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SANITATION (IRC)

# SDC Sector Policy in Water Supply and Sanitation



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## Sector Policy on Water Supply and Sanitation

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## **1. Function and Terms of a Sector Policy**

SDC formulates a sector policy for each of its key sectors. These policies form part of SDC's operational management tools and contain directions for the work in a given sector. Deviations from these directions must be justified. The ideas behind the strategies and the proposed operational principles serve as references. However, they are not a recipe book for the formulation of programmes and projects<sup>1</sup>. It is an indisputable fact that each development concept must take into account the specific local situation and sociocultural context.



Photo SKAT

## 2. Water Supply and Sanitation

The object of the sector policy “Water Supply and Sanitation”, designated here as “W+S”, is the use of water to cover immediate human needs, the disposal of waste water, excreta and solid waste, as well as hygiene education. Water, as a production factor in agriculture and industry, is mentioned in this Sector Policy where required for resource allocation and management. Relevant aspects of water resources management are mentioned in relation to the design and implementation of W+S systems.

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### 2.1 Mankind, Water and Environment: A Global Problem

Drinking water in sufficient quantity and quality is one of the most basic human needs. The available water quantity and quality are both an expression and an indicator of the ecological context. Progressive deterioration of the environment, and settlement concentration lacking environmentally adequate waste and excreta disposal, hinder the direct access to sufficient and clean water. At the beginning of the 1990s, over one billion people have no access to safe drinking water. About 1.7 billion people lack sanitation facilities. In developing countries, 15 million infants die every year due to contaminated drinking water, lack of hygiene and malnutrition. WHO estimates that about 80% of all cases of morbidity are directly connected with insufficient water supply and sanitation.

In order to guarantee the basic function of water for human life and health, and to develop the economy and social institutions, the decade 1981-1990 was declared "International Drinking Water Supply and Sanitation Decade". Consequently, the required infrastructure was established for many hundred million people. However, although the Decade's achievements were impressive, they were not enough to keep pace with the demographic growth in general and to increase the level of coverage in underdeveloped regions more specifically. Increasing polarisation between poor and rich, urban and rural areas, has resulted from the difficult social and economic context of the 1980s. Rapidly expanding cities and their suburbs, as well as the inability of mostly government institutions to manage their investments in the field of operation and maintenance, are additional factors contributing to the sober outcome of the Decade.

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## **2.2 The Challenge of the Nineties**

A statement issued in 1990<sup>2</sup> stresses that developing and industrial countries will need to carry on working together at the same high level and to put into action sustainable programmes.

The call "some for all rather than more for some" focuses on the permanent availability of sufficient clean drinking water for all. Sanitation measures must be designed for the largest possible coverage. The following principles must guide their implementation:

- comprehensive management of water resources, as well as of liquid and solid waste to contribute to the protection of health and the environment,
- institutional reforms to promote a holistic approach - including modifications as regards procedures, habits and behaviour -, as well as a full participation of women at all institutional levels of the sector,

- operation of W+S installations through local communities and promotion of measures aimed at reinforcing the local institutions in the planning and implementation of sustainable W+S programmes,
- improved use and management of existing installations through application of managerial principles and consistent use of appropriate technologies.

This holistic approach is endorsed by Agenda 21 of the UN Conference on Environment and Development<sup>3</sup> and supplemented by two further theses<sup>4</sup>:

- The resources water and soil should be administered at the lowest possible institutional level.
- Water has an economic value in all its competing uses and should therefore be recognized as an economic good.

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### **2.3 Switzerland's Specific Contribution**

Switzerland has endorsed the principles and strategies proposed by the "Water Decade". It supports the reorientation for the coming years and contributes to its realisation. It is directly engaged in a number of international programmes:

- for the development and promotion of appropriate technologies and extension of training programmes to rural and urban settlements (e.g. through the "UNDP/Worldbank Water & Sanitation Program" and its regional networks);
- for the development of national and international networks which act as coordinators for sector activities (such as the "Water Supply and Sanitation Collaborative Council", an efficient forum for the promotion of the North-South dialogue in the sector).



The projects and programmes of the Swiss Development Cooperation directly contribute to the improvement of the basic conditions of rural and urban populations in a complex sociocultural and physical context. Thus, the scope of the cooperation extends from providing financial assistance for the construction of a single well within the frame of a fund granted to a NGO (non-governmental organisation), to co-financing of large rural water supply systems or planning urban infrastructures for water supply and sanitation. First priority is given to activities securing a sustainable access to drinking water in sufficient quantity and quality, and/or to activities enabling a hygienic and environmentally acceptable disposal of liquid and solid waste.



Photo. J P Iseli © l'illustré



### **3. Objectives of the Swiss Development Cooperation in Water Supply and Sanitation**

The 1991 guiding principles of SDC define the W+S sector policy within a development policy context. This sector policy is based on the experience gained from SDC's own programmes and projects, as well as on information provided within the frame of the international dialogue by the sector.

The Swiss Development Cooperation focuses on water supply and sanitation in order to promote the self-reliance of developing countries and to improve the structural conditions in the struggle against poverty. W+S projects serve to fulfil basic human needs and can contribute to a rational use of water and to its protection as a natural resource. Measures taken in the field of W+S are important elements of public health. They reduce in particular the risk of transmission of water and waste-related diseases.

To contribute actively to the protection and conservation of natural freshwater resources in developing countries, and to the efficient use and preservation of non-renewable or only partially renewable natural resources in developing countries, SDC has set itself the following targets for the coming years:

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#### **3.1 Water Supply and Sanitation are Structural Improvements**

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#### **3.2 Objectives**

- to secure and to promote actively the access to qualitatively and quantitatively sufficient drinking water for all,
- to promote low-cost, environmentally sound installations for excreta and waste water disposal,
- to develop and implement municipal waste management schemes which protect the resources and the environment,
- to promote improved hygiene behaviour in the population concerned,
- to secure training and long-term support within the frame of W+S programmes.

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### 3.3 Strategy for a Balanced Development

Use of drinking water, disposal of liquid and solid waste, and hygiene behaviour of the population are all part of the sociocultural and natural context. The strategy of a balanced development takes into account these important contextual conditions. It shows adequate solutions for the development, implementation and operation of balanced and sustainable W+S systems. The context is described below before specific strategies for reaching the sector's targets are formulated.

#### **Culture**

***Water and hygiene are integral components of every culture***  
Since water is essential to life, traditional W+S systems are found everywhere in the world. Fully-established solutions are integrated into the social life and correspond to each community's ability to maintain and manage them. Modernisation of water supply and disposal installations may bring an improvement where the provision of water is time-consuming, the quantity insufficient or the quality unsafe. This often calls for a replacement of the existing infrastructure by a more efficient one, and may eliminate

some of the risks inherent in the installations; however, it may at the same time create new risks. This process may seriously jeopardise traditional practices and decision-making processes of established communities. It is thus essential that priority be given to a careful planning and parallel evaluation, as well as to the training and promotion of the problem-solving capacity of the beneficiaries<sup>5</sup>.

***Water and hygiene are integral components of nature***

Water is essential to life. Any shortage or waste of fresh-water presents a serious threat to a sustainable development and to the environment. Water management must be placed within the frame of an integral environmental protection and sustainable use of resources. Minimising ecological risks generally implies a better or even a new organisation of resource management (water supply and disposal/management of liquid and solid waste). The selection of the technical solution plays a decisive role. Elaboration of a technical solution must involve an analysis of the various ways in which adapted technologies may be applied. These must satisfy the identified needs in a technically, socially and culturally acceptable manner and be affordable for the user.

***Nature***

***Waste management as an ecological challenge***

Recent findings<sup>6</sup> in municipal waste management have shown that problems related to waste disposal arise primarily in cities and agglomerations with a high population density.<sup>7</sup> Significant environmental pollution loads are caused by refuse disposal areas and uncontrolled landfills, as well as by noxious infiltration of toxic and infectious waste in the natural cycles. These ecological risks require the elaboration of projects based on a sound knowledge of cause and effect in waste management.

***Ecology***

Technically adapted and environmentally compatible solutions must be developed to integrate synergically the institutional and human potentials available for problem solving.

**Empowerment**

***Sustainability depends on a strengthening of the target groups***

The required efficiency increase of the W+S sector is closely related to aspects dealing with the strengthening of the personal and institutional capacity of the target groups, the "Human Resources and Institutional Development" (HRID). In order to achieve a sustainable development, solutions must be sought to overcome in particular deficiencies in the training and institutional fields, and in the financing of construction and maintenance of water and sanitation projects. The significant role played by women in the W+S field must be acknowledged above all.

**Health and Environment**

***Health and environment are closely interrelated***

The concept of environmental health stresses the link between the influence of environmental pollution (e.g. contaminated water sources, industrial waste, atmospheric pollution, use of pesticides) and health. Through polluted water alone about two billion people are exposed to the risk of infectious diseases. In combining water supply and disposal measures with programmes on improving personal hygiene, a general health improvement is achieved. The Decade has already promoted the required linking of basic health programmes and W+S. This endeavour must, in future, take even greater account of factors that have an influence on the environment.

## 4. Strategies

Infrastructural measures in W+S, which aim at promoting a balanced development, take into account the various interest and beneficiary groups. They are further subjected to the influence of their natural, cultural and economic context. The time scale is quite comparable to infrastructure projects in Switzerland: ten to twenty years often elapse between planning, implementation and completion. Planning targets must therefore be defined on a long-term basis. Their implementation must be divided into phases and take into account the prevailing local capacities.



The following strategies are based on a holistic understanding of W+S programmes embedded in their socio-cultural and natural environment, and will contribute to meet or to achieve the W+S sector's objectives. The strategies cover five related fields, all of which interact towards sustainability of W+S systems.

- The social field covers aspects of motivation for W+S measures and the active participation of users in decision and implementation processes.
  
- The institutional field covers the aspect of division of tasks between Government, other institutions and the community.
  
- The economic field covers aspects of financing and resource management.
  
- The technological field covers aspects of technical W+S supply installations.
  
- The field of rules & regulations and knowledge & skills cover aspects of rights and responsibilities, as well as of training and transfer of know-how within W+S programmes.



***Ecological aspects of W+S systems are transsectoral***

W+S systems specifically modify the natural water cycle. The resulting secondary effects may hinder other uses of water which are sometimes distant from the water and sanitation system in question. Changes in the drainage conditions, residual water quantity and in the groundwater level, fluctuations in the volume, quality and loads; as well as damming and deposit of transported materials respectively, are possible effects of the necessary modifications in the water cycle. A sustainable water management requires viable institutions to safeguard and settle the rights and responsibilities of all users.

With regard to its transsectoral nature, the ecological aspects of W+S systems will be given due consideration in each of the five fields of the strategy.

***Motivation and participation of all parties involved are decisive***

W+S measures are sustainable only if all decision-making groups attribute to them a high rank of priority as regards the meeting of prevailing individual and collective needs. Decisions should not be made in advance and in isolation, but should be taken by all the project partners concerned. Specific attention must be paid to traditionally grown rules and rights concerning the use and management of water. In the field of drinking water provision and hygiene, women in particular hold a considerable responsibility. If they are not adequately consulted when decisions are made, their potentials and needs will be misjudged, what often leads to inadequate planning. National strategies and programmes must be based on the needs and potentials of the beneficiaries. Municipalities or — where these structures are missing — user groups should

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**4.1  
Strategies  
in the Social  
Field**



occupy a key position in the planning, construction and operation of an installation. For example, prior to implementing a project, the people concerned must be asked whether they accept the required conditions, and whether they are able to keep them up permanently. These include the forming of special committees, modification of the relations between the social forces (division of labour between men and women, traditional and modern authorities, nomadic tribes and sedentary populations, etc.), investments in the participation of training measures, personal input in construction and maintenance, linking of drinking water and latrine construction, behavioural changes in public and private hygiene.

These aspects of participation, involving different actors, are grouped under "Community-Based Management" and "Gender-Balanced Development" strategies.

***Genuine needs and local structures are fundamental***

The "Community-Based Management" strategy implies open behaviour on the part of all participants in the programme. It also requires the choice of adequate methods of negotiation to gear W+S projects to the genuine needs and possibilities of local structures. Alternatives must be offered since an improvement in the quality of life also involves material values and modifications in the balance of political power.

National sector policies, as well as regional and urban development plans, must include the promotion of self-administered W+S installations at the appropriate institutional level, and define the required structural conditions. One of the central tasks is to negotiate the distribution of authority between the various actors concerned. Responsibility should be taken as much as possible by the users,

and should be based on the traditional rules of water management.

***Women's participation is dependent on the elimination of obstacles***

Women have considerable technical, social (decision-making structures, education, etc.) and ecological know-how and experience, as well as their own forms of organisation which can contribute to improving W+S infrastructures. In the planning, implementation and evaluation of W+S programmes, women must be involved as partners with equal rights, and existing obstacles to their participation must be eliminated. The technical, institutional and didactic means applied must be adapted to their needs and capacities. "Gender-Balanced Development" (see Annex) means that project activities should

- have no negative effects on women and on prevailing gender relations,
- be at least as beneficial to women as to men,
- place priority on women as they are chiefly responsible for children and are the main victims of poverty.

## 4.2 Strategies in the Institu- tional Field



### ***Efficiency and transparency between all partners***

Sustainable development is based on an optimum allocation of tasks between public administration and individuals or communities. In this context, particular attention should be paid to collaboration between the institutions which will intervene at different points in the water cycle. An opening of government authorities towards non-governmental corporations, allowing them to collaborate as partners, will result in synergies and greater efficiency on both sides. NGOs<sup>9</sup> are competent mediators between the target population and government institutions. They have often developed mechanisms for project implementation which meet the needs of the populations concerned and lead to sustainable developments.

An improved interaction between Government and economy also contributes to increasing efficiency. The involvement of private companies will efficiently promote a resource-preserving waste management; e.g. the contracting of private companies from the informal sector to handle waste recycling.

### ***Strengthening of institutions within national sector policies***

Strengthening of the institutional capacities of the various actors may be achieved by different means; i.e., “targeted training activity”, “support in the creation or adapting of specific institutional structures”, or “simplification of internal administrative procedures, in particular as regards decentralisation activities”. In order to strengthen institutional capacities, clear contextual conditions based on national, participative processes involving large sectors of the population need to be elaborated by national sector policies. External support will be used as a subsidiary instrument.

Coordination and collaboration between government institutions, NGOs and the private sector must be strengthened. However, implementation of W+S projects extending over several administrative zones or over the whole country is dependent on the national administrative structure. To that end, public organisations must provide reliable services, their work must be problem-oriented and efficient and they must dispose of adequate executive instruments. The policies should support the new function of the Government, which no longer plays the role of "provider", but that of competent supervising organ and promoter of development measures.

The actual implementation of a project should be assigned, whenever possible, to the private sector or to NGOs. NGOs should be chosen as partners particularly where they have already contributed to the W+S sector or where they intend to do so. It is important not to discharge the Government from its responsibility of assuming the long-term tasks of maintenance and follow-up if the NGOs and their partners are unable to do so for lack of resources. However, agreements in which the Government delegates certain long-term tasks to NGOs can be worth supporting.

Programmes involving NGOs must aim at strengthening the technical and institutional capacity of the organisations concerned. This comprises financial support along with training and further education courses in project management, in organisation of construction and operation of W+S installations and in solving project-specific technical problems.

Programmes involving or promoting private companies require the establishment of clear administrative and technical procedures and criteria.

### 4.3 Strategies in the Economic Field



#### *The beneficiaries must derive tangible advantages from water projects*

In the long term, W+S installations will have an impact only if they provide economic and ecological advantages and relief, provided these are accepted as such by the beneficiaries. This active opinion-building process, and the participation of the partners in a project, both require time. The project will thus have to be adapted accordingly. Improved W+S infrastructures are sustainable only if the users derive real economic and health benefits over a long period of time.

Appropriate pricing and financing models play a key role as regards economic sustainability. On a medium term, adequate self-financing and cost recovery of operation are required. In addition to external credits or non-reimbursable funds, the partners must make greater use of local resources and invest the available financial means more efficiently. Otherwise, no significant improvement of the situation in the W+S sector will be achieved before the year 2000 for the over five billion people concerned.

#### *Cost recovery is dependent on a long-term realistic sharing of costs*

Due to limited funds, a financing model must be found for each project that can be applied to both the public and the private sector. In the long term, the W+S sector should strive for a realistic cost recovery, with water no longer considered a free good. Appropriate financing models, reflecting the local sociocultural and economic conditions, can lead to sustainable projects. They must be based on an adequate participation in the construction costs of the installation. In all cases beneficiaries should cover operation and maintenance costs.

***Resource management contributes to preserving limited resources***

As a matter of policy, water, as a resource, should be managed at the lowest possible institutional level. Every means of reducing the amount of liquid and solid waste should be considered. This contributes to the preservation of scarce resources that can only be partially renewed or recycled. Where quality and quantity of available water are critical, projects should also take into account its allocation and utilisation in irrigation, animal husbandry or industry.

***A reliable and sustainable W+S infrastructure depends on ....***

***.... appropriate technology***

Sustainable W+S technologies have a low impact on the environment, are technologically appropriate and can be duplicated. When choosing a technology, aspects such as available know-how, training (procurement, maintenance, repairs), and the social context in which the infrastructures are installed must be included. So-called “appropriate expert solutions” may sometimes hinder the development and strengthening of indigenous institutional capacities necessary for sustainable installations. In this context, the discussion on sustainability addresses the problem of risk shifting through the introduction of new systems. This shift occurs when an improved W+S infrastructure initially lowers the ecological and health risks, but creates new economic (maintenance costs), political (dependencies) and social risks (weakening of existing exploitation systems, of their rules and regulations as well as of their skills and knowledge). On a medium term, these risks will deteriorate the original reliability of W+S infrastructures.

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**4.4  
Strategies in  
the Techno-  
logical Field**



**.... promotion of local construction**

Household and community-level W+S installations will stand a better chance of being used in a sustainable manner if they are built and maintained with local material and know-how, which the users can afford and know how to apply. It is often more judicious to up-grade the operation and maintenance of existing systems or to repair inoperative installations rather than to build new ones. The local construction of installations or of single components (handpumps) should further be promoted.

Low-cost technologies and systems should be developed and used in poor urban neighbourhoods for waste management, waste recycling and environmentally compatible waste disposal. The potentials of the informal sector should be integrated in the planning. In order to lower costs, existing capital-intensive installations and equipment (collection and transport vehicles) should be used and maintained more efficiently.

**.... avoidance of new risks**

Learning processes, specific training and further education should be designed in such a way that the new risks, which are introduced by the new technologies, are evaluated and avoided. Risk-assessment comprises a learning process in four parts. First of all, the existing W+S systems and their risks are evaluated with the beneficiaries. Once the problem areas have been identified, various possible solutions are evaluated from the point of view of the risks involved. After defining the best possible (most reliable and most sustainable) solution, the project is implemented in collaboration with the partners, and the future attendants of the installation are given additional training. The learning process is consolidated during the follow-up period.



***Sustainability is dependent on ....***

***....the ability to solve (new) problems***

Sociocultural sustainability has a lot to do with tradition. Time and energy are invested in transmitting a culture to the next generation. Cultural transmission is always related to the social organisation of the group. Most project contexts comprise a division of labour that functions between genders, between professional groups, between the family and the community. Each segment has its own knowledge (experience) and rules (defining rights and obligations). It is of utmost importance for each project to identify the knowledge and influences of each group within the local community, and to synergically integrate their potential in the use of an improved W+S installation. The self-reliance of the W+S project relies after its completion on these groups. As every society undergoes changes, sociocultural sustainability can be fostered by promoting the beneficiaries' problem-solving capacity.

***.... the strengthening of available knowledge through new competence***

Educational components in planning, implementation and follow-up of W+S programmes contribute to reinforcing the problem-solving capacity of the community of beneficiaries. Their knowledge in the social (rights and obligations) and in the technical (operation and maintenance) fields form the foundations of a sustainable W+S installation. W+S improvements often require from the beneficiaries an awareness of new, complex factors; i.e., an understanding that water is available only in limited quantity and must thus be used judiciously along with hygienic and environmental measures. In this context, programmes encouraging a change in hygiene behaviour are particularly important.

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**4.5  
Strategies in  
the Field of  
Rules &  
Regulations;  
Skills &  
Knowledge**



*... the promotion of research and exchange of experience within international networks*

Many promising products and concepts have evolved from research and development carried out in countries of the South. The knowledge acquired in recent years and the exchange of information between developing countries, i.e., the South-South contact, must be promoted. To this effect, international networks should be expanded further. Research effort should be particularly intensified in the field of waste management. More generally, economic incentive systems for optimum use of scarce water resources and reduction of waste quantities should be developed.



Photo. EAWAG/IRCWD

## **5. Operational Project and Programme Implementation**

The following operational principles are important guideline specifications for the sector, formulated in the "Principles of SDC's Organisational Development"<sup>10</sup>.

### ***Collaboration at the international level***

The aims of SDC's active participation in international expert committees are

- to use the international exchanges of practical and scientific experience in order to improve its sector activities;
- to promote national coordination among donors and between donors and developing countries in order to ensure the best possible investment of their funds;
- to achieve synergies through selective collaboration with other bilateral donors. SDC also collaborates with multilateral professional institutions in order to make use of their knowledge and networks for its own work.

### ***Collaboration in Switzerland***

Specialists, personnel and administrative-operational resources available in Switzerland are used, whenever necessary, to help our partners acquire more competence. Qualified staff working for specialised institutions and

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## **5.1 Institutional Integration**

development organisations, for the private sector and universities, for SDC and for international organisations assist local governmental and non-governmental institutions with the implementation of projects and programmes financially supported by the Swiss Official Development Assistance. Moreover, SDC fosters and coordinates the dialogue with other federal departments, NGOs, universities, the private sector, and other interested partners in order to strengthen its own professional competence. Through on-going analysis, evaluation and dissemination of new information, the specialist group AGUASAN<sup>11</sup> contributes to a fast transfer of new knowledge.

***Research in the field of sector policy and evaluation of experience***

SDC supports or initiates user-oriented research projects if they consolidate its sector policy and if they are useful to its practical activity. Research carried out by other agencies is evaluated systematically. Based on the evaluation of the experience gained from its own W+S activities and from that of other agencies, the sector policy is examined periodically and adapted to the new information. Special methods of appraisal<sup>12</sup> are used in addition to the classical tools of evaluation.

***Readiness of the partners***

SDC's collaboration within the W+S sector is part of a process that is highly dependent on the political, institutional and technical potentials and limits of the partners concerned. This process cannot be accelerated from outside, but it can be supported. SDC is willing, however, to support programmes/initiatives which serve to elaborate national sector strategies.

***Large-scale cooperation projects***

Important collaborative modifications (new commitments, concentrations) are based on sector analyses demonstrating the demand, bottlenecks and potentials that have arisen in the area concerned. This type of sector analysis proceeds from an evaluation of existing reports/studies and may take the form of supplementary studies, action research or pilot projects. It must identify trends for medium-term modifications, take stock realistically and indicate comparative advantages. Along with the national sector plans, sector analyses form the base of medium-term and long-term targets of the sector's support. To translate the concrete measures to the local level, special attention should be paid already during elaboration of the concept to the above-mentioned elements of sector strategy.

***Securing project management***

Supply and demand (SDC's potential and requirements of the partner) must be coordinated; they cannot be organised selectively and on a short-term basis. The strategy of collaboration within the W+S sector must not only be defined in a national programme; it also requires measures from the coordination offices of SDC and from the head office which will enable them to contribute actively to the programmes, both on a conceptual and on an operational level.

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**5.2  
Principles of  
the Sector  
Policy within  
the Frame of  
Country  
Programmes**

***Periodic evaluation of the experience gained***

In addition to their continuous monitoring, SDC's W+S activities in a country are regularly evaluated as a whole. This allows the improvement of coherence and efficiency of the collaboration within the frame of national and local targets.

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**5.3  
The Specific  
Instruments  
in W&S**

***Selection of the Programmes/Projects<sup>13</sup>***

The "life cycle" of each phase of a project must be examined in terms of the "balanced development" strategy discussed above. The series "Handbook Water"<sup>14</sup> will provide an important technical tool to all those concerned with the selection, planning and implementation of activities.

SDC recommends that the support given to technical supply and disposal installations be supplemented by programmes in hygiene education. However, the sociocultural processes necessary for the approval of water supply systems, changes in personal hygiene and/or for the implementation of excreta and waste disposal systems, do not follow the same pattern. Water supply and solid waste disposal systems are generally "collective installations", whereas latrines are usually "individual or family systems". The manner in which the expected advantages are evaluated by individuals or by the community may differ considerably. This may delay or render decisions more difficult. The operational implementation of often requested simultaneous implementation of water supply systems and latrines should, therefore, be critically examined for each project. If necessary, the construction phases should be realised one at a time or separately. Coordination between W+S components and their promoters is indispensable.

***Financing***

The available funds will always be limited. In future, construction and operation of W+S installations will therefore not be possible without an adequate financial contribution from the partners, except in special cases (e.g. humanitarian aid after natural disasters). The extent to which investments are self-financed and the costs for operation and maintenance recovered are to be evaluated in terms of the contribution made by these payments to reaching the project targets. Today, studies on "willingness to pay" are increasingly used as an indicator of the beneficiaries' readiness to participate financially in a project. When evaluating W+S projects which provide, for instance, entire cities or regions with W+S infrastructures, these studies are used to define the standard of construction and the financing policy to be adopted. Willingness to pay is set off against the financial means available to the project and, for instance, the necessary cross subsidies are determined between user groups.

However, this method has its limits. For instance, it is quite difficult to request financial participation from users who already have access to alternatives such as traditional installations. In economies where the subsistence level of the population prevails, a theoretical willingness to participate financially should be distinguished from the user groups' ability to pay. Moreover, the availability of financial means is no guarantee for actual participation. It is wrong to assume that sustainability of an installation is defined merely by the extent of self-financing. The required technical, administrative and especially social components must be taken into account in any financial evaluation. There is a risk of being left with a financed, but soon inoperative installation, especially if community empowerment is missing and if too much stress is placed on financial aspects.

The financial evaluation of projects must take into account the following aspects:

- In urban areas, willingness to pay can be taken into consideration to determine the standard that may be reasonably applied to projects within a proposed solution. However, the extent of participation should be determined in a differentiated manner, considering economic and financial evaluation criteria.
- It is practically impossible to carry out projects in rural and periurban areas without subsidies. Projects in urban areas are possible only under favourable economic conditions. The required donor grant or Government subsidy must be determined according to the "available" income. This income should be compared with the per capita cost of the project.
- Each case should be evaluated individually and coordinated with the national sector policy if such a policy exists. The extent of financial participation varies; i.e., some groups may be able to self-finance the better part of the investment and operation costs, whereas the underprivileged may have to restrict themselves to a material participation (labour, building materials). The work invested by beneficiaries in the autonomous planning and monitoring of a project should be accounted for as a self-contribution.
- A scenario on the extent of the costs and duration of the concluded activity, i.e., from the construction to the operation phase, should be used as a basis for establishing external subsidies. The sums which are expected to be reimbursed will depend on



the partners' financial possibilities and should be evaluated realistically. Projects and programmes that are not likely to be managed in the long term by the groups concerned should normally not be supported.

Ideally, a project should be designed so that users choose (and pay according to choice), but also have the opportunity to change their choice, e.g. to upgrade service when they have more information or funds they are willing to invest.

***Training and retraining***

In addition to providing financial assistance, technical support, training and further education, and advisory services must be clearly defined and complement each other. Long-term technical support should be limited in time and mainly assume an advisory and training function. Advisory services should be designed primarily as a long-term supply and called upon when necessary.

Application of the strategy of integrated transfer of knowledge is a key activity in any project or programme. Training and/or further education components have a higher priority than technical implementation. The dynamics of the learning processes must be taken into account as they follow different patterns in different sociocultural contexts. Transfer of knowledge must build on available know-how. Appropriate and up-to-date methods must be applied, and though preference should generally be given to on-the-job training rather than formal teaching.

**Advisory services**

Advisory services should not provide magic formulas for problem solving, but should trigger learning processes and contribute to developing solutions that have already been partly formulated. This will require experienced advisers who are competent in W+S technology, in teaching and communication. Their activity must rest on reciprocal acceptance, understanding and trust.

Preference should be given to local advisers with the required qualifications over external advisers. Where external advisers are commissioned, they should collaborate with local advisers (eliminate language/cultural barriers, train and support local advisers, lower costs in the long run). Long-term advisory mandates secure personal continuity which, in turn, has a positive effect on the work.

Development of private W+S adviser teams in partner countries can often also be promoted by the activities and projects of SDC. The required sustainability is ensured if SDC programmes foresee and promote a long-term privatisation of advisory services. Provision of free advisory services within a project may hinder the development of such services in the private sector.

**Follow-up**

In the past, donor organisations have too often regarded projects as completed once the implementation phase and official hand-over of the project were concluded. Overlooked was the fact that during the planning and implementation phase, the technical problems may well have been solved, but the social and institutional requirements have remained unidentified and unsolved.

The follow-up phase consists mainly in fostering community-based management structures in collaboration with the beneficiaries and, if necessary, in readapting or consolidating them. During this phase, external contributions include the provision of adequate advisory services and, if necessary, further education at seminars and project visits in the form of an exchange of experience among all parties involved. For lack of long-term experience on effective forms of project management, new strategies must be developed through careful monitoring. It is important that learning processes (learning from mistakes) are not hindered by premature external intervention. In general, new approaches are used only if they provide real economic advantages.

The follow-up phase should also increasingly focus on the government organisations involved (if necessary also NGOs, should these be involved and have the required institutional capacity) to assume entire responsibility for the following tasks:

- adequate technical and institutional advisory services,
- periodic quality control of maintenance,
- follow-up on the regular contribution to the agreed contractual arrangements for the operation of the utility.

The follow-up phase may then be regarded as completed once the local project management is consolidated and the Government, possibly the NGOs, assume the required support. The organisational measures necessary for a long-term project management should be integrated in the project already at the planning stage.

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**5.4  
Planning,  
Implementa-  
tion and  
Evaluation of  
Programmes  
and Projects**

***Project/programme cycle***

SDC financed projects/programmes are subdivided into 2-4 year phases. So called "Credit Proposals" (within SDC) and contracts (with the partner) create the legal basis for commencement of the project activities. Project agreements define the targets agreed upon by the partners, the expected results, the activities and the means foreseen. Operational plans determine the implementation process. The results and effects obtained are regularly monitored and evaluated. It should be stressed here again that the partners play a central role in all decisions, and SDC has only a subsidiary function.

***Planning, Evaluation, Monitoring and Implementation (PEMI)***

PEMI stands for the four important phases in a project cycle. These phases must be clearly defined and linked together.

During the planning phase, the feasibility and sustainability of projects/programmes must be examined with respect to sector specific strategies. Specific tools may be used to this end<sup>15</sup>.

Monitoring uses a limited number of quantitative and qualitative indicators pertinent to measuring the implementation and effectiveness of programmes and projects. In W+S projects, the main objects of evaluation are effectiveness (objective reached), efficiency (input-output comparison), sustainability, and impact (global effects on target group or region). Verifiable indicators must be formulated for each of these four categories and applied during the evaluation. The investment in obtaining and evaluating the information should be balanced against the knowledge acquired by this process.

In order to steer the project and adapt its design, implementation requires regular planning, evaluation and monitoring at the project level. At a global level, the experience gained from all W+S projects is systematically evaluated. This experience is fed back into the formulation of the sector policy and also used in the elaboration of working tools and training material.

Annex 1 contains a list that may serve as a basis for planning, monitoring and evaluating the factors involved in a sustainable W+S installation. The evaluation criteria proposed for the general PEMI fields should be completed for each project in the W+S sector.

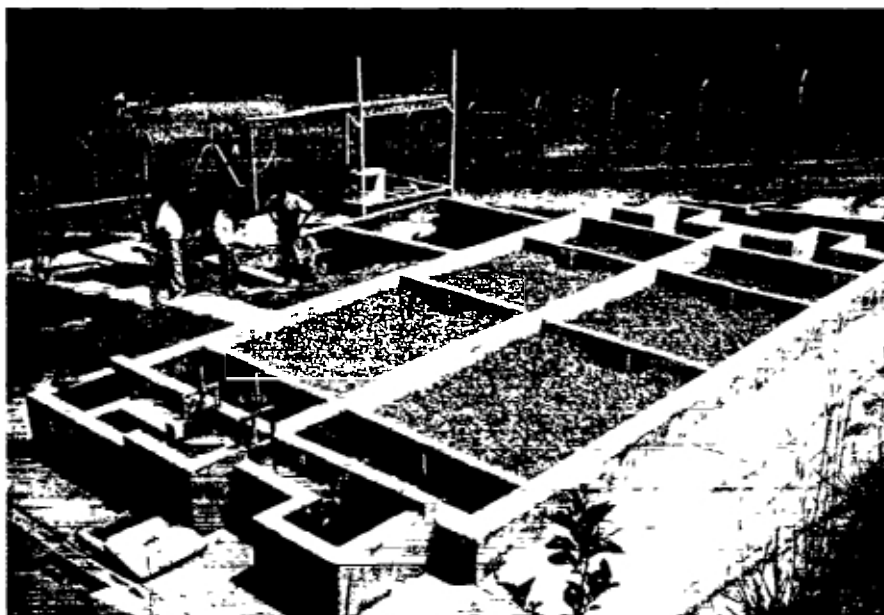


Photo: EAWAG/IRCWD



## **ANNEX 1**

### **Defining Project-Specific Indicators with Regard to the Planning, Evaluation, Monitoring, and Implementation (PEMI) of W+S Installations**

The following list serves as a basis for defining project-specific indicators that will be used in the evaluation and the monitoring of programmes.

- Sustainable motivation with respect to W+S installations is reached if clean drinking water is given high priority compared to other needs.
- Participation is achieved once the organisational forms (including financing) required for operation and maintenance are effective.
- The motives for participating in sanitation projects vary from case to case and should be identified in each case. They are usually related to the private sphere or to convenience, and less often to hygienic aspects.
- Motivation and participation are dependent on the historical experience made by the different social and ethnic groups in collaborating with administrative bodies.
- W+S projects will meet their objectives if all the social groups are given from the start the same chance of participating in the decisions regarding location, use and cost of the installations.
- Drinking water supply projects should not lead to a deterioration of the situation for anybody.

### ***Social Field***

- W+S installations are more sustainable if women are involved from the start in their planning, implementation and maintenance, and if they are treated as equal partners (“components for women” should not be added at a later date).

***Institutional  
Field***

- The institutional structure is sustainable if it is integrated into the existing institutional environment, allotted a clearly defined task, and accepted by both Government and population.
- The institutional structure is sustainable if it is attributed a locally-financed budget that is used adequately.
- The question whether women should form their own W+S committees or work in mixed teams with men is dependent on the specific local cultural context of the project.
- Organisational structures function more efficiently where a favourable relationship between project input and management is encouraged.
- The organisation is considered efficient when it takes on clearly defined tasks and avoids creating structures that run parallel to other structures.



***Economic  
Field***

- Sustainable operation is ensured if financing questions pertaining to management, operation and maintenance of the installations are settled and secured within the communities concerned.
- W+S installations are considered economically sustainable only if the costs are proportional to the income and to the beneficiaries' daily labour input requirements (willingness, ability to pay). On principle, the beneficiaries must contribute to the construction, operation and maintenance according to their financial and material possibilities.
- W+S programmes must benefit both genders equally (gender-balanced development). When defining self-financing of W+S installations, the family budget does not serve as sole reference, but male/female income must be calculated separately .
- The informal sector's potential in waste management can be promoted once its existence is acknowledged and its working conditions gradually improved.
- Efficient waste management systems can be promoted through participation of the private sector.

**Technological  
Field**

- Sustainable operation requires W+S installations to be simple and cheap in operation and maintenance (appropriate technology).
- At the community and family level, W+S installations are more sustainable if they are built and maintained with locally available material/means.
- User groups should be informed about the risks (social, political, ecological risks, construction and maintenance ability, purchase of spares, etc.) involved in existing or new technologies.
- W+S installations are technologically more sustainable once the aspects of know-how and transfer of knowledge (purchase, maintenance, repairs), as well as the social context in which the infrastructures are used, are adequately clarified.

**Field of Rules  
& Regulations  
and Knowledge & Skills**

- W+S installations are more sustainable if their implementation relies on a sound assessment of the rules and regulations as well as of knowledge and skills and influence of each group in the local community, and if their potential is integrated into the use of an improved W+S installation.
- A project is more sustainable if there is clarity and consensus amongst the partners involved regarding their respective contributions to which they commit themselves. These contributions should be stipulated in a contract.

- The educational components integrated in the planning, implementation and follow-up of W+S programmes contribute to reinforcing the problem-solving capacity of the beneficiaries. Their knowledge in the social (rights and obligations) and in the technical (maintenance) field form the foundations of a sustainable W+S installation.
- Improvements of W+S require often an awareness of new interrelations from the side of the beneficiaries; e.g., that water resources are limited and that their use can only be sustained through hygienic and ecological measures.
- W+S installations are more sustainable if training, further education and advisory services are complementary to construction activities. On principle, advisory services should be offered on a long-term basis, and called upon if necessary. In general, preference should be given to on-the-job training over formal teaching.
- The project is sustainable after its hand-over if a contract has been negotiated, stipulating hand-over date and arrangements, as well as the follow-up activities (maintenance project). The installations should then be the property of the users.
- W+S installations are more sustainable after hand-over if learning processes and transfer of knowledge are institutionalised and promoted during the follow-up phase.

- Female experts with the required professional experience and personal qualifications must be consulted with respect to training and retraining, but also to planning, monitoring and evaluation. In many traditional contexts, women have greater access than men to both the male and female domains.



Photo. HELVETAS

## **ANNEX 2**

### **Selected Bibliography**

**This bibliography is not exhaustive. It enumerates basic publications pertaining to the W+S sector.**

- 1 COMMUNITY PARTICIPATION AND HYGIENE EDUCATION IN WATER SUPPLY AND SANITATION (CPHE)**  
(exists in French and Spanish)  
GTZ, 1989

The series on community participation and hygiene education comprises five papers:

1. Sustainability and effective use
2. Practical guidelines for integrating CPHE into water and sanitation projects
3. Tools for integrating CPHE into water and sanitation projects
4. Indicators for success
5. Strategy development for CPHE

The material contained in this publication provides excellent and comprehensive reading on all the issues that really matter when trying to enhance the sustainability through community management. It can easily be used as subject matter for workshops at all levels of a (sub-)national water supply and sanitation programme.

- 2 GUIDELINES FOR DRINKING WATER QUALITY:  
VOL. 1: RECOMMENDATIONS (2nd ed.)**  
WHO, 1993, 180 p.

**DIRECTIVES DE QUALITÉ POUR L'EAU DE BOISSON:  
VOL. 1: RECOMMANDATIONS**  
WHO, 1984/85, 131 p.

Provides a basis for the development of standards; may also be of assistance in developing alternative control procedures where the implementation of drinking-water standards is not feasible.

- 3 GUIDELINES FOR DRINKING WATER QUALITY:  
VOL. 2 HEALTH CRITERIA AND OTHER SUPPORTING INFORMATION**  
**DIRECTIVES DE QUALITÉ POUR L'EAU DE BOISSON:  
VOL. 2 CRITÈRES D'HYGIÈNE ET DOCUMENTATION A L'APPUI**  
WHO, 1984/85, 335 p.

Contains a review of the toxicological, epidemiological and clinical evidence that was available and used in deriving the recommended guideline values that are given in Vol. 1.

- 4 GUIDELINES FOR DRINKING WATER QUALITY:  
VOL. 3: DRINKING WATER QUALITY CONTROL IN SMALL  
COMMUNITY SUPPLIES  
DIRECTIVES DE QUALITÉ POUR L'EAU DE BOISSON:  
VOL.3: CONTROLE DE LA QUALITÉ DE L'EAU DE BOIS-  
SON DESTINÉE A L'APPROVISIONNEMENT DES PETITES  
COLLECTIVITÉS  
WHO, 1985, 121 p.

Deals specifically with drinking water supplies for small communi-  
ties, particularly in rural areas, with the main emphasis on microbio-  
logical quality. It contains information on surveillance of water sup-  
ply systems and the remedial and preventive measures necessary for  
maintenance of water quality, and gives step-by-step instructions on  
methods for collection of water samples, bacteriological analysis,  
and determination of residual chlorine.

- 5 INVENTORY OF SELECTED TRAINING MATERIALS IN  
WATER SUPPLY AND SANITATION  
IRC, 1991, 158 p.

This annotated and comprehensive list of materials will provide  
guidance to those who are developing their own training material as  
well as to those who are in need of off-the-shelf modular courses.

- 6 LESSONS LEARNED FROM THE WASH-PROJECT: TEN  
YEARS OF WATER AND SANITATION EXPERIENCE IN DE-  
VELOPING COUNTRIES  
LEÇONS RETENUES DU PROGRAMME WASH - UNE DÉ-  
CENNIE DE PROGRAMMES D'APPROVISIONNEMENT EN  
EAU ET D'ASSAINISSEMENT DANS LES PAYS EN VOIE  
DE DÉVELOPPEMENT  
J. Turner, C. Hafner, D. Campbell, F. Mattson, P. Roark, F.  
Rosensweig, J. Walker, M. Yacoob  
WASH, 1990, 100 p.

This special report, published to coincide with the conclusion of the  
International Drinking Water Supply and Sanitation Decade, con-  
sists of lessons and basic principles on the following key topics:  
providing technical assistance, linking water and sanitation with  
related programmes such as health and housing, ensuring sustain-  
ability, and the roles and responsibilities of all organisations in-  
volved in water and sanitation projects. The lessons and principles  
grow out of the broad democratic premise that whatever the level of  
decision-making, ordinary people can be trusted to solve their own  
problems if they are given the chance, and no policy or programme is  
likely to succeed unless they are.

**7 A HANDBOOK OF GRAVITY-FLOW WATER SYSTEMS FOR SMALL COMMUNITIES**

T. Jordan Jr.

Intermediate Technology Publications, 1984, 223 p.

This comprehensive handbook brings together the technologies, work procedures and experience developed in Nepal in the construction of gravity-flow water supply systems. It covers: surveying; water sources; water quality assessment; design criteria and design period; basic hydraulics; distribution systems. Examples of water intake structures, pipelines, break-pressure tanks; air release valves; storage tanks; public standpost designs; valve boxes. Various appendices. Very useful handbook for training and reference purposes.

**8 HYGIENE EDUCATION IN WATER SUPPLY AND SANITATION PROGRAMMES: LITERATURE REVIEW WITH SELECTED AND ANNOTATED BIBLIOGRAPHY**

L. Burgers, M. Boot, C. v. Wijk-Sijbesma

IRC, Technical Paper Series No. 27, 1988, 144 p.

This extensive literature study provides an overview of current knowledge and experience in hygiene education in community water supply and sanitation projects. It covers the importance and purpose of hygiene education, organisation and cost of programme, manpower and training required, use of audio-visual tools and hygiene education.

**9 PARTNERS FOR PROGRESS - AN APPROACH TO SUSTAINABLE PIPED WATER SUPPLIES**

IRC, Technical Paper Series No. 28, 1991, 140 p.

This book provides concepts and guidance on the "partnership approach" in which responsibility for projects is shared between agency and user communities. The comprehensive text emphasises subjects such as community participation and women involvement and an integrated approach of piped water supplies, hygiene education and sanitation - by phase - in the project cycle, rather than dealing with these subjects separately.

**10 JUST STIR GENTLY - THE WAY TO MIX HYGIENE EDUCATION WITH WATER SUPPLY AND SANITATION**

M. Boot

IRC, Technical Paper Series No. 29, 1991, 172 p.

This book provides options and methods for integrating hygiene education in water supply and sanitation projects. The aspects covered include the process of behavioural change, hygiene education planning, implementation, monitoring, and evaluation, hygiene education approaches and methods, programme organisation, manpower, and costs. The book is intended primarily for those responsible for the development and implementation of hygiene education components.

**11 COMMUNITY WATER SUPPLY: THE HANDPUMP OPTION  
APPROVISIONNEMENT EN EAU DES COLLECTIVITÉS:  
L'OPTION "POMPES MANUELLES"**

Saul Arlosoroff, Gerhard Tschannerl, David Grey, William Journey, Andrew Karp, Otto Langenegger, Robert Roche  
The World Bank, Washington DC, 1987, 202 p.

The report summarises the findings of a project on the testing, and technical and managerial development of handpump-based systems. This reference-book provides guidelines for the selection of water supply systems and planning of handpump projects, emphasis being on community-based maintenance. Analysis and thorough discussion of critical elements: aquifer, well, handpump technology, maintenance systems, etc. Pump selection guide for 42 out of 70 models evaluated.

**12 TOOLS FOR COMMUNITY PARTICIPATION: A MANUAL  
FOR TRAINING TRAINERS IN PARTICIPATORY TECHNIQUES**

Lyra Srinivasan, Prowess/UNDP Technical Series

Involving Women in Water and Sanitation, 1990, 180 p.

This book is a tool for training trainers in participatory techniques. The manual focuses on PROWESS' field experience of adapting and building according to the SARAR methodology in the Water Supply and Sanitation Sector. Community participation in development, planning a participatory training programme, organising the workshop, designing the participatory workshop, simple daily evaluation techniques and activities, and follow-up planning are all subjects dealt with in Part I. The second part looks at 39 participatory training activities.



### 13 AGUASAN-BERICHTE ZU DEN SEMINAREN

Unterhalt von Trinkwasserversorgung  
Stephan Niederer  
SKAT, 1988, 39 S.

Monitoring und Evaluation in Trinkwasser- und Sanitationsprojekten  
Urs Geiser  
SKAT, 1989, 120 S.

Zur Nachhaltigkeit von Trinkwasser- und Sanitationsprojekten  
Urs Geiser  
SKAT, 1990, 110 S.

Kommunikation in der Entwicklungszusammenarbeit  
Werner Fuchs  
SKAT, 1991, 125 S.

Water and Sanitation Knowledge System  
Werner Fuchs  
SKAT, 1992, 99 S.

Wasser ist kein freies Gut (mehr) - Wer bezahlt?  
Werner Fuchs  
SKAT, 1993, 110 S.

Monitoring and Evaluation of Water and Sanitation Projects. Concepts and Tools, Workshop Experience, Aguasan Regional Workshop Lesotho, 1993  
D. Hall, K. Wehrle, J. Christen,  
SKAT 1993, 125 p.

### 14 QUERSCHNITTANALYSE WASSER

QSA WASSER 89 - SYNTHESE (Zusammenfassung)  
WATER AND SANITATION 89 - A SYNTHESIS (Summary)  
Andrea Pozzi, Jean-Pierre Wolf  
DEH, 1989, 70 S. (Zusammenfassung 17 S.)

Die Querschnittanalyse "QSA Wasser 89" befasst sich mit 5 Projekten der DEH im Bereich Trinkwasserversorgungen und Sanitärmaßnahmen. Die QSA ist eine Analyse der Arbeiten, die von den Evaluatoren zu den einzelnen Projekten gemacht worden sind. Auf einer höheren Ebene verdichtet sie die in den Projekten gewonnenen Erfahrungen und eröffnet Perspektiven, diese Erfahrungswerte in alle Stadien von Trinkwasser- und Sanitationsprojekten miteinzubeziehen.

**15 SERIES OF MANUALS ON: HEALTH / DRINKING WATER /  
SANITATION**

Several authors

About 10 volumes are in preparation and will be published by the Swiss Centre for Development Cooperation in Technology and Management. This whole series will be in line with the SDC Sector Policy.

One part of the series will give the technical background on water supply from catchment to the tap and contain volumes on **SPRING CATCHMENT, RIVER CATCHMENTS, WELLS, WATER STORAGE / WATER DISTRIBUTION and BUILDING CONSTRUCTION and ENGINEERING**. This part will be extended by the volumes **WATER TREATMENT and WATER LIFTING**.

A second part deals with **HEALTH AND SANITATION** (probably several volumes) and will include those parts of this vast subject that are not yet covered by the established reference literature. The volume **PROJECT PREPARATION / POST PROJECT ACTIVITIES** is more interested in the concepts used for a whole project in this sector. It is related to all other volumes in the series.

**16 ENVIRONMENTAL MANAGEMENT OF URBAN SOLID  
WASTES IN DEVELOPING COUNTRIES - A PROJECT  
GUIDE**

S. J. Cointreau

World Bank, Urban Development Technical Paper No. 5, 1982,  
214 p.

This project guide provides information and procedures for planning and implementation of municipal solid waste management improvements. All major components are complemented with data and rates based on the experience of World Bank supported projects. The annexes include useful data collection guides for planning technical and managerial improvements, and worksheets for calculating sectorial budgets to maintain, upgrade and expand services.

**17 MANAGEMENT OF SOLID WASTES IN DEVELOPING COUNTRIES**

F. Flintoff

WHO/SEARO, Regional publications South-East Asia Series No. 1, 1984, 231 p.

This manual is one of the first documents focusing on problems and solutions of municipal solid waste management in developing countries choosing new suitable options. All major components, starting from waste generation, storage, collection, street cleansing, landfill, and composting, are discussed.

This document has become a most widely utilised standard book. Though almost twenty years old and therefore outdated regarding many data, the book has kept its relevance for conceptual and strategic issues and principles.

**18 SOCIAL ASPECTS OF SOLID WASTE RECOVERY IN ASIAN CITIES**

Ch. Furedy, A.Z. Bubel

ENSIC/AIT, Environmental Sanitation Reviews No. 30, 1990, 66 p.

This report deals with the important social aspects of the urban poor and their relation to urban waste. The social status of waste workers is discussed and the role of informal sector practices in solid waste management is analysed. Attempts to solve problems of informal waste recovery are based on examples from Asia. In the second part, the relation of waste picking (scavenging) and solid waste management is presented for a case study of the "Smoky mountain" in Manila.

**19 IMPROVEMENT OF SOLID WASTE MANAGEMENT IN DEVELOPING COUNTRIES**

K. Sakurai

Institute for International Cooperation/Japan International Cooperation Agency, Technical Handbook Series Vol. 1, 1990, 272 p.

This report focuses on crucial issues of solid waste management problems in developing countries, such as national level planning, requirements for municipal master plans, collection improvement and collection expansion in urban fringe areas, and hazardous solid waste management.

20 SOLID WASTE MANAGEMENT IN LOW-INCOME HOUSING PROJECTS: THE SCOPE FOR COMMUNITY PARTICIPATION

UNCHS-Habitat, 1989, 46 p.

This booklet is produced for the promotion of community-based solid waste management in unserved low-income settlements. Simple methods of waste collection and storage, of waste disposal, recovery and recycling of major materials are presented. Thought as an instructor's manual, this booklet also provides a concise overview of community-based approaches for planners and decision-makers.

21 MUNICIPAL SOLID WASTE MANAGEMENT IN DEVELOPING COUNTRIES: PROBLEMS AND ISSUES; NEED FOR FUTURE RESEARCH / SYNERGETIC EFFECTS OF COLLECTION, RECYCLING AND DISPOSAL OF MUNICIPAL SOLID WASTE

R. Schertenleib, W. Meyer  
IRCWD News No. 26, 1992

This newsletter contains two substantial articles on a problem analysis regarding the current situation of municipal solid waste management. The first article identifies major problem areas and important issues, and proposes approaches on how to solve the most urgent problems. The second article analyses the interrelations and effects between collection, recycling and disposal as components of the complex municipal solid waste management system. The conclusions point out important issues as regards the design of improvements in urban solid waste management schemes.

22 INVENTORY OF SELECTED TRAINING MATERIALS IN WATER SUPPLY AND SANITATION

IRC, 1991, 158 p.

This annotated and comprehensive list of materials will provide guidance to those who are developing their own training material as well as to those who are in need of off-the-shelf modular courses.

## Endnotes

- 1 SDC has formulated a number of general working tools that may be used for this purpose. As regards the Water Supply Sector, a series of publications is in preparation. Annex 2 contains a bibliography.
- 2 New Delhi Statement, India, September 1990.
- 3 Chapters 18 and 21 of Agenda 21, UNCED, Rio de Janeiro, June 1992.
- 4 International Conference on Water and Environment, Dublin, February 1992.
- 5 The sector policy recognises women as equal partners in the implementation of W+S measures. Measures are taken to eliminate existing obstacles to a genuine partnership, both at the level of policy and programme decisions and at the institutional level. Thus, in what follows, any reference to participants in a project means both, men and women.
- 6 See Annex 2, Bibliography, "Management of Solid Wastes in Developing Countries".
- 7 SDC's sector policy "Urbanisation" discusses these aspects in more detail.
- 8 *Conduire un développement équilibré hommes-femmes*, SDC, 1993.
- 9 Non-Governmental Organisations
- 10 "Grundsätze der Organisationsentwicklung der DEH"
- 11 Since 1983, AGUASAN has been the interdisciplinary coordination group of the technical services attached to the W+S sector. Its members are collaborators in the following institutions: IRCWD/EAWAG, Helvetas, Swiss Federal Institute of Technology in Zurich and Lausanne, Zurich University, Swiss Centre for Development Cooperation in Technology and Management (SKAT), WHO, and SDC.
- 12 During the annual AGUASAN Workshop, project collaborators exchange experience on topical problems in the fields of water supply and sanitation.
  - In the field of water supply, a cross-analysis of typical, mainly rural water supply projects was carried out (see Annex 2, Bibliography).
  - In the sanitation sector, a state-of-the-art analysis of waste management in urban and periurban settlements was conducted (see Annex 2, Bibliography).

13 See Annex 1.

14 The Handbook is in preparation and will be published by mid-1994.

15 See Annex 2, Bibliography.



# MANAGING GENDER-BALANCED DEVELOPMENT

**FOR THE 90s** In the context of the 1990s, the issue of women in development has reached a turning point. By reconsidering our concepts, we should be able to overcome the obstacles and contradictions which spelled out in the past failure for women in development. This is why we are proposing a new framework of ideas geared towards a positive view of women and their roles in society, as men's partners in gender balanced development.

*Women's participation in development is a SDC policy goal. It shall be implemented with a gender-balanced development approach.*

Gender-balanced development corresponds to :

- a necessity for social equity and economic efficiency,
- a requirement for democratic participation and sustainable development;
- a concept focused on the socio-cultural roles of women and men as developed by each culture, and on the relationships of power and complementarity between men and women,
- the prospect of an "active society" featuring choice, diversity, solidarity and participation in guiding change, in which men and women are in charge of their own development.

- THREE GUIDING PRINCIPLES**
- *Ensure that programmes/projects do not have a negative impact on women and children in developing countries.*
  - *Ensure that programmes/projects benefit women at least as much as men.*
  - *Ensure that, wherever possible, programmes/projects provide more support and resources to women who are responsible for the family and children.*

**APPROACHES FOR OUR PARTNERS** In order to support gender-balanced development, SDC must first acknowledge the needs and legitimate aspirations of the peoples of the South as genuine development partners.

**1. Social equity.** Improving the quality of life of women and men by promoting their own life choices through access to education and health, work and housing, solidarity and freedom, as the basis for social equity.

**2. Empowerment.** Reinforcing the power of women and men in their decision-making processes to enable them to define their own development models and defend their human rights.

**3. Practical and strategic needs.** Satisfying the needs of women and men on two levels:  
"Practical needs" such as access to water or to technologies for improving conditions for women and men in the short term  
"Strategic needs" such as revised laws and constitutional amendments for improving the status for women and men in the long term.

**4. Control.** Facilitating women's and men's access to development resources and benefits as well as to their control, with a prospect of multidimensional development aimed at a better distribution of wealth, not only in material but also in social and cultural terms

**5. Knowledge and skills.** Recognizing local knowledge and skills and relying on their development potential, while avoiding any action which could cause their disappearance or downgrading.

**6. Change.** Supporting the processes of change and social innovation emerging in the developing countries in order to combat inequality and discrimination, and promoting the active participation of women and men as agents of change



**SDC LINES OF ACTION** SDC proposes lines of action for headquarters, field staff and implementing agencies as progressive steps towards implementing gender-balanced development.

**Headquarters**

- Institutionalize a cross-sectoral gender-balanced development approach affecting all areas of development cooperation
- Promote a support/advice unit that acts as a catalyst
- Raise the awareness of SDC staff about gender-balanced development through training courses and ad hoc documentation to promote a better understanding of our own attitudes and those of our partners.
- Cooperate with the operational sections and services as well as with the multilateral section in order to incorporate the gender-balanced approach into country programmes, sectoral policies and programmes, programmes/projects and action plans.
- Present gender-balanced development strategies in annual reports and programmes in an explicit manner
- Exchange information with Swiss NGOs to reinforce joint efforts in this field.
- Take into account the socio-cultural dimension of development to gain a better perception of gender issues in promoting balanced development.
- Support the Federal policy of equal opportunity in seeking positive actions to promote women's access to the various levels of responsibility and decision-making with a view to a more active gender complementarity.

**In the field**

- Promote in Coordination Offices the recruitment of a (preferably local) female staff member responsible for cross-sectoral gender-balanced development issues, and facilitate setting up of local support networks
- Mandate local consultants, wherever possible, to analyze the roles of men and women in their socio-political context and the factors obstructing and stimulating development for a deeper and more accurate understanding of reality in the field.
- Provide for the participation of female and male consultants dealing with aspects of gender-balanced development in identification, planning, monitoring and evaluation missions, and define their terms of reference bearing in mind specific gender criteria .
- Provide training for women in local communities in order to reinforce their planning, management, organizational and advisory skills and their work on management committees.
- Seek innovative methods of promoting grass-roots participation of women at all levels of responsibility and decision-making, without cutting into the feeling of solidarity between men and women in the family and community context
- Participate in the provision of premises and resources for reinforcing institutional capacity to be aware of women's role in development
- Recognize women's fundamental roles in society where they are active in the labour market activities as well as in the family and in the community, and acknowledge the economic and social value of non-commercial activities.

- Implementing agencies**
- Define in the mandates and in the terms of reference of the field staff how implementing agencies should include strategies and actions plans for gender-balanced development.
  - Ensure that the programmes/projects mandated for implementation include the gender-balanced development concept
  - Promote the participation of implementing agency staff in the training courses on SDC's cross-sectoral gender approach
  - Brief the implementing agencies about SDC measures concerning, and experience with, gender-balanced development in the countries of the South in programmes, projects, workshops and seminars

**WHAT  
CAN WE DO  
TO PROMOTE  
GENDER-BALANCED  
DEVELOPMENT?**

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**FOR THE FUTURE** New dimensions of development — equity, democracy, participation, self-management and sustainability — are essential for the Nineties. These cannot be achieved without women, as active and responsible partners in their life choices alongside men. Ensuring that both the men and women of the South are "winners" in the process of sustainable development is the new challenge of the Nineties.



