Guidelines on Municipal Wastewater Management

10 KEYS

FOR LOCAL AND NATIONAL ACTION

UNEP unicef UN-HABITAT

Jointly developed by the United Nations Environment Programme UNEP, the WorldHealth Organisation WHO, the United Nations Human Settlements Programme UN-Habitat and the Water Supply and Sanitation Collaborative Council WSSCC.

The 10 KEYS listed below are prerequisites for sustainable municipal wastewater management. They cover policy issues, management approaches, technology selection and financing mechanisms.

These basic principles have been developed in the framework of the UNEP/WHO/UN-HABITAT/WSSCC **Strategic Action Plan on Municipal Wastewater**, adopted at the UNEP/GPA Inter-governmental Review Meeting, Montreal, November 2001, and re-emphasized at the UNEP Governing Council, 22nd Session, Nairobi, February 2003.

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1. Secure political commitment and domestic financial resources.

A political climate has to be created in which high priority is assigned to all aspects of sustainable municipal wastewater management, including the allocation of sufficient domestic resources.

2. Create an enabling environment at national AND local levels.

Public authorities remain responsible for water and wastewater services. The 'subsidiarity principle', which is the delegation of responsibilities to the appropriate level of governance, applies to the entire water sector. National authorities should create the policy, legal, regulatory, institutional and financial frameworks to support the delivery of services at the municipal level in a transparent, participatory and decentralized manner.

3. Water supply and sanitation is not restricted to taps and toilets.

A holistic approach to water supply and sanitation should be adopted. This incorporates not only the provision of household services, but various other components of water resource management, including protection of the resource that provides the water, wastewater collection, treatment, reuse and reallocation to the natural environment. Addressing the environmental dimensions mitigates direct and indirect impacts on human and ecosystem health.

4. Develop integrated urban water supply and sanitation management systems also addressing environmental impacts.

Municipal wastewater management is part of a wider set of urban water services. The wastewater component is usually positioned at the end of a water resource management chain. Integration of relevant institutional, technical, sectoral, and costing issues of all major components of the chain is required. Consideration should be given to the joint development, management, and/or delivery of drinking water supply and sanitation services.

5. Adopt a long-term perspective, taking action step-by-step, starting now.

The high costs of wastewater systems necessitate a long-term, step-by-step approach, minimizing current and future environmental and human health damage as much as possible within existing budgetary limits. Non-action imposes great costs on current and future generations and misses out on the

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potential of reusing valuable resources. A step-by-step approach allows for the implementation of feasible, tailor-made and cost-effective measures that will help to reach long-term management objectives.

6. Use well-defined time-lines, and time-bound targets and indicators.

Properly quantified thresholds, time-bound targets and indicators for environmental aspects of sanitation and waste-water management are indispensable instruments for priority setting, resource allocation, progress reporting and evaluation.

7. Select appropriate technologies for efficient and cost-effective use of water resources and consider eco-technology alternatives.

Sound water management relies on the preservation and efficient utilization of water resources. Pollution prevention at the source, efficient use and reuse of water, and application of appropriate, often low-cost, treatment technologies can result in a reduction in wastewater quantity and in investment savings related to construction, operation and maintenance of sewerage systems and treatment facilities. Depending on the local physical and socio-economic situation, different technologies will be appropriate. Eco-technology is a valid alternative to traditional engineering and technical solutions.

8. Apply demand-driven approaches.

In selecting appropriate technology and management options attention must be given to users' preferences and their ability and willingness to pay. Comprehensive analyses of present and future societal demands are required, and strong support and acceptance from local communities should be secured. With such analyses realistic choices can be made from a wide range of technological, financial and management options. Different systems can be selected for different zones in urban areas.

9. Involve all stakeholders from the beginning and ensure transparency in management and decision-making processes.

Efforts and actions on domestic sewage issues must involve pro-active participation and contributions of both governmental and non-governmental stakeholders. Actors stem from household and neighbourhood levels to regional, national and even international levels, and possibly the private sector.

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Early, continuous, targeted and transparent communication between all parties is required to establish firm partnerships. The private sector can act as a partner in building and improving infrastructure, in operation and maintenance of facilities, or in providing administrative services.

10. Ensure financial stability and sustainability:

10.1 Link the municipal wastewater sector to other economic sectors.

Sound and appropriate wastewater management may require substantial construction and operational investments in wastewater infrastructure and treatment facilities. Relative to the water supply sector, cost recovery in the wastewater sector is traditionally a long process. Developments in other (socio-) economic sectors, for instance water supply or tourism, may create opportunities to address sanitation at the same time. Linking wastewater management with other sectors can ensure faster cost-recovery, risk-reduction, financial stability and sustainable implementation.

10.2 Introduce innovative financial mechanisms, including private sector involvement and public-public partnerships.

Traditionally, sanitation services have been provided by public authorities. Costs for investments, operation and maintenance, however, often out-strip their capacities, as do present and future requirements for serving the unserved. Therefore, innovative, more flexible and effective financial management mechanisms have to be considered, e.g. micro-financing, revolving funds, risk-sharing alternatives, municipal bonds. Public-private partnerships, and also public-public partnerships, are important tools to assist local governments in initial financing and operating the infrastructure for wastewater management.

10.3 Consider social equity and solidarity to reach cost-recovery.

The employment of principles like 'the water user pays' and 'the polluter pays' is required to achieve stable and sustainable wastewater management with efficient cost-recovery systems. These principles should be applied in a socially acceptable way, considering solidarity and equitable sharing of costs by all citizens and facilities. Various user groups should be made aware of and be able to identify with concepts such as "water" and "catchment solidarity". All users will benefit from environmental improvement.