









GUIDELINES ON MUNICIPAL WASTEWATER MANAGEMENT

A practical guide for decision-makers and professionals on how to plan, design, and finance appropriate and environmentally sound municipal wastewater discharge systems.

Disclaimer

The designations employed and the presentation of the materials in this document do not imply the expressions of any opinion whatsoever on the part of UNEP concerning the legal status of any State, Territory, city or area, or its authorities, or concerning the delimitation of their frontiers or boundaries. The document is an evolving document and contains the views expressed by the authors acting in their individual capacity and may not necessarily reflect the views of UNEP.



© 2004 UNEP - United Nations Environment Programme

UNEP/GPA

The Global Programme of Action for the Protection of the Marine Environment from Land-based

GPA Coordination Office

P.O. Box 16227 2500 BE The Hague The Netherlands

Clearing House: http://www.gpa.unep.org

Visiting address: Kortenaerkade 1, The Hague, The Netherlands

UNEP/IETC

International Environmental Technology Centre of UNEP Osaka Office 2-110 Ryokuchi Koen Tsurumi-ku Osaka 538-0036 Japan

Web: http://uneo.or.jp/ietc

UNESCO-IHE

Institute for Water Education PO Box 3015 2601 DA Delft The Netherlands

Web: http://www.unesco-ihe.org

This publication may be reproduced in whole or in part and in any form for educational and non-profit purposes without special permission from the copyright holder, provided that acknowledgement of the source is made. UNEP/GPA would appreciate receiving a copy of any publication that uses this material as a source.

No use of this publication may be made for the resale or for any other commercial purposes whatsoever without the prior permission in writing of UNEP/GPA.

For bibliography purposes this document may be cited as:

UNEP/WHO/HABITAT/WSSCC: Guidelines on Municipal Wastewater Management. UNEP/GPA Coordination Office, The Hague, The Netherlands (2004).

GUIDELINES ON MUNICIPAL WASTEWATER MANAGEMENT

A practical guide for decision-makers and professionals on how to plan, design, and finance appropriate and environmentally sound municipal wastewater discharge systems.

Version 3 February 2004



Acknowledgements

The preparation of this report was commissioned by the UNEP Coordination Office of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) to the UNESCO-IHE Institute for Water Education, The Netherlands. The Governments of the Netherlands and Belgium contributed to the funding of this activity.

Earlier versions of this guide were based on a report usually referred to as "Recommendations for Decision-making on Municipal Wastewater" and on a background document "Strategy options for Sewage Management to Protect the Marine Environment" prepared by IHE, IRC and NEI.

In 2001 and 2002 version 2.1 of the guidelines formed the basis for extensive review and discussion at regional level with a wide variety of stakeholders, including national and local experts, representatives from non-governmental organisations, the private sector, professional organisations, international financial institutions, and potential donors.

The GPA Coordination Office wishes to thank all those who assisted in the development and production of this report, the participants of consultative meetings, the expert reviewers, the partner organizations, and the Regional Seas, Regional Offices and Coordinating Units.

Collaborative partner organizations are the World Health Organization of the United Nations (WHO), the United Nations Human Settlements Programme (UN-HABITAT) and the Water Supply and Sanitation Collaborative Council (WSSCC).

The contents of this document are shared with the Sanitation Connection Database http://www.sanicon.net .

Foreword

Since the adoption of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) in 1995, UNEP has pioneered the development of tools addressing marine pollution originating from land-based activities. GPA is the only global action programme addressing the interface between the fresh water and coastal environment. One of the problems the GPA address's is the uncontrolled discharge of wastewater into the fresh water 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 municipal wastewater problems, the GPA has developed guidelines for municipal wastewater management, jointly with WHO, UN-Habitat, and WSSCC.

The guidelines provide practical guidance on how to plan appropriate and environmentally sound municipal wastewater management systems. The guidelines are meant for decision-makers, operational professionals in government institutions, and in the private sector, development banks and related organizations. The guidelines focus on four elements: approaches and policies, institutional arrangements, technological choices, and financing options. Each element is supported by a practical checklist.

The guidelines address and stress 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. Local participation is advocated and stepwise approach to technology and financing, starting at modest levels, expanding if and when more resources become available.

The guidelines are summarized in 10 keys for action covering: political commitment; action at national and local level; going beyond taps and toilets; integrated management; long-term perspectives with step-by-step approaches; time-bound targets and indicators; appropriate technology; demand-driven approaches; stakeholder involvement; transparency; and financial stability and sustainability.

UNEP and its partners are pleased to present this third version of the guidelines, which went through several rounds of review and consultation. UNEP very much welcomes comments to ensure that the guidelines address the needs of the users.

Veerle Vandeweerd Coordinator GPA Coordination Office United Nations Environment Programme

About the GPA and its Strategic Action Plan on Municipal Wastewater

The Global Programme of Action for the Protection of the Marine Environment from Landbased Activities (GPA) was established in November 1995 when 108 governments and the European Union met in Washington, D.C. This action illustrated a clear commitment among national governments and the international community to protect and preserve the marine environment from adverse environmental impacts of land-based activities. UNEP was charged to provide the Secretariat and as such the UNEP/GPA Coordination Office in The Hague currently facilitates and catalyzes the implementation of the GPA.

The GPA framework provides a series of recommendations for action as well as criteria for their development at different levels. At the national level, it provides a comprehensive yet flexible framework, to assist countries in fulfilling their duty to preserve and protect the marine environment from sewage, physical alterations and destruction of habitat, nutrients, sediment mobilisation, persistent organic pollutants, oils, litter, heavy metals and radioactive substances. Integral to the implementation of the GPA is the development of Key Principles and Checklists, within a framework of Practical Guidelines and Toolkits for the major GPA programme areas. These Principles and Checklists advocate innovative approaches on issues such as institutional set-up, financing mechanisms, alternative technologies and stakeholder involvement, including the private sector and local communities.

To further assist governments in implementing the GPA, a Strategic Action Plan on Municipal Wastewater (SAP) was prepared by the UNEP/GPA Coordination Office, in close cooperation with other international and regional organizations, donor agencies, financial institutions and development assistance agencies. SAP aims to promote concrete actions at both local and national levels. Actions focus on promoting the use of alternative solutions, including low cost and environmentally sound sanitation and wastewater treatment technologies, innovative financial mechanisms, appropriate partnerships, and the creation of an enabling environment for action. SAP provides for normative guidance, demonstration and capacity building initiatives. In November 2001, the First Intergovernmental Review of the GPA, held in Montreal, Canada, welcomed the Strategic Action Plan on Municipal Wastewater and urged UNEP to finalize SAP as a tool for implementing the objectives of the GPA.

The Plan of Implementation adopted at the World Summit on Sustainable Development (WSSD), held in Johannesburg, in September 2002, further endorses the GPA with particular emphasis on municipal wastewater. Furthermore, the Strategic Action Plan on Municipal Wastewater and the Guidelines on Municipal Wastewater Management presented in this document directly relate to the targets on water supply and sanitation agreed at the Millennium Summit and the WSSD.

The UNEP/GPA Coordination Office focuses on implementation of the Strategic Action Plan on

预览已结束,完整报告链接和二

https://www.yunbaogao.cn/report/index/report?re