and the public on levels and trends of contaminants in food¹, their contribution to the total human exposure and significance with regard to public health. This is to be done globally, regionally and locally, as well as in geographical areas of special concern, as a basis - where appropriate - for remedial actions, for food control and for resource management. Components supporting the Programme involve technical cooperation, analytical quality assurance programmes and information exchange.

¹At present these refer to chemical contaminants only; in 1989/1990 the addition of selected microbiological contaminants is being considered. Similarly, consideration is being given to the inclusion of drinking water.

3. Selection of Contaminants and Foods

- (i) Monitoring data will continue to be collected for selected contaminants in individual foods and on dietary intakes; increased emphasis will be placed on the latter.
- (ii) The number of contaminants/foods covered by GEMS/Food is to be selectively reduced.
- (iii) The data collected will come from:
 - (a) Random sampling programmes; and
 - (b) Special studies such as contamination incidents, biased enforcement samples, research projects and localized pollution problems. These data will be identified and reported upon separately.
- (iv) Data on contaminants in individual foods will consist of three types:
 - (a) A small number of foods/contaminants of global concern;
 - (b) A selected number of foods/contaminants to reflect regional priorities. These will be selected on a regional basis with major input from future Regional Collaborating Centres; and
 - (c) Foods/contaminants of concern for special population groups.
- (v) The monitoring of foods/contaminants of global concern will be mandatory for all participants in the GEMS/Food Programme. Exceptions will be made if the food or contaminant is not of concern in a country, and this will be indicated in the report.
- (vi) Emphasis is to be placed on those contaminants most important to human health, international trade, and those which serve as indicators of environmental contamination. Priority will be given to staple foods. Selection criteria for contaminants to be monitored, as given in the report of an expert consultation on the subject (WHO/FAD/FCM/74.21; 1974), were considered to be still valid.
- (vii) Chemical contaminants present in food and due exclusively to food processing (e.g. tin) will be excluded, as will residues of veterinary drugs, intentional food additives, substances from packaging material, and radionuclides.

4. Reporting and Data Handling

The present reporting and data handling system will be changed to comprise the following:

(i) There will be four sources of data for assessment purposes:

- (a) Data generated within GEMS/Food
- (b) National and regional reports, including those from studies implemented with the technical assistance of FAO
- (c) Literature
- (d) Responses to Codex Alimentarius Committees' Circular Letters

Codex Circular Letters will be sent as usual to the Codex Contact Points and concurrently to institutions participating in GEMS/Food. It is believed that this will increase the amount of data received.

When established, Regional Collaborating Centres will collect and compile for GEMS/Food national reports and published data. In addition, national data reports will be assembled at two to three central localities (e.g. GEMS-MARC, WHO Geneva Headquarters) for future reference.

- (ii) GEMS/Food institutions will send their data to WHO on an annual basis. The data reporting forms will be the same as those now used, with some additions: (a) information on quality assurance to be given in greater detail; and (b) indication whether the data could be released upon request.
- (iii) The raw data will be protected and cannot be released without the prior permission of the specific countries concerned. These countries will also be consulted on a possible arrangement for the release of computer tapes containing processed data. Published reports containing these same data are already freely available; however, in accordance with the usual embargo, the data cannot be reviewed, abstracted or quoted without the agreement of the sponsoring Organizations.
- (iv) The possibility of storing data on diskettes for general release or data exchange should be explored, subject to the agreement of GEMS/Food institutions. A specific consultation composed of a small number of computer and data management advisers should be convened to look into this matter and to consider computer compatibility aspects.
- (v) Data will be analyzed and reported upon in the following ways:
 - Computer Printouts: to be produced annually and distributed to participating countries, the partner Agencies and, upon request, to Codex Alimentarius Committees and others concerned.

- Assessments: where possible, sectoral and specific assessments, including those requested by Codex Committees, for selected contaminants, e.g. toxic metals, pesticides, aflatoxins (one or two per year). It will also be necessary to produce regional assessments and reports which will be selectively integrated into a global report. In addition, individual country profiles will be prepared and distributed to the countries concerned for their use only. Based on the scientific reports, assessment documents for the general public will also be prepared.
- Situation Report: an annual situation report to be provided at year's end giving status of the Programme, achievements, and major findings - about 4-6 pages.
- Global Assessment: to be produced every four years and approved by Government-designated Experts before public release; to be written in laymen's terms for public awareness purposes. This global assessment will be prepared initially by consultants, followed by subsequent review by GEMS-MARC, WHO, FAO, UNEP experts or others before being submitted to the Government Expert Groups.
- Annual Reports and Press Releases: reports are to be published in World Health Magazine, World Health Bulletin, FAO Network, Food Laboratory News, and through various UNEP information channels including Our Planet, Sentinel (jointly with WHO), Regional Newsletters (Africa, Asia and the Pacific, Europe, Latin America, North America, West Africa), Infoterra Newsletter, Industry and Environment Review, Grid Newsletter.

A press release should be prepared for each public edition of a new printed assessment, and used as the basis for press conferences to be given by the three Agencies on a regular basis.

5. Analytical Quality Assurance (AQA)

Further consideration should be given to the AQA component of the Programme, as was pointed out in the report of the Meeting of UNEP/WHO Government-designated Experts (September 1988): "...Analytical quality assurance should be strengthened as it has been shown that some laboratories have problems, and that in some cases the quality of data is not improving over time." Similar concern was expressed by the Joint FAO/WHO Codex Alimentarius Commission at its Eighteenth Session in July 1989 when it also recommended that action be taken to improve the quality of the data.

It was agreed that:

- (i) Countries with a national AQA programme will be requested to select at least five laboratories out of those contributing data to GEMS/Food and to participate in the international AQA programme as currently being undertaken by GEMS/Food.
- (ii) All laboratories providing data to GEMS/Food from countries which do not have a national AQA programme should participate in the international AQA programme. Only those submitting AQA data will be allowed to submit data on levels of contaminants in food.
- (iii) Increased emphasis will be placed on follow-up of AQA results (e.g. by correspondence, visits to laboratories, etc), and the reasons why certain countries do not submit AQA results will be investigated.
- (iv) In accordance with previous decisions of the Technical Advisory Committees, AQA results from individual laboratories will not be made known to the national Collaborating Centre or Participating Institution.
- (v) The acceptance of food contamination data for assessment cannot be dependent upon the AQA results. However, efforts will be made to improve the quality of the data.
- (vi) The validity of the data will be assured, as far as possible, by:
 - (a) International AQA
National AQA
Laboratory AQA
 - (b) Improved follow-up of AQA results
 - (c) Restriction of data submission to those laboratories participating in AQA studies.
- (vii) Information on AQA in laboratories which contribute data to GEMS/Food will be requested on the data reporting forms. Such information may include participation in international (GEMS) AQA programmes, national ongoing and inter-laboratory AQA programmes, and any additional information deemed necessary.
- (viii) In practice, very few samples are truly representative, and this should be qualified when data are provided. Existing FAO manuals and Codex guidelines on sampling techniques will be distributed to GEMS/Food institutions and their use encouraged.
- (ix) The FAO manual on AQA under preparation will be distributed to GEMS/Food participants.

6. Technical Cooperation

It was recognized that the objective of the Programme was data collection, assessment and dissemination of information concerning levels and trends of contaminants in foods, and that it was essentially not a technical cooperation programme. However, since technical cooperation activities with many developing countries are an essential prerequisite for obtaining the data to achieve the objective, the Organizations should continue to make every effort to attract extrabudgetary resources for this purpose. In this context, Programme resources could be used as seed money for attracting extrabudgetary resources. When increased resources are available, expert consultants should visit more selected laboratories to assess local AQA needs, equipment and training, offer recommendations for immediate action, and prepare project documents for extrabudgetary funding. In addition, a percentage of the Programme resources could also be used to respond to requests from participating institutions regarding reagents, standards, solvents, spare parts, etc.

The three Organizations should endeavour to support the GEMS Programme through their respective technical cooperation activities related to food control, including food contamination monitoring.

The group recommended the establishment of a dialogue with appropriate branches of industry (the food industry, instrument manufacturers, chemical industries, etc.) to obtain their support. In this context, it was proposed that a meeting be held between industry and the Agencies implementing GEMS programmes, including GEMS/Food. Such a meeting could also discuss the possibilities of companies providing analytical training to scientists from developing countries. Contacts will be established with the UNEP Environment and Industry Office in Paris.

7. Management/Coordination

- (i) Policy decisions, including approval of annual budgets and work plans, will be made by a Programme Management Committee consisting of representatives of the three Organizations. This Committee will meet biannually. Close contact should be maintained between each meeting by the three Organizations.
- (ii) The Programme will be implemented by WHO with the active support of FAO and UNEP, with individual tasks to be assigned to each Organization as agreed upon by the Management Committee. The manager, a WHO staff member, will report on the implementation of the Programme to each session of the Management Committee, and put forward proposals for future work activities.
- (iii) Ad hoc working groups of technical experts will be convened to deal with specific issues as and when necessary. A meeting of Government-designated Experts will be convened periodically to conduct an overall programme review and to finalize major data assessment reports.
- (iv) As the occasion warrants, meetings of participating institutions will be convened, globally or regionally, to review certain aspects of programme implementation and for the exchange of information and experience.

8. Miscellaneous

WHO's Regional Office for Europe is planning to substantially increase the participation of European countries in GEMS/Food. UNEP and FAO should be kept informed of activities related to such expansion, including any meetings which might be convened for this purpose.

Except for what is reported above, there will be no concerted effort to increase the number of countries participating in GEMS/Food in 1989 and 1990.

9. Action Items (until December 1989 - unless otherwise stated)

- (i) Organize meeting of Programme Management Committee in December 1989
- (ii) Finalize report of this meeting (August)
- (iii) Letter to participating institutions informing them of decisions taken and requesting their opinion on contaminants and foods to be monitored, and on any other relevant items (September)
- (iv) Engage consultant in microbiology to select microorganisms and foods to be included in GEMS/Food as well as to develop the data collection system
- (v) Request FAO, WHO Regional Offices and Infoterra to start collecting national reports on food contamination monitoring and to send them, preferably in duplicate, to WHO Headquarters
- (vi) The three Agencies will submit their suggestions on ways to mobilize extrabudgetary resources at the next Programme Management Committee Meeting in December 1989
- (vii) Prepare a revised draft GEMS/Food project document for 1990 for UNEP support which considers priority actions and funding in agreement with the proposed changes recommended for the programme. The draft project document is to be considered at the next meeting of the Programme Management Committee
- (viii) Prepare and finalize publicity leaflet along the lines of the one on GEMS/Water. This leaflet will describe the revised Programme, and in simple terms will outline what benefits countries acquire as a result of joining GEMS/Food. The leaflet will be made available to all participating institutions and used to publicize the Programme. Some advantages of joining GEMS/Food would include: possibility of comparing country results with those of others; identification of reasons for high contaminants' levels; initiation of countries in monitoring programmes and inclusion of new contaminants of health concern; information on trends; AQA possibilities; occasional help with standards and trouble shooting missions; and direct communication between GEMS/Food institutions, etc.

- (ix) Consultant to develop draft priority list of global/regional foods/chemical contaminants to be included in Programme
- (x) GEMS to contact UNEP Environment and Industry Office about contact with instrument and chemical manufacturers
- (xi) Revise data submission form for AQA information and for other items if required
- (xii) Initiate development of Regional Collaborating Centres with the following Terms of Reference:
 - (a) Collect for the Programme national reports and published data, and prepare the information for WHO
 - (b) Deal directly with the countries in the region and stimulate them to send data to GEMS/Food
 - (c) Select foods and contaminants of regional importance
 - (d) Organize regional activities as required
- (xiii) If countries agree to the release of computer tapes containing processed data, convene consultation to consider computer compatibility aspects for data release and exchange.
- (xiv) WHO to prepare a progress report on items (ii) - (xiii) for the Meeting of the Programme Management Committee in December 1989.

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Moderator

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20 to 22 July 1989

AGENDA

1. Opening of Meeting
2. Appointment of Moderator
3. Adoption of Agenda
4. Status Report on GEMS/Food Activities
 - 4.1 GEMS/Food Institutions
 - 4.2 Data Collection, Reporting and Assessment
 - 4.3 Contaminants and Foods
 - 4.4 Analytical Quality Assurance Studies
 - 4.5 Technical Advisory Committee:
Actions and Recommendations
 - 4.6 UNEP/WHO Government-designated Experts:
Recommendations
 - 4.7 Guidelines
 - 4.8 Technical Cooperation
 - 4.9 GEMS/Food Budget
5. FAO Activities in the Area of Food Contamination Monitoring
6. WHO Activities in the Area of Food Contamination Monitoring
7. Recommendations for GEMS/Food Future Development

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