WHO'S HUMAN HEALTH AND ENVIRONMENT PROGRAMME

Report by the Director-General

The Thirtieth World Health Assembly in resolution WHA30.47, requested the Director-General to study long-term strategies for the evaluation of the effects on health of chemicals in the environment, including possible options for international cooperation in this field, and to report the results of the study, together with his recommendations, as soon as possible. Concurrently, the Organization has been reinforcing its cooperation with Member States in preparing for the International Drinking-Water Supply and Sanitation Decade, 1980-1990.

The present report covers developments in the human health and environment programme since 1977, particularly the programme plans and strategies adopted, but with special emphasis on the two programmes mentioned above. The United Nations Water Conference, in accordance with resolution WHA30.33, is being reported on separately under agenda item 3.13.6 (document A31/45). Problems of the human environment as they relate to food hygiene are reported on under agenda item 2.6.17 (document A31/28).

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I. INTRODUCTION

1. The Twenty-ninth World Health Assembly, after reviewing the Director-General's report on WHO's human health and environment programme (document A29/11), adopted resolution WHA29.45 requesting the Director-General to plan and implement the programme on the basis of the proposal made in his report, and taking account of the previous resolutions of the World Health Assembly.

2. The activities carried out during the biennium 1976-77 are reported in The Work of WHO 1976-1977: Biennial Report of the Director-General (Official Records No. 243). The present report reviews (1) the implications of the Sixth General Programme of Work Covering a Specific Period (1978-1983); (2) the follow-up to HABITAT - the United Nations Conference on Human Settlements (1976) - and the United Nations Water Conference (1977) in respect of community water supply and sanitation; (3) the problem of chemicals in the environment; and (4) certain measures taken for the planning and implementation of the programme.

3. The problems of the human environment are still changing rapidly and the work of the Organization is continuously being adapted to these changes. The full impact of the directives contained in the Sixth General Programme of Work and in resolution WHA29.45 will be the subject of a report to a subsequent Health Assembly, as requested by that resolution.

4. Information on the resources available to WHO for environmental health activities in 1975, 1976 and 1977 is contained in the Appendix to this document.

II. PROGRAMME EMPHASIS

5. The Sixth General Programme of Work emphasizes the promotion and development of environmental health policies and programmes (principal objective 12.1) and the recognition, evaluation and control of environmental conditions and hazards that may affect human health (principal objective 12.2). Similarly, the proposals contained in the Director-General's report to the Twenty-ninth World Health Assembly (document A29/11), and endorsed in resolution WHA29.45, highlight water supply and sanitation; the recognition, evaluation and control of environmental conditions and hazards; and environmental health policies, services and institutions.

6. In terms of strategies and orientation, document A29/11 provided specific guidance for programme planning and implementation, and for the medium-term programming of the promotion of environmental health (see paragraphs 30-32 below). Among the principles for orientation, the following are noteworthy:

(1) environmental health activities should be considered as part of the total development efforts in Member States;

(2) the programme should aim at the largest possible population coverage by basic sanitary measures, as a key to improving health;

(3) environmental health programmes should be planned on analysis of the social, cultural and behavioural aspects involved, particular attention being given to community participation, the utilization of local resources and the development of self-reliance.

7. The emphasis on water supply and sanitation as an essential health measure, particularly in respect of the rural and urban-fringe population, and on the recognition and prevention of health hazards resulting from conditions in the environment, are further highlighted by the recommendations of HABITAT - the United Nations Conference on Human Settlements (Vancouver, June 1976) - and the United Nations Water Conference (Mar del Plata, March 1977) on the one hand; and by resolution WHA30.47, on the evaluation of the effects of chemicals on health.

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on the other. The results of HABITAT are reported in document A31/40, Addendum 3. A report on the United Nations Water Conference (document A30/28 Add.2) was submitted to the Thirtieth World Health Assembly, which adopted resolution WHA30.33. The report to the present Assembly on the follow-up to the Mar del Plata Action Plan will be found in document A31/45.

III. COMMUNITY WATER SUPPLY AND SANITATION

Community water supply and sanitation as part of primary health care

8. Water supply and sanitation are integral parts of primary health care. The emphasis is on providing these services to the most underserved populations, particularly rural populations, with the participation of the community and the application of appropriate technology ensuring the availability of safe drinking-water and the sanitary disposal of human wastes.

9. The study under way, following a decision of the twenty-first session of the UNICEF/WHO Joint Committee on Health Policy on the subject of water supply and sanitation components of primary health care, will not be limited to water and sanitation in relation to health services per se, but will view these as part of development. This study is being carried out in two parts: (i) by a general review of past and present experience on water supply and sanitation as components of development, and (ii) through case studies planned in twelve countries.

International Drinking-Water Supply and Sanitation Decade

10. The United Nations General Assembly, in resolution 32/158, endorsed the Action Plan recommended by the United Nations Water Conference, namely, the adoption of programmes based on realistic standards for quality and quantity, with a view to providing safe drinking-water and adequate sanitation for all by 1990. In addition, the General Assembly also decided that the period 1980-1990 should be designated the International Drinking-Water Supply and Sanitation Decade.

11. An analysis of the present situation in the drinking-water and sanitation sector shows a widening gap, with population growth outpacing service development in many countries. The populations most in need are those scattered in rural areas and crowded in urban slums. Water is becoming a scarce resource under the increasing pressure of competing uses. Sanitation, except for privileged populations, has often yet to be introduced.

12. The Thirtieth World Health Assembly, in resolution WHA30.33, requested the Director-General, among other things, to collaborate with Member States in this field; to make immediate efforts for a rapid assessment of ongoing national programmes and the extent to which they could usefully be expanded to meet the objectives recommended by the United Nations Water Conference; to make maximum possible use of national collaborating institutions; and to strengthen collaboration with multilateral and bilateral agencies.

13. Rapid assessment of ongoing national programmes. A rapid assessment was initiated after the Thirtieth World Health Assembly, in cooperation with the World Bank, with the purpose of cooperating with governments in their evaluation of the extent to which ongoing programmes could be usefully expanded and, more specifically:

(1) the country's preparedness to proceed with accelerated programmes;

(2) the constraints which were likely to hamper such programmes;

(3) the action required for preparing, during the period 1978-1980, national plans (including investment plans) for the programme of the International Decade, 1980-1990, which would be reviewed in 1980 through arrangements made by the United Nations Economic and Social Council;

(4) the international cooperation required for preparing development plans for the Decade.
14. The response to the rapid assessment is gaining momentum, and it is estimated that some 55 countries will be participating by the end of April 1978. In 1980 the Economic and Social Council will review the national programmes developed for the Decade and assess the extent to which the countries concerned have succeeded in mobilizing local and national support, so that coordinated action on agreed targets may be assured.

15. It will be recalled that the Thirtieth World Health Assembly, in resolution WHA30.33, operative paragraph 2(2), requested the Director-General "to revise as appropriate the review being undertaken in accordance with resolution WHA29.47, operative paragraph 5(4), with a view to meeting the terms of the recommendation of the United Nations Water Conference concerning country plans for water supply and sanitation, and as a major contribution to the preparations for the proposed International Drinking-Water Supply and Sanitation Decade". The rapid assessment of ongoing national programmes will allow the reports to the regional committees of WHO and to the Thirty-fourth World Health Assembly in 1981 (requested in paragraph 5(4) of resolution WHA29.47) to reflect conditions and needs in Member States not only in statistical terms but also in terms of the preparedness and capacity of countries to undertake accelerated programmes during the International Drinking-Water Supply and Sanitation Decade.

16. Use of national collaborating centres. Resolution WHA30.33 stipulates as a key strategy the utilization of national collaborating institutions. These can serve the dual purpose of extracting valuable information from within a country for evaluation and dissemination elsewhere, and of providing for the expansion of the knowledge required for national programmes and projects by transmitting information received from extranational sources. An established network of collaborating centres - 75 in all - already exists and is headed by two international centres - one for community water supply, the other for wastes disposal. The network is in the process of being consolidated by a revision of the centres' functions to bring them into line with the objectives of the International Drinking-Water Supply and Sanitation Decade. Regional centres of the Organization will play a major role in the functioning of the network, e.g. the Pan American Centre for Sanitary Engineering and Environmental Sciences (CEPIS), established in 1968 in Lima, Peru, and the Western Pacific Regional Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS), authorized by the Regional Committee for the Western Pacific in 1977. The establishment of additional WHO regional centres is under consideration.

17. Coordination. It is obvious that the implementation of the water supply and sanitation target for the International Decade (1980-1990) requires effective coordination at both the national and international levels. Arrangements are therefore being worked out for appropriate mechanisms for multiagency technical support at different levels, including coordination of their action at the country level, to ensure the most effective use of available resources. In view of the particular focus on rural water supply and sanitation, coordinated action is being developed together with the World Bank, UNDP, UNICEF and FAO. The purpose is to strengthen national capacities for planning and implementation of programmes providing for a wide coverage of rural water supply and sanitation, and to ensure that resources are made available and are used in accordance with defined needs of underserved populations. Further details are reported in document A31/45.

18. Outlook. In keeping with the Sixth General Programme of Work, a sustained effort by the Organization will be required to ensure that high priority is given to water supply and sanitation as part of health and related development programmes, particularly for high-risk populations which now use unsafe and inadequate water for consumption. Promotion will be an essential priority at both the national and global levels, as also the elaboration of service and quality standards, phased programmes for implementation, identification of projects and other activities that might be of help in attaining the Mar del Plata target, development of institutional capacity, assuring the use of a suitable technology that meets public health standards, and training of manpower.
IV. CHEMICALS IN THE ENVIRONMENT

19. There are now some 60,000 chemicals in frequent use for different purposes and their number is increasing at a rate of about a thousand per year. The implications for the environment and for human health of the use of these chemicals, their ultimate fate, and the pathways through which they reach man are increasingly complex, and the risks to man's health - both short-term and long-term - are a matter of worldwide concern. The control of these chemicals is also a complex matter, involving not only the evaluation of their efficacy as well as their undesirable effects, but also questions of trade (both national and international), legislation, and monitoring, WHO's role, however, being to ensure the safety of these chemicals in relation to human health.

Ongoing programmes for the assessment of the safety of chemicals

20. Annual FAO/WHO meetings of experts on food additives and contaminants, including pesticide residues, have been convened since 1956. Some 300 food additives and 150 pesticides have been evaluated; and at present about 3500 additional additives and some 800 pesticides are in need of assessment. The WHO environmental health criteria programme was started in 1973 in collaboration with national institutions and the United Nations Environment Programme (UNEP) to provide an evaluation of the risks to health of a series of priority environmental pollutants. To date, four criteria and other 20 are in preparation. Though the programme has gained momentum, its pace should be accelerated. The evaluations by the International Agency for Research on Cancer (IARC) of existing data on the carcinogenicity of about 400 chemical compounds and groups of compounds have been published in a series of 17 monographs. Research in progress in IARC includes studies on specific chemicals in relation to carcinogenesis, e.g., the study on aflatoxin, nitrosamines, DDT, and polycyclic aromatic hydrocarbons. Moreover, WHO systematically receives data from 22 drug-monitoring centres; some 150,000 reports on adverse effects of drugs, under about 11,500 different names, have been received to date.

21. There are other WHO activities which should, because of their potential usefulness, be considered in the context of an international system for the evaluation of the effects of chemicals on health. A Joint ILO/WHO Committee on Occupational Health met in 1968 to discuss permissible levels of occupational exposure to airborne toxic substances;¹ and a further meeting on priority metals is planned as part of a programme on internationally recommended health-based permissible levels for occupational exposure to chemical agents (resolution EB60.R2). With respect to training of manpower, WHO and IARC have both fellowships and courses but, in view of the vast demand, these are too limited. The service for collaborating with Member States in emergency situations is restricted and often slow, and the fact that it is available is not well known. A programme for health-related biological monitoring of three metals and of organochlorine compounds was started in 1976 in cooperation with UNEP. The Joint FAO/WHO Food and Animal Feed Contamination Monitoring Programme has started to collect data on organochlorine pesticides, chlorinated biphenyls, and lead.

22. As regards recent activities aiming at the improvement and harmonization of methods, a monograph on evaluation of the toxicity of chemicals is being prepared in collaboration with more than 50 national experts and with the support of UNEP. Methods used in establishing permissible levels for occupational exposure to harmful agents were evaluated by a WHO Expert Committee in 1977, with the participation of ILO.² Work on a monograph on epidemiological methods in studies on the effects of environmental agents on health began in 1975 and its publication is scheduled for 1979, in collaboration with the International Epidemiological Association.

Implementation of resolution WHA30.47

23. Resolution WHA30.47 requested the Director-General to study the health problems related to the growing use of chemicals and the long-term strategies in this field, and to examine the possibilities for international cooperation with a view to (i) accelerating and making more effective the evaluation of the health risks from exposure to chemicals, and promoting the use of experimental and epidemiological methods; (ii) exchanging information on new chemical hazards to public health; (iii) making arrangements for rapid and effective response to emergencies; and (iv) developing manpower in this field.

24. As a first step, a consultative meeting of experts was convened in Geneva in September 1977 to advise on the methods and procedures of the study and on the possible tasks and options for an international collaborative programme in the light of existing WHO and other international activities. Since December 1977 consultations have been held with 15 Member States to explore expectations and preferences as regards content and output of international activities, and to discuss the options for arranging them. Similar consultations were held with some international bodies, including ILO, FAO, UNEP, the Commission of the European Communities, the Council for Mutual Economic Assistance, and the Organisation for Economic Cooperation and Development. An advisory group composed of WHO temporary advisers and representatives of several international organizations will meet from 1 to 5 May 1978 in Geneva. WHO also participated in a meeting on the control of toxic substances with special regard to environment chemicals, convened by the National Swedish Environment Protection Board in Stockholm in April 1978 for the purpose of reviewing the subject and possible ways of resolving problems requiring international cooperation.

25. Tasks for international cooperation. The consultations held so far indicate agreement that a future international cooperative programme should give priority to:

(1) the development and promotion of methods for laboratory testing, epidemiological investigations and health risk assessment. The present lack of such agreed methods is seen as an obstacle to a globally acceptable health risk evaluation with a view to health protection in all parts of the world from which and to which there is a large flow of chemicals;

(2) the international evaluation of Health risks associated with different uses of chemicals. This is important to most countries in the context of their national regulatory action on chemicals. There was agreement that the ongoing activities outlined in paragraphs 20 to 22 above should be not only continued but accelerated; however, a new programme should be initiated for the rapid preliminary assessment of the large number of existing and new chemicals which are suspected of having adverse effects and for which a full evaluation is too time-consuming or is impossible because of the lack of adequate information;

(3) technical cooperation aimed at solving specific problems in Member States where institutional capacity is lacking and where regulatory action is either under consideration or known to be needed;

(4) the exchange of information on new chemical hazards;

(5) the training of a sufficient number of specialists, and the promotion and coordination of research.

26. Possible options for international cooperation. At this stage, the following options for international cooperation are being reviewed (in each of them, the International Register of Potentially Toxic Chemicals of UNEP would be an essential component and nongovernmental organizations and industry would be participants):
(1) to increase resources for existing WHO programmes;

(2) to establish a new institution, incorporating the pertinent features of IARC, strengthened by a number of regional centres as appropriate;

(3) to expand the scope of IARC to make it also an international agency for the evaluation of the effects of chemicals on health;

(4) to establish a network of national institutions which would be assigned specific tasks and which would be appropriately strengthened by international staff and adequate resources, coordinated by a central WHO unit;

(5) starting from option (4), to aim at a much broader international programme on all aspects of environmental toxicology (covering the entire ecosystem in addition to human health) by suitable arrangements between WHO, UNEP, other agencies and organizations within and outside the United Nations system (including, for example, the Commission of the European Communities, the Council for Mutual Economic Assistance, and the Organisation for Economic Cooperation and Development) and also industry.

27. It is too early at this stage to rank these options in order of preference, although it appears from the consultations held so far that option (4) would be the most feasible, acceptable, and productive. This option would presume a large degree of specialization among the national institutions participating in the network, as well as the delegation to them of functions performed traditionally by the WHO Secretariat. Such specialization might be by type of chemicals (e.g., food additives, pesticides, solvents), by the media involved (air, food, water, working environment), or by the effects being evaluated (e.g., carcinogenicity, mutagenicity or other specific effects). The delegated functions might include the collection of information, the preparation of reviews, the convening of meetings of experts for the purpose of evaluation, the scientific editing of evaluation reports or monographs, and perhaps their publication. In order to make the output of such a network globally acceptable, this option would also presume the existence of a strong WHO coordinating unit, possibly attached to one of the national institutions. The coordinating unit would develop priorities and ensure the coherence of the programme and the quality and uniformity of output; it would develop plans and programmes of work, set the procedures to be followed and ensure their implementation, promote a high standard of work. It would also carry out certain activities of the programme for which a centralized approach is highly desirable. The resources required for such a network are yet to be estimated. It is obvious, however, that substantial additional resources will be needed if the network outputs are to substantially increase present programme outputs; and extrabudgetary resources will be required, particularly from Member States whose national institutions assume functions within the network foreseen under this option. A further requirement would be that Member States participating in the programme would agree to direct their research and testing towards the priorities established, using the methods developed by the programme.

Integrated approach

28. The health problems resulting from chemicals in the environment require an integrated approach, i.e., consideration of all pathways of exposure of man. Measures are therefore being taken to bring together the Organization's expertise and programmes dealing with the effects of chemicals in air, water, food, and at the place of work, and other conditions of exposure. Some of these activities have been integrated through structural rearrangements at headquarters, and for others special arrangements for coordination have been made. The subject of food hygiene is dealt with under agenda item 2.6.17 (see document A31/28).

Coordination

29. Coordination at both the national and international levels is essential in dealing with chemicals in the environment. Close contacts are maintained with other agencies and organizations, particularly with UNEP and its International Register of Potentially Toxic Chemicals, with a view to defining the optimal role it can play under any of the options referred to in
V. PROGRAMME PLANNING AND STRATEGIES

Medium-term programming

30. Within the context of the Sixth General Programme of Work, plans are under way for the elaboration of a medium-term programme for the promotion of environmental health. The first meeting of the global medium-term programming working group took place in Geneva in August 1977; it was attended by 11 participants from Member States in the six regions, in addition to WHO regional office and headquarters staff. The basic orientation and priorities of the proposed medium-term programme were provided by resolution WHA29.45, which requested the Director-General to plan and implement the programme on the basis of the proposals in his report to the Twenty-ninth World Health Assembly (document A29/11).

31. The substantive approach taken provides for the medium-term programme to focus on two items, namely, (i) action related to the implementation of the target for the International Drinking-Water Supply and Sanitation Decade, and (ii) prevention of adverse effects of environmental hazards in air, water, and food. For each of these two areas, efforts are being made to establish (a) targets, (b) list of recommended activities, (c) time sequence, (d) location of activities, and (e) output indicators, in line with the methodology for medium-term programming approved by the Executive Board (resolution EB61.R24).

32. Every effort is being made to involve Member States in the process. Account is also being taken of the work of the Regional Committees for Africa and for Europe on evaluation of the long-term planning of their regional programmes for the promotion of environmental health (documents AFR/RC27/12 of 17 June 1977, and EURO/ICP/FPE.002 of 24 February 1978). Furthermore, attention is being given to achieving an adequate linkage of the medium-term programme with the Organization's proposed programme budget for the biennium 1980-1981, and with the rapid assessment of ongoing national programmes (see paragraphs 13 to 15 above).

Integration of resources

33. The challenges offered to the Organization by the International Drinking-Water Supply and Sanitation Decade and the problems of chemicals in the environment have required a restructuring of arrangements for coordination between regional and globally available resources in order to obtain increased effectiveness of the Organization's technical cooperation in environmental health. Among other things, plans for globally available resources are made in cooperation with the regions and the Organization's cooperation with the World Bank extends to the regions, with the aim of providing rapid and specialized services to Member States. Particular attention is given to collaboration with bilateral and donor agencies to increase resources and to intensify activities for the International Drinking-Water Supply and Sanitation Decade.

Coordination

34. The major thrust of coordination, both within WHO and with other international organizations is maintained on the basis of the principles outlined in the Director-General's report to the Twenty-ninth World Health Assembly (document A29/11, section 3.5). New developments in respect of follow-up to the United Nations Water Conference are described in document A31/45. Other important developments relate to the Organization's cooperation with UNEP on the subject of chemicals in the environment (see section IV above); with FAO with respect to the implementation of the new food control strategy, reported in document A31/28; and with IAEA on the priority subject of radiation health. Special arrangements have been made with FAO for cooperation and coordination as regards the integration of rural water supply into rural and agricultural projects; the health aspects of water resources development; and the health aspects of the reuse of wastewater for agricultural purposes (see document A31/45).
## Promotion of Environmental Health - Expenditure in 1975, 1976, 1977

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<th>UNDP</th>
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| Of which:                                        |              |      |       |       |              |      |       |       |              |      |       |       |
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| Africa                                          |              | 311 073 | 1 353 951 |      | 164 076 | 1 829 100 |      | 314 865 | 1 332 018 |      | 69 378 | 1 716 261 |      | 278 882 | 1 093 453 | 113 456 | 1 483 791 |
| The Americas                                    |              | 976 701 | 2 604 996 |      | 22 200 | 3 403 897 |      | 1 160 882 | 1 768 252 |      | 9 226 | 2 918 160 |      | 1 141 294 | 1 101 814 | 617 | 2 243 525 |
| South-East Asia                                 |              | 916 749 | 383 850 |      | 6 000 | 1 306 599 |      | 1 342 868 | 809 101 |      | 2 151 969 |      | 1 387 242 | 1 528 443 | 2 915 685 |
| Europe                                          |              | 523 626 | 1 919 773 |      | 45 086 | 2 488 685 |      | 684 300 | 2 195 196 |      | 100 244 | 2 979 740 |      | 784 928 | 1 560 744 | 233 579 | 2 579 251 |
| Eastern Mediterranean                            |              | 371 138 | 995 490 |      | 178 862 | 1 545 490 |      | 354 603 | 879 264 |      | 516 262 | 1 750 129 |      | 441 600 | 267 187 | 582 385 | 1 291 172 |
| Western Pacific                                  |              | 665 985 | 307 488 |      | 973 473 | 577 010 |      | 364 179 |      | 941 189 | 665 113 | 231 242 | 7 347 | 903 702 |
| Global and Interregional activities             |              | 647 301 | 129 634 | 1 009 567 | 1 786 502 |      | 705 199 | 8 560 | 1 123 839 | 1 837 598 |      | 770 369 |      | 1 400 618 | 2 170 517 |
| **Total**                                       | 6 266 713    | 7 495 382 | 1 431 754 | 15 193 849 | 7 267 857 | 7 356 570 | 1 847 027 | 16 451 454 | 7 480 970 | 5 782 683 | 2 410 887 | 15 674 540 |