



Water, energy, transport

Sustainable sanitation – ecosan

The challenge

More than one third of the world's population currently lives with inadequate sanitation or none at all – a situation which is an affront to human dignity. Unhygienic living conditions threaten the lives and health of both children and adults: Every day about 4,100 children under the age of five die from diarrhoea worldwide. The majority of these deaths are caused by unsafe water, inadequate sanitation and poor hygiene. The lack of sanitation also has adverse impacts on the economy, because diseases reduce people's productivity. In addition, pollution of groundwater, rivers, lakes and oceans damages the environment.

The reasons for the poor sanitation conditions in many developing countries and emerging economies are manifold. The subject is often a taboo topic. People in positions of political responsibility are often unaware of the extent of the problem, particularly since the majority of the victims are the poorer and weaker members of society. There is also a lack of strategies, laws and policies which promote effective structures and institutions in the sanitation sector, as well as a lack of adequately trained personnel.

Our approach

Acting on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), GTZ is implementing projects to improve sanitation services in more than 25 countries. Its work involves providing organisational and technical advice to institutions and service providers, developing sustainable sanitation strategies and raising awareness among decision-makers and the general public. Our aim is to work with the partners to change structures and processes within the country in order to bring about sustainable improvements in living conditions. A key factor of success is a focus on demand and on local needs when disseminating sustainable sanitation solutions.

In order to be sustainable, sanitation systems must not only protect human health, be economically affordable, socially acceptable and technically and institutionally appropriate; they should also protect the environment and natural resource base. In addition, ecological sanitation (ecosan) emphasises the safe reuse of wastewater as well as the use of the nutrients and organic matter contained in treated excreta in agriculture.

Our services

- **Advisory services:** Specialist and management advice to local partners, assistance and ongoing support for pilot, demonstration and upscaling projects.
- **Capacity development:** Support in designing human resources development strategies, workshops, curriculum development at universities and schools, provision of teaching materials.
- **Policy advice and strategy development:** Support in developing strategies, legal frameworks, investment plans and guidelines.
- **Information services and knowledge management:** Making information on technologies and case studies available (via electronic media, workshops and conferences).
- **Public relations and mainstreaming:** Lobbying and public relations at national and international level.
- **Networking:** Strengthening worldwide networks for sustainable sanitation and ecosan (e.g. the Sustainable Sanitation Alliance network).
- **Promotion of public-private partnerships (PPP):** Supporting the initiation of PPP projects, e.g. in the construction and operation of sanitation facilities.



The benefits

Cooperation with GTZ opens up new perspectives and opportunities worldwide in connection with the planning, development, management and financing of wastewater management and sanitation systems. Health risks caused by untreated wastewater and contaminated water bodies are reduced. It has been shown that significantly more girls attend classes if schools have sanitation facilities.

Sustainable wastewater management conserves water and soil resources and reduces environmental risks. Moreover, with appropriate treatment wastewater can be used for irrigation. The recovered nutrients help to increase soil fertility in agriculture. The biomass contained in excreta and sewage can also be used to generate renewable energy.

An example from the field

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), GTZ is advising the Indian Ministry of Rural Development in the nationwide application of the ecosan approach. The Ecosan Services Foundation, which is supported by GTZ, provides services in connection with the planning and construction of sanitation facilities as well as training courses. In addition, a network for innovative sanitation solutions has been set up which brings together a number of important institutions such as the Navsarjan Trust. This trust works towards improving the rights of socially disadvantaged people in more than 3,000 villages in the State of Gujarat.

Working with GTZ, this trust has also implemented closed-loop sanitation systems in schools and training centres. Simple processes are used to produce fertilisers to improve the impoverished soils of the region. Urine is collected separately and stored for pathogen removal according to guidelines from the World Health Organisation (WHO), and is then diluted with water and used for irrigation. Greywater from showers and bathrooms is treated and used to irrigate school gardens and green areas. A range of hygiene education projects teach pupils at these schools about the ecosan approach.

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