



CONSULTATION ON THE INTERNATIONAL DRINKING
 WATER SUPPLY AND SANITATION DECADE AND ITS
 IMPLICATIONS IN THE LIGHT OF THE FIRST
 THREE YEARS OF ITS IMPLEMENTATION

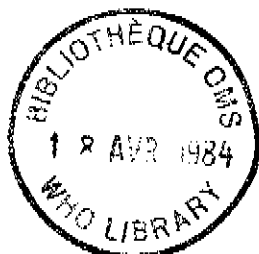
*Water Supply
 and Sanitation
 Decade*

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INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE

THE DECADE AND ITS IMPLICATIONS IN THE LIGHT OF
 THE FIRST THREE YEARS OF ITS IMPLEMENTATION



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1. INTRODUCTION

1.1 To those closely involved in the Decade, the very topic of the paper may call for an interpretation. The emphasis assigned to water supply and sanitation through the 1970's by its inclusion in the United Nations Second Development Decade, the priority urged for it in the UN Conference on Human Settlements in 1976, the positive Resolution passed thereon at the Mar del Plata UN Water Conference in 1977, and culminating in the Proclamation of the Decade by the UN General Assembly in 1980, raised great expectations both on the part of the Member countries and concerned UN and external Agencies.

1.2 However, recent reviews of the Decade status by WHO's Regional bodies have brought out various factors - both positive and negative - relating to its implementation over the past three years. For instance, the Regional Office for Africa has identified weakness of sectoral institution framework and insufficient priority as obstacles to national planning process. In contrast, the Region of the Americas has benefitted by a succession of development decades since 1961 and attained a satisfactory momentum for progress in the current Decade. Efforts to improve the data base in the countries of the Eastern Mediterranean Region as a preliminary to producing national Decade plans were still under way, because in most cases the information was dispersed and difficult to assemble. In the European Region, attention has had to be drawn to service deficiencies, and an increased awareness has been created that the Decade is not of concern only to developing countries. In the South-East Asia Region, while many countries are emphasizing the need for maximum coverage, there is still a need for full understanding of the Decade and the Primary Health Care (PHC) approaches, and there still remains an urban bias in resource allocation and a lack of priority to sanitation development. At the Western Pacific Regional level, there has been a substantial improvement in service coverage, so that Decade goals are expected to be reached by 1990 in more than half the Member States and areas.

1.3 In general, a great effort has gone into promotion since the start of the Decade, but several of the constraints which tend to inhibit the work include a frequent misunderstanding of the definition and aim of the Decade, with the assumption that "water for all by 1990" is the principal objective. As time has passed and the realization has dawned that in many countries this ultimate objective will not be attainable, discouragement has ensued. To overcome this, perhaps a restatement of the Mar de Plata Action Plan is needed, emphasizing that goals and objectives are to be developed at the national level by the countries themselves in accordance with their needs and the resources available.

1.4 The initial proposal (following the Mar del Plata Resolution) was to complete preparatory studies and develop national plans as a matter of urgency so as to initiate the Decade. Priority projects were to be prepared during 1978-1980 for external consideration with which implementation could begin with the Decade in 1981, but in the case of many countries progress was poor in the absence of expertise and matching funds. The concerned UN Agencies also did not have additional budgetary resources to provide the technical assistance required. From the standpoint of the donors, it was felt that the projects reaching them were based mostly on ad hoc proposals and assumptions, and not part of a national priority assigned to water supply for a concentrated effort during the Decade. In fact, the donors' insistence that it was only the governments which must assign priorities on development aid negotiations has, in many instances, prevented additional donor resources flowing to water supply because governments were not clear in their expression of priorities for the Decade. The resulting disappointment and waning of the initial enthusiasm began to have a snowballing effect which could be traced back to basic misunderstanding of the Decade: Whose Decade is it? Is it the governments'? Is it the donors'? Or the UN System's? Added to this misunderstanding came the additional handicap that the opening of the Decade coincided with a worldwide recession, which by itself forced all concerned (governments as well as donors) to be extremely restrictive in setting their priorities.

1.5 Under the impetus of the Decade concept, however, some of the more advanced countries in a better state of preparedness with national plans and developed manpower resources accelerated the pace of their programmes. Even for these countries, the limitations of priority and funding posed real problems and raised doubts whether the Decade goals were attainable by 1990.

1.6 To summarize, factors which have emerged during the first three years of the Decade have brought to the surface misconceptions on the scope, content and nature of the Decade programme, distortions in applying priorities and targets, lack of precision and accuracy in project preparation, and paucity of manpower and funding resources to prosecute and sustain a programme of such magnitude. Regional reviews conducted by the WHO have revealed that even if the Member countries fulfil their current targets for the Decade there will be a large percentage of urban, and a larger percentage of rural populations left unserved by water supply and sanitation at the end of 1990.

1.7 Because of its mandate in this field and its close involvement in implementing the Decade, WHO feels the need to bring this matter to the notice of all concerned for a reorientation of ideas and review of present attitudes and procedures to achieve optimum success in the remaining years of the Decade. The object of this paper is neither an evaluation nor an appraisal of the sector activities of the Decade in any form. It will address itself to explaining the Decade and its implications, and indicating the options in deciding the scope and nature of future action. Part I of this working paper will accordingly deal with "situation analysis", and Part II will outline the "options for decision".

PART I: SITUATION ANALYSIS

2. THE GENESIS OF THE DECADE

2.1 The importance of water supply and sanitation received emphasis in the United Nations Second Development Decade through the 1970's. The Vancouver UN Conference on Human Settlements in 1976 urged priority be given to the sector, and targets established by all nations and considered by the UN Water Conference. Soon after, the UN Water Conference at Mar del Plata in March 1977 resolved that drinking-water and sanitation services should be

provided to all by 1990, if possible, and recommended a Plan of Action specifying priority areas for action, action at national level, and action through international cooperation. Then followed Resolution 35/18 of the General Assembly of the United Nations (in its 55th plenary meeting on 10 November 1980) proclaiming the period 1981-1990 as the International Drinking Water Supply and Sanitation Decade, during which Member States will assume a commitment to bring about a substantial improvement in the standards and levels of services in drinking-water and sanitation by the year 1990. Governments were urged to develop the necessary policies and targets, strengthen institutional framework, mobilize resources, and heighten popular awareness and support to this end. Bodies of the UN System and other Organizations concerned were called upon to increase their financial and technical cooperation with the developing countries; Regional Commissions were to review progress periodically; and the Secretary-General was requested to prepare and submit a comprehensive analysis of the situation to be reviewed by the General Assembly at its Fortieth Session.

2.2 It is to be noted that the Decade Proclamation was made by the Member States at the forum of the UN Assembly to signify their resolve to accomplish a common objective. The interest and activities on the part of the UN Agencies preceding the Proclamation, however, lent pointed emphasis and support to it. Understandably, their interest encouraged hopes and aspirations in the Member States that the sector would receive priority attention through the Decade, and their own efforts inside the countries would receive outside support to attain their targets.

3. FOLLOW-UP ACTIONS

3.1 The Mar del Plata Resolution on Community Water Supply sets out in fair detail a Plan of Action at national level and also through international cooperation. The UN Assembly Resolution proclaiming the Decade also emphasizes the actions to be pursued by the concerned Agencies - national and international, and refers to the growing efforts by Governments and external agencies in responding to the Mar del Plata Plan. This has reference to the earlier activities set afoot specifically to utilize the period 1979 and 1980 to set targets for national plans and prepare projects for implementation with the commencement of the Decade. In an effort to pool their resources to give support to this effort, the concerned UN Agencies, UNDP, UN, ILO, World Bank, FAO, UNICEF and WHO formed a Steering Committee. In order to provide an insight into the situation in the context of the Decade and the nature of the commitments it entailed, an informal consultative meeting of potential donors interested in this sector was convened by the UNDP and WHO jointly in November 1978. Member countries were advised to expedite national actions for programme development and project preparation in order to assess their problems preliminary to a dialogue with the donor agencies. Assistance by way of technical inputs was also provided by the WHO and other Agencies to the extent their budgets permitted.

4. CONSTRAINTS

4.1 Initial efforts by the Member countries showed the sectoral weakness in several aspects and lack of resources and, in some cases, the lack of resolve even to develop national plans and Decade programmes, and assign a high priority to them in terms of resources and measures to ensure implementation. It was also realized that the resources needed by the developing countries from within the UN System to help them prepare projects for external funding were far beyond the budgetary limits of the UN Agencies, and available help in this direction was disappointing. Nevertheless, Member States came out with programmes and projects, though based often on ad hoc premises. The donor agencies, which had expected funding requests in better shape, were disappointed although some of them had a positive approach. There was a feeling that there were more funds than acceptable projects. This tended to decelerate progress.

4.2 The world recession was already influencing selective investments by the donor agencies. Established lending agencies could exercise a judgement for water and sanitation projects giving preference to countries which were demonstrating an absorptive capacity with matching funds and technical and management skills. But many donors lacked policies of their own, or laid conditions beyond governments' abilities. Because of the recession, however,

country policy-makers also tended to give priority to "productive" investments with which to counter the recession. The situation tended to slide back to the pre-1980 period when the sector could make no progress due to lack of financial and manpower skills on the part of many of the developing countries. The Decade gave them hopes which may not be realized. The recession had also discouraged hopes of external aid to help countries improve their internal capabilities for preparing projects. The basic problem of the donors was that the squeeze worked against additionality in external resources.

5. THREE YEARS OF THE DECADE IN RETROSPECT

5.1 It is to be noted that the Decade did make a good start. The Proclamation gave shape and content to a time-bound programme to achieve set goals and promote Health for All by the end of the century. In a spurt of enthusiasm, the Member countries addressed themselves to preparing plans, programmes and projects and resources development within their limitations, in the hope of securing supplemental support from outside, which was an ambitious part of the Decade promotion. These preparatory efforts were prompted and assisted particularly by UNDP, WHO, the Swedish International Development Authority (SIDA) and the Agency for Technical Cooperation of the Federal Republic of Germany (GTZ), among others. Their initial exercises brought out the cumulative deficiencies of past neglect, in planning capacities, resources generation and programme capabilities. External support was not readily forthcoming to supplement or energize national activities in the competitive rush to seek such assistance. In positive terms, the UN Proclamation had generated a widespread awareness of the problem among the Member countries, and brought to surface the variety of actions to be initiated and pursued by them to improve their internal capabilities and resources and capacity for optimum use of external support. It has also drawn the collective attention of the UN System and external support agencies to the areas in which many of the developing countries need outside support and guidance to help them develop their internal capacity, and have projects under a planned programme for implementation.

5.2 The initial efforts at alerting and stimulating external support agencies were promoted by the WHO and UNDP acting in unison, and convening an Informal Consultative Meeting of potential donor agencies to present them with a broad spectrum of the picture, with country digests in support and a future plan of action to promote the Decade.

5.3 Two instances in which external support agencies did evince interest may merit mention. A Decade Consultative Meeting sponsored and organized by Zaïre in February 1983, made a good impression, and drew favourable response from the external agencies. This was the first consultative meeting to be held at country level to discuss the prospects for the Decade, and the experience had proved useful. Another Decade Exploratory Consultative Meeting held in Rabat, Morocco, in April 1983, was equally successful. The Government presented as many as 89 projects with a total budget of nearly a billion US dollars, of which 58% was expected by way of external participation. There was response from the external support agencies, but without committing funds. It is, however, a pointer that external support agencies are still open-minded.

5.4 Even among the bodies of the UN System, the initial fervour did not continue. The Steering Committee referred to earlier had four more members joining it (UNESCO, UNCHS, UNEP and INSTRAW), making a total membership strength of eleven. The Committee had set itself up as non-operational, with its main function addressed to promoting the objectives of the Decade, which possibly constrained its effectiveness as a Steering Committee for Cooperative Action. The Resident Representative of the UNDP was the focal point at the country level, with Technical Support Teams drawn from Agency representatives to provide support to the National Action Committee and other national agencies on Decade-related activities. Unless and until the dynamism and informed interest of the Resident Representative could make a country-level impact, the Steering Committee's role as a visible symbol of cooperative action could find no tangible expression. The Committee was exploring ways and means of making itself more effective, but definite procedures were yet to be established for its closer involvement. It had, however, set up Task Forces to deal with priority areas of action such as Human Resources Development, Project Formulation, Information Exchange, Public Information, and Women and the IDWSSD. Experimental research field projects were under way

on hand-pump technology and low-cost sanitation. The manner and method of improving the Cooperative Action was a pressing issue. The Member countries had accepted the philosophy of the Decade, and the external support agencies were ostensibly willing to go along with the premises prescribed for their involvement.

6. EMERGING FACTORS

6.1 In retrospect, the current situation raises certain pertinent questions calling for clarification and/or explanation.

6.1.1 A widespread sense of awareness among the countries' governments and the international and external agencies about the Decade is acknowledged, as well as an anxiety for greater involvement to promote its progress. Nevertheless, the initial enthusiasm has been generally waning through the first three years. What can be the contributory causes, barring the world recession? Is it any basic misconception about the Decade goals? Or a widening gap between misconceived goals and actual resources? Or both? Does the background discussed in para. 1.4 provide an answer? How to identify a feasible solution?

6.1.2 Almost all countries have programmes for expansion of water and sanitation services, few of them designed to meet the Decade targets as conceived, while a majority of them are labouring under a backlog of unresolved problems, and resort to ad hoc plans and proposals without adequate surveys and studies. How is the situation to be improved?

6.1.3 In many countries, urban water supplies continue to claim priority at the expense of water supplies to other areas, and of sanitation services altogether. How best can the Decade set right distortion in priorities?

6.1.4 Can the Decade provide practical solutions to the critical manpower and institutional problems faced by many of the countries?

6.1.5 Widespread deficiencies in the operation and maintenance of water and sanitation systems indicative of poor infrastructure, inappropriate designs and lack of community involvement, act as major handicaps in many countries. How best can the Decade activities be evolved to initiate corrective steps and ensure benefits for present and future investments?

6.1.6 The general climate in North/South cooperation is one of disillusionment for those who had expected the Decade to attract a massive increase in external support. In fact, external aid agencies, singly or collectively, could not respond or move significantly to the Decade needs and challenge. What further steps are feasible, in the light of the earlier experience, to revive and increase inflow of external support for the Decade progress?

6.1.7 Community involvement or participation would seem to have become a hackneyed phrase, tending to be a slogan. Its dynamic potential as a vital country resource in promoting rural water supply and sanitation is not yet identified, much less harnessed by most of the countries' governments in promoting the Decade. How best can this be brought home to those involved in the Decade?

6.1.8 What are the steps by which the effectiveness of the Steering Committee for Cooperative Action can be enhanced and/or extended over a wider sphere to benefit the Member countries? Is such a need indicated by the experiences gained through the three Decade years?

7. NEED FOR REVIEW AND REORIENTATION

7.1 The foregoing in brief is the fallout from the Decade Proclamation. It is pertinent to reflect whether the situation, as has now emerged, is what the sponsors of the Proclamation could have had in view at the time. It is time to analyze the present impasse in the Decade progress, review our own concept of the Decade and its implications, and decide on a more realistic and positive course for future action. Part II of the paper is addressed to evolving this strategy.

PART II: OPTIONS FOR DECISION

8. THE DECADE OBJECTIVES RECALLED

8.1 It would be relevant to recall the Decade and its objectives as defined by the Mar del Plata and UN General Assembly Resolutions:

8.1.1 Reaffirming commitment to provide drinking-water supply and sanitation for urban and rural areas by 1990, if possible adopting programmes with realistic standards for quality and quantity;

8.1.2 Assuming commitment to bring about a substantial improvement in the standards and levels of service in drinking-water supply and sanitation by the year 1990;

8.1.3 As this challenge facing all mankind can be met only with full international cooperation in all its aspects, entailing the mobilization of physical, economic and human resources, all agencies in a position to provide assistance should undertake to do so until the objective is attained;

8.1.4 The Resolution took note of the fact that Organizations of the UN System and other international organizations were making progress towards possible establishment of a consultative group mechanism on community water supply programmes.

8.2 Two major conclusions emerge: one is that the Decade is not exclusively the concern of the Member countries but the outcome of the joint endeavours of the countries and the Organizations of the UN System and other international organizations; the other is that drinking-water supply and sanitation shall be provided for all urban and rural areas, if possible*, bringing about a substantial improvement in the standards and levels of service, with realistic standards for quality and quantity.

8.3 It is pertinent to note also that based on its Global Strategy for Health for All by the Year 2000, WHO's Decade Strategy highlights complementarity of sanitation with water supply development; focus on both rural and peri-urban underserved populations in policies and programmes; achievement of full coverage through replicable, self-reliant and self-sustaining programmes; association of the community with all stages of programmes and projects; close relation of water supply and sanitation programmes with those in other sectors; and association of water supply and sanitation with other health programmes. The approach emphasizes health aspects and priority factors calling for special attention.

9. THE CONTENT AND CHARACTER OF THE SECTOR

9.1 Sector Components and Activities they Signify

It would be helpful to have a general idea of the component segments of the sector and the activities they call for in an implementation programme. The omnibus character of the sector is not easily identified, much less appreciated. The options to be considered would be meaningful with a clear idea of the content and character of the entire sector.

9.2. The Urban Component

9.2.1 The division into urban and rural sub-sectors is a broad civic classification, connoting the size and civic status of the community to be served. Urban water supply systems may range from the luxurious to the threadbare, depending on the degree of affluence of the community and repaying potential of the consumer. A sophisticated system calls for a high level of software in technical, management and operational skills, and high range of hardware in materials, equipment and instrumentation. Project planning and development, financing and implementation, form a successive series of activities from the stage of initial conceptualization, with the operation and maintenance following as a continuing activity. Periodic additions to the installed plant capacity, repairs and renewals of plant components, and rehabilitation of obsolescent installations are all part of an ongoing

*This proviso was advisedly inserted at the Vancouver Conference, when the possibilities of full coverage for all people were considered, and it was felt that such a goal, however desirable, might not be within the realm of practical achievement.

programme to meet expanding demands from an increasing population. This is true of an urban sewerage system as well. The water supply project embraces all components from the water source and treatment plant up to and through the distribution network with service piped into the house. For such luxurious systems, the kitchen, bath, toilet and garden wastes piped out of the premises and through the sewer network to the treatment and disposal site comprise the sewerage component, which also will need periodic additions and expansions to meet the increasing needs of the urban population.

9.2.2. The less pretentious urban water supply systems must make do with public standposts within easy access of the houses to suit local fiscal and other limitations. Sewer systems as such are even more beyond the reach of a major part of the urban communities, and the "sanitation" may be confined to hand-flush toilets with leach pits within individual houses, or community toilets with a spot attendant to serve a group of houses; and where feasible, a sewer network to selected crowded areas of the city.

9.2.3. The very nature of these urban facilities would show that they are not of the character of a "one-shot" activity to cater to a specific population at a given time. Indeed, the elements of a sound project would always retain a reserve capacity to meet anticipated incremental demands as and when the population increases at an expected rate. Even in the case of the simpler urban water supply systems, the need to upgrade, expand and increase the supply to the consumers as and when the community improves its socioeconomic status is an ever-present possibility. There is no finality to the content and character of the system as installed. It is imperative to bear this crucial factor in mind when considering options for the Decade promotion.

9.3. The Mechanism for Implementation

To provide such sophisticated or the simpler systems of water supply and sanitation utilities in the urban areas calls for a comprehensive, institutional structure equipped to deal with the engineering, financial and management activities covering a wide spectrum. Preparatory studies, planning, project identification, preparation, and implementation followed by operation and maintenance as a continuing day-to-day activity, and periodic inputs to expand and modify the entire installation to meet increasing needs of the consumers, involves the development of human resources to provide the necessary skills, a matching training programme, generation of funding resources, establishing appropriate technologies, evolving strategies for community involvement at all stages of the programme, and a monitoring activity at crucial stages with information exchange. The mechanism, in fact, should be adequately equipped to deal with the physical, economic and social aspects of the entire programme, both urban and rural. The development and operation of such a complex mechanism gains visibility only through the concrete emergence of the utilities and their beneficial operation for the consumer populations.

9.4. The Rural Component

9.4.1. Rural water supply systems in the developing countries cannot afford any high-level software in their planning and preparatory stages, or expensive, complicated hardware in their installation. Limitations of finance and skilled manpower resources would be the militating factors for a foreseeable time. Here again, the nature of the existing water sources used by the villagers would dictate the nature of the new systems called for. In riverine delta areas prone to floods and with plenty of polluted water sources, on-site hand-pump wells at close intervals, such as would prevent their resorting to the polluted sources, would be a minimum need. A skeleton piped system, where feasible, can be thought of. In water scarcity areas, protected shallow wells with hand-pumps, or deep borewells with power pumps, may be called for. The post-installation operation and maintenance is a vital factor in planning and designing such sources and pump systems. Community involvement at all stages of the programme and project is a sine qua non for success.

9.4.2. Rural sanitation for the present must comprise hand-flush leach pit toilets or other forms of latrines for each dwelling, with health education to the village communities on their daily use and maintenance forming an integral part of the promotional work.

9.4.3. The nature and content of rural water supplies and sanitation are such that they may well turn into a self-sustaining programme once community involvement is secured as an enduring factor, and health education has imparted meaningful lessons for their beneficial use by the villagers.

10. CHARTER OF PUNTA DEL ESTE AS ANALOGY

10.1. Should the current global recession continue over an indefinite period, and should the Decade continue to face difficulties beyond solution by the Member States, it is prudent to search for a contingent plan with which to promote the Decade objectives as best as is possible. It is in this context that the Charter of Punta del Este for Latin America in the 1960's becomes relevant as a practical analogy, both for its success and lessons of warning.

10.2 The Charter set practical targets to be achieved during the period 1961-1968 (within the Alliance for Progress Decade 1961-1971), followed by National Plans during 1968-1971, and organized a massive deployment of resources to achieve the goals. While the targets set for water supplies were attained by and large, progress in urban sewerage and rural sanitation fell short of expectations. Nevertheless, the Charter laid a good foundation for institution building, a trained infrastructure and development of resources. The period 1961-1971 provided a valuable rehearsal for organized implementation of a massive sector programme. This was a positive contribution towards continuing progress through the 1970's to achieve the new goals set therefor. The experience of the two earlier decades has improved the state of preparedness of the Latin Americas with which to fulfil the Decade objectives through the 1980's.

10.3 It has also yielded lessons to learn. The earlier two decades concentrated on building new and expanding existing systems, with less attention paid to the quality of water and to operation and maintenance aspects, so much so that intermittent service and poor condition of some distribution systems had resulted in water losses of 40%-60%, and infiltration of contaminants into the systems. It is significant that the Pan-American Sanitary Conference in 1974 had to stress greater attention to improving the bacteriological quality of drinking-water.

10.4 There were shortcomings, also, in the development of critical leadership, of appropriate technology, in the establishment of national focal points for information exchange, training of personnel, and interaction with lending agencies and donor countries on project identification and preparation.

11. INCIDENCE OF THE FINANCIAL BURDEN

11.1 The availability of the Latin American model with experience over the two earlier decades should be of value in interpreting the IDWSSD and discussing the options at this stage of its progress. The Decade implies that the onus of financing the entire programme to make up for the neglect of past decades should fall on the present generation. In almost all the developing countries this is true of every sector and it is the obvious reason for the clash of sectoral priorities (although enlightened planning should accord high priorities for health for its fundamental contribution to nation building). Nevertheless the consumers' ability to pay for these facilities should improve with the march of time both during the 80's and the 90's, and to that extent should make for a significant improvement in the financing of these utility services, and relieve the national budgets of that much burden. In addition, sector performance could also give incentive for investment. It will also avoid the pitfalls in the development of institution building, and manpower resources and the use of appropriate technology, normally the areas for hurried decisions in the compulsive stresses of a Decade implementation. These are valid factors if they are not allowed to divert or diminish the optimal efforts to be addressed to promoting the Decade.

12. OVERRIDING CONDITIONS FOR OPTIONS

Before discussing the options available, it is pertinent to decide on certain prerequisites which may be considered as exempt from any compromise. These are referred to below.

12.1 Aim at Coverage for All, if Possible, but with Varying Levels of Service

It may be agreed that the Decade objective of providing water and sanitation service to all urban and rural areas by 1990 should be complied with, if possible, any limitations in doing so being met by modified levels of service to suit conditions.

12.2 No Compromise on Water Quality

As a principal aim is to ensure health safety, the quality of the water supply, be it urban or rural, should be safe from the health aspect, relaxing physical and aesthetical qualities to adjust to local limitations, leaving refinements to later stages of development.

12.3 Excreta Disposal a MUST for Water Protection and Health Impact

The impact of water supply can be illusory so long as the water is in constant risk of contamination. The Decade objectives must include excreta disposal as an inescapable concomitant of the programme, both urban and rural.

12.4 Integration of Rural Sector with Primary Health Care for Maximum Advantage

The Declaration of Alma Ata has given pre-eminent importance to Primary Health Care as the mainspring of integrated rural development and Health for All. Primary Health Care, irrespective of whether it is considered a "programme" or an "approach", is based on three principal operative points, i.e., (i) it is community-based with the emphasis on actions by the people rather than for the people; (ii) it has the support of all government services which are involved at community level through their respective programmes and projects, and (iii) it employs a technology which the people - the community - can use, maintain and sustain. For Primary Health Care therefore, the provision of information to people, and educational activities - primary education, general education, health education - are essential components consistent with the basic rationale that government supports the community rather than abandons it. Given this character of Primary Health Care, it can be readily conceded that it holds the potential of promoting and actually implementing rural water supply and sanitation where the traditional water agencies may not be successful or even involved because of lack of mandate, funds or interest. Primary Health Care depends on action by the individual, the family or the village community as a whole. Water supply and, perhaps more so, sanitation lend themselves to action by the individual, the family or the village - certainly if the government provides the support indicated above, i.e. technical, financial and managerial, and if education provides the motivation leading to participation. If a practical and effective arrangement can be made for this support - probably by combining the forces of health agencies with those of the outreach forces of the agencies dealing with water and sanitation, rural development, agriculture, community development and extension services and allied bodies, there would seem to be no better alternative way to gain the object in view. It is well to remember that the rural phase of water supply and excreta disposal covers nearly 70% of the population of the developing countries and, unless there is a proper institution and mechanism for it, it is far more practical and realistic to build it up as a part of the Primary Health Care infrastructure, and channel resources earmarked for rural water supplies through the PHC Programme Implementation Agency. A separate system to look after rural water supply and sanitation may be a tax on money and resources which the developing countries could ill afford. This, however, need not be binding on such of the more developed countries which may elect to complete rural water supply and sanitation under a formal sectoral programme.

12.5 Operation and Maintenance to Guarantee Investment Insurance

In the history of community water supply through the past four decades, chronic neglect of operation and maintenance of completed installations has become proverbial. The neglect of urban installations is visible, resulting from both managerial defaults and operational deficiencies. Similar neglect in rural areas remains invisible and uncared for. Experience in all developing countries in this vital function has been uniformly depressing. The experience of the Latin Americas lends pointed emphasis to this important activity, and the consequences of ignoring it. One crucial consequence of the lack of proper operation and maintenance is that it will prove to be a deterrent to investment. The decision-maker may well question the wisdom of making an investment if, say, two years later the investment is lost because of avoidable neglect. Planning and implementation concepts and practices have all along proceeded on the misconception that project planning, preparation and execution marks the finale of the process, and operation and maintenance can be left in a vacuum. The large-scale investments on the installations are placed under avoidable risk due to management and administrative lapses and deficiencies. It is necessary to guard against a continuance of such procedures in the planning activities of the Decade, calling for massive investments on the installations. It seems logical to insist that operation and maintenance will be enjoined as compulsory components in all the related Decade activities. Indeed, the potential of the Primary Health Care approach (see 12.4 above) deserves to be explored to supplement the traditional agency-dependent modes of operation and maintenance.

13. OPTIONS ANALYZED

13.1 Water Quality

An adequate water supply postulates four main service criteria - quality, quantity, convenience (accessibility) and reliability. Of these, quality may be held to be non-negotiable in the interests of health safety and health impact. A safe water, in terms of minimum quality, should imply freedom from pathogenic bacteria and toxic chemicals, acceptable chemical properties, colour and odour. So long as freedom from bacterial pollution and toxic chemicals is assured, some latitude may be permitted in respect of chemical properties, colour and odour, depending on local conditions, tolerance limits of the consumers, and the cost-benefit of improving these factors.

13.2 Levels of Water Service

Excepting quality, the other three service criteria represent levels of gradation, amenable to staged improvement.

13.2.1 Adequacy in quantity

A safe, potable or drinking-water supply usually implies safe water made available to meet drinking, culinary, bathing and washing and toilet purposes. In scarcity areas and when water is carried home from distant water points, drinking and culinary needs alone may be met. Apart from the physical strain, carrying more than the minimum or optimal need faces safety risks from home storage. It is for the Member countries to lay down decisions on the minimum per capita supply to be provided in the designs of projects for rural areas (again of different categories based on geosocioeconomic conditions) and for the small, medium and large urban communities. They may also lay down the criteria for increasing the quantity at appropriate stages of the Decade progress, by periodic project review and expansions.

13.2.2 Reasonable access

In an urban area, a public fountain or standpost located not further than 200 metres from the house may be considered as being within reasonable access of the house. In rural areas, reasonable access to the water point or source would imply that the housewife or members of the household do not have to spend an undue or disproportionate part of the day in fetching the family's needs, the saving in such time and labour being assessed in terms of its productive utilization. How to improve the "accessibility" by providing additional water points at closer intervals is a stage to be decided by aspects of economy in design.

13.2.3 Reliability

"Spot sources" for rural supplies should ideally provide water at all hours of the day. Running water in urban piped supplies should be available at all hours of the day all the year around if the system is to be rated as "reliable". Source development and operational details should be planned to meet such criteria as an ideal. Intermediate levels of "availability" of the supply during fixed hours may reduce operational costs, but expose the water to adventitious contamination due to the intermittent nature of the supply and undermine the health safety to the consumers. It is also possible that intermittent supplies engender unwitting wastage by psychological over-storage at the homes. Nevertheless, source adequacy and demand patterns may dictate a limited or intermittent supply system for reasons of economy in cost. A prudent design would envisage and spell out staged expansions, and also prescribe and enforce precautions against the shortcomings, during operation.

13.3 Urban Sanitation

13.3.1 Sewerage

Urban Sewerage rates a low priority in the developing countries because of its high cost-low return nature in economic terms, and very few cities have a plentiful water supply to justify and permit a sewer system. In absolute terms, water supply and sanitation systems are mutually complementary, but so long as excreta disposal parallels water supply in progress, the provision of comprehensive "sanitation" can follow as and when the economy facilitates it. Traditionally, and in epidemiological terms, sanitation has a broad connotation to include a cleaning up of the immediate and larger environment, so that factors adverse to health are eliminated or minimized. In a developing economy, community water supply and sanitation has been taken to signify a domestic water supply system and sanitary disposal of human excreta and other domestic wastes. A sewerage system should normally meet this need provided the adequacy of the water supply would ensure its functional efficiency and funds are available, but under a tight economy the options offered are between the conventional sewer system as against sanitary excreta disposal and sanitary wastewater disposal. They also call for options in the approach and method.

13.3.2 Sanitary excreta disposal/wastewater disposal

Research programmes being pursued on low-cost sanitation are examining the feasibility of simple hand-flush toilets at the homes in urban areas, with leaching pits for sub-surface dispersion. The options to explore would include if and under what conditions the household wastewater could find a joint solution; conditions in which crowded parts of the city would need community latrines with hand-flush toilets and local dispersion, with an attendant in service, to serve groups of houses; or a limited sewer system to serve dense areas; the manner and method of wastewater collection, treatment and disposal for critical urban areas; planning stages and implementation schedules; cost-effective appraisal of the options available, and decisions for project shape and content to suit local conditions.

13.3.3 Linkage with water pollution control

It is possible that sewage treatment and disposal or wastewater disposal problems could find effective linkage with water pollution control programmes, in order to generate additional support and funding assistance by inter-sectoral approaches and inter-ministerial intervention.

13.4 Rural Water Supply and Sanitation

13.4.1 Levels of service for rural water supplies find mention in the options discussed earlier. The size of the community and its socioeconomic status would decide the nature of source development, transmission and distribution elements and the level of technology called for, and community involvement as an essential condition.

13.4.2 Rural excreta disposal will predominantly follow individual hand-flush toilets and leach pit at the house site with adequate provision for water supply needed for its proper use. Other forms of sanitary latrines could also be considered. Communal hand-flush toilets for select areas in villages may be feasible in a few developing countries, depending on their earlier usage and experience. Community involvement is crucial for the success of the activities.

13.4.3 The scope and content of appropriate technology to be applied is of great importance in the content of the Decade. The use of external assistance for exploring ways and means to develop field research and action will need to be considered.

13.5 Integration with Primary Health Care

A major and important option would be to merge rural water supply and sanitation as an integral part of PHC. The advantages implicit in such a step were discussed earlier (vide 12.4). Admittedly, an appropriate institutional infrastructure [attuned to the needs of this important sub-sectoral programme] is yet to be identified and built up in most of the developing countries. By its very nature and impact rural water supply and sanitation is a component of a multisectoral and multidisciplinary character; as a factor of health in primary health care; as an essential adjunct of rural development; as a part of community development and extension services; as the backbone of children's health and care; and as a part of a total water resources programme in water scarcity areas. Experience has indicated the difficulties in implementing it as a self-sufficient or self-contained programme, depending as it does on multiple support. To organize it as an isolated programme and build up the physical, human and economic resources anew would entail duplication of labour and resources. To develop the skills in a labour force to carry and promote the programme on its own to the rural societies with different social habits and religious beliefs would tax the country governments unduly in planning and developing requisite strategies. On the other hand, the training of community level workers, and development of health education, public information, intersectoral promotion, and policy mechanisms pertaining to Primary Health Care could cover the needs of rural water supply and sanitation included as a part of the same programme. Other benefits of exercising such option would manifest themselves when implementation activities are set in motion. For these reasons, the recommendation made earlier to consider this as a firm option would seem valid under the logic of compulsion. Other options available will need to be weighed on the comparative advantages they offer and the prospects of achieving the objective in view.

13.6 Sectoral and Multisectoral Approaches

Water supply and sanitation with recognized credentials as basic means to health has the unique opportunity to secure help and support for intersectoral involvement, as health and wellbeing underwrite productivity, agricultural and industrial prosperity, nutrition, child welfare, and all fields related to nation building. A sick person is no asset to society. Infant mortality not only saddens the home, but debilitates the community. A high sickness rate undermines all sectoral advancement. Policy-making bodies should be enabled to have a comprehensive perception of the pervasive impact this sector has in promoting the national potential for progress, and identify the support which the sector could derive from other related sectors in the national plans and programmes. It is well to remember that all sectors can do something for water supply and sanitation as part of their programmes. The potential of this option could vary from country to country, but the approach would have similarities.

13.7 Use of External Assistance

The Decade activities are manifold. At the base is institution-building with expertise in planning, programming and management; followed by assessment of manpower needs, establishment of training programmes at the national level, to meet immediate and future needs for additional professional staff, intermediate-level technicians and village technicians. Engineering activities will include initiating preparatory surveys, engineering and feasibility studies for project identification and preparation; followed by funding and implementation with progress monitoring and programme evaluation at appropriate stages. Evolving cost-effective technology appropriate to local conditions, and methods for effective

community participation at all stages are concurrent strategies. Exploring venues for intersectoral help and assistance, and identifying and mobilizing external support for the programme and project components would be an omnibus concern spanning the entire range of activities.

The utilization of external assistance calls for foresight in identifying areas where such assistance will generate local resources and promote self-help in an increasing measure. External aid agencies would also welcome such an approach, as it would make for maximum cost effectiveness in securing a wide coverage for the investment. The activities cover a wide spectrum as indicated and development needs and quantum of external support would vary from country to country. It is important to remember that external aid, big or small, can only complement or supplement, but not supplant country efforts and resources. It has a catalytic role in the initial process of national planning and programming and in identifying roles for those involved in the implementation stages. When external assistance is channelled to secure a qualitative improvement and generation of local resources it serves to promote self-help and self-reliance in the implementation of further stages of country activities. The options to be exercised in matching external assistance to need-based activities may cover specifically one or more of the following, depending on local factors in each case:

- Institution-building and manpower development;
- Technical expertise and management skills for specific tasks;
- Information exchange and technology development;
- Establishing operation and maintenance methods and techniques;
- Monitoring and evaluation procedures;
- Orientation of community level workers and village technicians in the rural water supply and sanitation component of Primary Health Care;
- Research and the promotion of community participation.

13.8 Conclusion

Much of what has been said above is but a restatement of what has been already discussed by all those concerned with the Decade. The points sought to be highlighted now have relevance in reshaping the Decade activities to achieve positive results in the limitations of the present setting.

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