



Improving Municipal Wastewater Management in Coastal Cities



- Objective oriented planning
- Innovative technologies
and financial approaches
- Stakeholder involvement
- Presentation techniques

UNESCO-IHE
Institute for Water Education



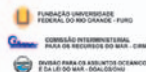
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Development of the modules

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**UNEP/GPA - UNESCO-IHE
Train-Sea-Coast GPA**

Improving Municipal Wastewater Management in Coastal Cities

**A Training Manual for Practitioners
focussing on**

- **Objective Oriented Planning**
- **Innovative Technological and Financial Approaches**
- **Stakeholder Involvement**
- **Presentation Techniques**

Foreword

GPA is the only global action programme addressing the interface between the freshwater and coastal environment. One of the problems the GPA addresses is the uncontrolled discharge of wastewater into the freshwater and coastal environment. A priority also identified by UNEP and reconfirmed at the 2002 Millennium Summit and the World Summit on Sustainable Development.

Indeed in many parts of the world sewage is still discharged directly into open water without treatment. Such uncontrolled discharge is one of the most serious threats to the productivity and biodiversity of the world's oceans. At the same time it causes serious environmental and human health problems and threatens sustainable coastal development.

In response to the daunting challenge faced by many governments in addressing wastewater problems, the GPA has developed training for municipal wastewater managers, jointly with UNESCO-IHE Institute for Water Education and the UN/DOALOS Train-Sea-Coast Programme.

The training provides participants with analytical tools, substantive information and skills on how to select, plan and finance appropriate and environmentally sound municipal wastewater management systems. The training is meant for project managers at municipality level, mandated with the task to develop and manage municipal wastewater collection and treatment systems with often very limited resources. The course focuses on four elements: (i) objective oriented planning, (ii) involvement of stakeholders and mobilizing local resources, (iii) conventional and innovative approaches; and (iv) formulation and presentation of proposals.

The content is based on the UNEP/WHO/HABITAT/WSSCC guidelines on municipal wastewater management and stresses the need to link water supply and the provision of household sanitation, wastewater collection, treatment and re-use, cost-recovery, and re-allocation to the natural environment.

UNEP and its partners are pleased to present this first version of the training manual. UNEP very much welcomes comments to ensure that the course addresses the needs of coastal municipalities.

Veerle Vandeweerd
Coordinator
UNEP/GPA Coordination Office

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In 2003 a pilot course was developed and delivered in Zanzibar, Tanzania. Based on the experiences and with support from the UN/DOALOS Train-Sea-Coast Programme a team of experts was formed to upgrade the course to Train-Sea-Coast standards. The GPA Coordination Office wishes to thank all those who assisted in the development and production of this training, the participants of consultative meetings, the pedagogic experts who developed the curriculum, Train-Sea-Coast Brazil for their pivotal role in reviewing, editing and packaging the content, and the Western Indian Oceans Marine Science Association (WIOMSA) for conducting the initial regional training needs assessment and their important contributions in arranging the first two course deliveries in East Africa.

This document is handed out to participants of the training. It is supplementary to a fully documented instructor's manual including all presentations, tests and descriptions of the group work that enables cost-effective and instructor independent course delivery.

More information about this capacity building initiative are shared at the GPA Clearing House Mechanism at an inter-agency training web site (<http://www.gpa.unep.org/training>).

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