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SWEDISH SUPPORT
TO
WATER SUPPLY AND
ENVIRONMENTAL SANITATION

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SWEDEN'S SUPPORT TO THE WATER SECTOR**Policies and objectives**

The objective of SIDA's assistance to the water sector is to improve the capacity of the recipient countries to solve problems relating to inadequate water supplies - in terms of both quality and quantity - and associated problems of health/hygiene and sanitation.

The long term goal is to improve the standard of health and to provide greater prospects for the achievement of social development and economic growth. Another important goal is to reduce the physical burden of fetching water, particularly for women and children.

SIDA's strategy for domestic water supply, health education and environmental hygiene (1984) provides guide-lines for the development of the sector. The objectives as outlined in the strategy document are valid for all programmes. The design of the water projects in different countries varies, however, according to the particular cultural, social and economic conditions prevailing in each country.

SIDA's definition of "water sector" is broad and includes:

- water supply in rural and peri-urban areas
- environmental sanitation and waste management
- human resources development including health/hygiene education
- water resources management.

Water development - a process of social change

The supply of water in rural areas has proven to be much more complex than expected. The belief that water supply and sanitation development is a matter of technology transfer and technical assistance has been replaced by the understanding that such improvements are based on a process of social change, in which attitudes, knowledge and practice will gradually change.

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The emphasis of the SIDA supported programmes has changed during the last decade. The previous concentration on construction of new water schemes is being replaced by an approach in which improvements of existing facilities are stressed and where the key role of the community is recognized.

An integrated approach

The provision of clean water alone does not result in improved health conditions. As this fact has grown increasingly clear it has become obvious that complementary activities such as hygiene education and improved environmental sanitation are just as important as water supply for the elimination of water related diseases.

Improved water supply programmes now include - in addition to improved water supply (within reasonable walking distance, in sufficient quantities and of acceptable quality) - improved hygiene (latrines, proper waste disposal), education and training in hygiene, sanitation and, where possible, the utilisation of water for productive activities.

Development based on local resources

To ensure sustainable results emphasis is being placed on the utilization of available local resources - human and physical. The HESAWA programme in Tanzania gives priority to basic improvements of traditional sources if these are conveniently located and considered suitable for human consumption. Efforts are being made to upgrade and utilize existing skills such as carpentry and masonry at community level.

Involvement of the local community

One precondition for the successful implementation of the integrated approach and the achievement of the goals of the programme is the active participation of consumers in planning, construction, operation and maintenance. This is especially essential for the proper care and reliable functioning of the improved water supplies. In order to make possible the full participation of men and women in the villages, it is essential that the programme is developed according to felt needs and that the technology is adapted to the social, economic and physical environment.

The mobilization of the community is essential if the programme is to act as a catalyst for further development within the communities. By organizing village contact drives, involving several thousands of community mobilizers, every village and almost every individual in the programme area of Rajasthan, India, was reached with information on hygiene, sanitation etc. In this manner the interest and involvement by the community was raised considerably.

Kwale and Tharaka Water and Sanitation Projects in Kenya are other examples of integrated programmes where community participation in combination with the use of simple technology is a basic concept. Most other SIDA supported programmes have a similar approach.

Active involvement of women

Traditionally women play a key role in water collection and usage at household level. This has implications for the general levels of health/hygiene and environmental sanitation. Special efforts to involve women fully in all aspects of the programmes will be a major future development.

In India and Kenya special efforts have been made to train women in the repair and maintenance of hand pumps. In Zimbabwe women play a prominent role in the construction of latrines and wells. In Ethiopia additional assistance is given to the training of female engineers. In Tanzania efforts are being made to spread awareness of methods to involve women more actively in planning and decision making.

Human resources development

The transfer of knowledge and the development of relevant skills and proficiency are emphasized in all programmes. In the HESAWA programme in Tanzania the human resources development activities include training of village health workers, local craftsmen etc. Management training for staff at village and district level is another basic activity. Workshops and seminars are designed to make the community aware of how they can be involved and benefit from the programme. A large number of study groups have been established in the villages to deal with the improvement of traditional water sources, latrine construction, nutrition and health care.

In India, through the "animator scheme", selected women are given training in hygiene/health as well as in communication techniques and given the task to spread their acquired knowledge among the households in their own as well as in surrounding villages.

Water and the environment

Deficiencies in the environment in the form of inadequate water supply and sanitation are the cause of 80 per cent of all the world's sickness and between 10 and 25 million deaths each year (according to WHO estimates). Improvements of the environment in homes and around homesteads will thus have a significant impact on health and well-being. These basic aspects of the human environment are to a large extent being neglected in the present discussions on ecology and environment.

The quantities of water used for domestic purposes are fairly small in rural communities and the effect on the ground water table in most cases marginal. In the programme areas of Botswana and Ethiopia water is, however, a scarce resource. In Botswana studies are in progress to ensure efficient and sustainable use of water. More attention will in the future be given to the broader environmental issues of the water resources.

The urban crisis

The main focus of SIDA's Water Supply Programme is on rural areas. However, the rapid expansion of towns and cities and the resulting problems of inadequate water supply, health/hygiene and sanitation will call for more in the water and sanitation fields in urban and peri-urban areas in the future.

In Honduras and Guatemala SIDA support is given to improved water supply and environmental sanitation in marginal urban areas. Towns and major villages in Botswana benefit from the general sector support provided from Sweden. Most district towns in the HESAWA programme area have received assistance in the form of rehabilitation and extension work.

Alternative technologies in water development

In all programmes priority is given to methods and techniques which can be afforded by households and can be operated and maintained on village level with a minimum support from outside. Preference is given to technologies such as improvements of traditional wells, spring capping, hand dug wells (with or without hand pumps), hand-drilled wells and small gravity water supplies.

Where the physical conditions do not allow such low-cost alternatives other options are sought. In Botswana and Tanzania trials are being made using photo-voltaic pumping systems. In Kenya and Tanzania rainwater harvesting is being introduced. Hand pumps suitable for maintenance on village level have been developed in India and Kenya. Methods to improve household wells have been introduced with success in Zimbabwe. In Uganda appropriate techniques to protect springs have been developed.

Environmental sanitation

Gradually more attention is being focused on environmental hygiene in rural and peri-urban areas, a previously neglected field. Technologies which can be afforded by the poorest households have not yet been systematically developed and tested, and insufficient attention has been paid to socio-cultural factors. A notable exception is the development in Zimbabwe in which an appropriate latrine model has been designed and widely adopted. A promising development is on the way in the HESAWA programme in Tanzania where a very basic model is sold to the households without subsidy.

A study has been made of the experience gained hitherto of environmental hygiene in SIDA-supported programmes in the rural areas of Africa. Another study focusing on sanitation in urban areas is in progress. Based on these experiences improved guide-lines will be developed.

Cost recovery, operation and maintenance

Operation, maintenance and the closely related issue of cost recovery are important issues to address if water supply and sanitation systems are to be sustainable. SIDA gives high priority in its support to the development of decentralised

maintenance systems. In Ethiopia a separate organization for operation and maintenance has been introduced. A decentralized O & M system is under development in Botswana.

SIDA does not, on principle, contribute to the recurrent costs of completed schemes. These costs have to be borne by the consumers with a possible subsidy from local or central government. The level of income in rural areas is often very low. Appropriate systems for the collection of revenue need to be developed. Such development is at present taking place within the programmes in Botswana and Kenya.

Partners in the development cooperation

SIDA as a government agency primarily cooperates with government institutions in the respective recipient countries. In many countries, however, support to non-governmental organizations has proven an efficient way to reach the target groups. In Kenya SIDA gives support to KWAHO, a NGO which specialises in promotion work relating to water and sanitation. AMREF (Nairobi) plays an important role as a consultant to the HESAWA programme. PEDO is an Indian NGO working in the water sector with SIDA's assistance. Many NGOs have a great deal of experience of working in the field of social development. Cooperation with such organizations is important to SIDA. SIDA cooperates with NGOs such as Swedish Volunteer Service, Caritas, Care, Oxfam and different church groups.

SIDA is giving financial support to a large number of Swedish NGOs to implement water and sanitation projects all over the developing world. A reference group has been established as a forum for exchange of experience between the various NGOs and SIDA.

A number of Swedish consultants are involved in the water sector as advisers to the programme or to SIDA. To build up local competence, the use of local consultants / contractors is encouraged. Local consultants play an important role in Botswana, Tanzania, Kenya and India.

Coordination at national level between the various agencies involved in the sector is strongly supported. A close working relationship has developed between the Nordic countries and similar approaches towards water and sanitation development have evolved. SIDA works closely with

WHO in the field of health / hygiene education and UNICEF in the implementation of integrated programmes in Central America, India and Uganda. The World Bank gets financial support for policy development in the field of water resources.

Experience gained during 1988 - 1991

The past years can be described as a consolidation period, when the approach outlined above has been applied and adapted to local conditions. Initially progress was slow as local resources had to be mobilized, but gradually the overall performance has improved both in terms of quality and quantity.

As the main emphasis of the water and sanitation programmes is on capacity building and human resources development there are some uncertainties on how to measure progress and impact. Some measurement of the magnitude of the training activities can be given:

- Under the general programme in India about 50,000 persons attended courses related to hygiene, sanitation, community mobilization, pump maintenance etc.
- The study group activities in the HESAWA programme has reached 4,500 villagers (48% women) through 280 groups. The result is visible in the form of 119 completed rock lined wells and 520 latrines. The activities of the study groups continue, at present the theme is improved stoves.

The impact on health of improved sanitation and water supply is difficult to measure due to a number of other intervening factors, unreliable health statistics etc. The guinea worm is a parasite solely transmitted through drinking water. Thus, improved water hygiene should have a direct and visible impact. The SWACH programme in Rajasthan, India, has as a major objective the eradication of the plague of guinea worms. In the districts of Banswara, Dungarpur and Udaipur the number of guinea worm infected patients has decreased dramatically since 1985.

Based on information on the number and size of new water systems constructed the number of people covered under the programmes can be fairly well estimated:

- A total of approximately 550,000 people have been given access to improved water supply under the SIDA supported programme in Botswana.
- In Ethiopia one million people have been served with improved water in SIDA-supported programmes.
- Around one and a half million durable handpumps, developed by UNICEF with SIDA's support, are providing water to an estimated population of 200 million, mainly in India but also in some 30 other countries.
- More than 400,000 rural inhabitants in 156 villages were provided with clean water in the HESAWA programme, Tanzania, during the period 1985/86-89/90.
- Improved sanitation is not perceived as a basic need in the same way as improved water supply, thus introduction and adoption is a slow process. Notable success has however been achieved in Manicaland, Zimbabwe, where more than 20,000 ventilated improved pit latrines (VIPs) have been built since 1986.

The future

A development as outlined above, based on human resources development, integration of water/sanitation/health, community participation and appropriate technology will continue. The basic principles of sustainability, affordability and replicability will be stressed.

Environmental aspects will be given more attention in the future in order to minimize negative ecological consequences when implementing water projects in fragile areas.

The increasingly precarious water shortage in great parts of the Third World makes it necessary to use the available water in the most productive and economic way. Development projects have, to a large extent, been based on the visible water (water in lakes, rivers and reservoirs) while little attention has been paid to the invisible water in the form of soil moisture, ground water, solvent etc. The dynamic aspects of water resources and their interaction with soil and other elements have been neglected. SIDA will in the future put more emphasis on the management of

finite and fragile water resources and support related human resources development and capacity building. Priority should be given to water resources management on the local level.

More attention will be given to the ever growing problems of water and sanitation in urban areas, especially the urban fringe. While appropriate technologies for rural areas have been developed over the past 15 years, technologies for peri-urban water and sanitation systems are lacking.

Much more research and development is required to find technologies affordable to poor urban households. The main emphasis of the SIDA assistance will thus remain on rural areas where the experience of both SIDA and the Swedish resources in general can be best utilized.

SIDA support to on-going programmes will continue for the coming three year period. In Botswana the construction of new schemes will gradually be phased out and priority given to activities on district level such as management of operation and maintenance. More emphasis will also be placed on environmental sanitation. The programme in Kenya will enter a consolidation phase in which priority will be given to maintenance, cost recovery and community based activities. In spite of political problems in Ethiopia the good working relationship between donor and recipient in the sector must be maintained to facilitate much needed assistance when the situation improves. Based on the positive experience of cooperation with UNICEF present programmes in Central America, India and Uganda will continue.

Proposals for the expansion of water/sanitation/hygiene activities into new countries and additional sector activities will be thoroughly scrutinized before any decision is made. Considerations must be given both to SIDA's limited administrative capacity to handle new projects and to the capacity of organisations/institutions in the recipient country to implement such projects. SIDA support to water and sanitation activities in Angola and Laos is at present under consideration. Due to the above constraints these projects will most likely be carried out in cooperation with UNICEF.

CURRENT SIDA ASSISTED PROGRAMMES

SIDA currently gives assistance to water development activities in Botswana, Ethiopia, India, Kenya, Tanzania, Uganda, Zimbabwe and Central America.

Botswana

Total assistance to date SEK 294 million with a present annual contribution of MSEK 32. Current programmes:

- support to the Department of Water Affairs for survey and construction of new water supplies (this activity will be phased out during 92/93;
- support to the Ministry of Local Government and Lands for sanitation, rehabilitation of water schemes and development of operation and maintenance systems;
- support to the Ministry of Health for education related to hygiene, water and sanitation;
- technical assistance.

Ethiopia

Total assistance to date SEK 133 million with a present annual contribution of MSEK 3. Current programmes:

- rural water supply programme in the Eastern Regions (Hararghe), support to the Ethiopian Water Works Construction Authority (EWWCA) and the Water Supply and Sewerage Authority (WSSA);
- training of civil engineers in India;
- technical assistance.

India

Total assistance to date SEK 396 million with a present annual contribution of MSEK 60. Current programmes:

- a general programme for rural water supply and environmental sanitation, support to UNICEF/ Government of India;
- Sanitation, Water and Community Health Programme (SWACH) in Banswara, Dungarpur and Udaipur Districts, Rajasthan;
- support to an NGO (PEDO) for rural water supply, environmental sanitation in Bicchiwara Block, Dungarpur District, Rajasthan (phased out during 90/91).

Kenya

Total assistance to date SEK 347 million with a present annual contribution of MSEK 22. Current programmes:

- Kwale Water and Sanitation Project;
- Tharaka Water and Sanitation Project;
- development of water financial management systems;
- Kenya Water for Health Organization, KWAHO, and support to other non-governmental organizations;
- completion of earlier rural water supply projects in Eastern District;
- technical assistance.

Tanzania

Total assistance to date SEK 694 million with a present annual contribution of MSEK 40. Current programmes:

- The HESAWA Programme - Health through Sanitation and Water - covering Kagera, Mara and Mwanza Regions;
- Water Resources Institute, Dar es Salaam;
- technical assistance.

Uganda

Total assistance to date SEK 70 million from emergency funds. The present annual contribution is around MSEK 30. Current programmes:

- support to UNICEF for the implementation of South West Integrated Health and Water Project (SWIP);
- support (via UNICEF) to make construction materials and consulting support available to local organizations interested in water and sanitation activities (the Umbrella Project).

Zimbabwe

Total assistance to date SEK 17 million with a present annual contribution of MSEK 5. Current programmes:

- the Manicaland Health, Water and Sanitation Programme including human resources development;
- Mashonaland East Health, Water and Sanitation Programme;
- support to the Ministry of Health and Blair Research Laboratory for pilot activities.

Central America

Total assistance to date SEK 25 million with a present annual contribution of MSEK 15. Current programmes:

- Honduras, improved water supply and environmental sanitation in rural and peri-urban areas;
- Nicaragua, water supply and sanitation in rural areas;
- Guatemala, improved water supply and environmental sanitation in rural and peri-urban areas;
- El Salvador, water supply and sanitation in rural areas;
- Costa Rica, water supply and sanitation in rural areas;
- Belize and Panama will from July 1991 get SIDA-support for water and sanitation.

PROJECT DATA

Country/Project	Starting year/ Total disbursement as per 1991-06 (millions USD)	Present agreement period/ Agreed amount (millions USD)	Disbursed 1990/91 (millions USD)
Botswana Rural Water Supply	1971 45.2	89/90-91/92 11.3	4.9
Central America Water & Sanitation Unicef	1989 3.9	91/92-95/96 11.6	2.1
Ethiopia Rural Water Supply	1976 20.4	91/92 0.6	0.5
India Rural Water Supply Unicef	1979 60.9	91/92-93/94 32.8	9.2
Kenya Rural Water Supply	1970 53.4	91/92 3.4	3.4
Tanzania Rural Water Supply	1965 106.8	90/91-92/93 18.5	5.8
Zimbabwe Water, Sanitation, Health Education	1986 2.6	90/91-92/93 3.7	0.6
Uganda Water, Sanitation, Health Education Unicef	1989 10.8	90/91-92/93 13.8	6.2
Other countries	27.2		
TOTAL	331.2		32.7