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FOR THE PROTECTION OF THE MARINE ENVIRONMENT
FROM LAND-BASED ACTIVITIES

First meeting

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Item 5 of the provisional agenda*

THE GLOBAL PROGRAMME OF ACTION'S STRATEGIC ACTION PLAN ON MUNICIPAL
WASTEWATER

DEVELOPED JOINTLY WITH THE UNITED NATIONS ENVIRONMENT PROGRAMME,
THE WORLD HEALTH ORGANIZATION, THE UNITED NATIONS CENTRE FOR
HUMAN SETTLEMENTS (HABITAT) AND THE WATER SUPPLY AND
SANITATION COLLABORATIVE COUNCIL

Introduction

1. Municipal wastewater discharges are one of the most significant threats to sustainable coastal development worldwide. Their effects are usually localized, but they are a major source of coastal and marine contamination in all regions and therefore a global issue. Pathogenic organisms, for example, in domestic wastewater-contaminated marine and estuarine waters cause massive transmissions of infectious diseases to bathers and consumers of raw and undercooked shellfish with a global economic impact recently estimated at \$10 billion per year (GESAMP, 2001)¹. In addition to pathogens, chemicals and nutrients in municipal waste also may cause health and environmental problems.
2. The priority for action on sewage, as identified by the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP (OCA)/LBA/IG.2/7), was reconfirmed by the various regional workshops of government-designated experts organized by the Global Programme of Action Coordination Office within the framework of the Regional Seas Programme between 1996 and 1999,

* UNEP/GPA/IGR.1/1.

¹ All documents referred to in this document are or will be available on the Global Programme of Action clearing house Web site www.gpa.unep.org.

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and also by the Governing Council of the United Nations Environment Programme (UNEP) in its decision 20/19 of 5 February 1999 (see UNEP/GPA/IGR.1/2 and UNEP/GPA/IGR.1/3).

3. In response to the above, the Global Programme of Action Coordination Office, in cooperation with the World Health Organization (WHO), the United Nations Centre for Human Settlements (Habitat) and the Water Supply and Sanitation Collaborative Council (WSSCC) developed the Global Programme of Action's Strategic Action Plan on Municipal Wastewater.
4. For its implementation the Strategic Action Plan on Municipal Wastewater relies upon the existing structure of UNEP's Regional Seas Programme, its relevant conventions and protocols, UNEP regional offices and other regional bodies.
5. An overview of the progress in the period 2000-2001 in the implementation of the Strategic Action Plan on Municipal Wastewater is reflected in the annex to this document.

I. AIM OF THE STRATEGIC ACTION PLAN

6. The Strategic Action Plan on Municipal Wastewater has been prepared to further develop the guidance given on sewage in the Global Programme of Action (UNEP(OCA)/LBA/IG.2/7), and to promote concrete action at the local and national levels aimed at addressing sewage as one of the major source categories impacting the coastal and marine environment, particularly by: promoting the use of alternative solutions, including low cost technologies, appropriate financial mechanisms and partnerships; and creating an enabling environment for action.
7. The Strategic Action Plan on Municipal Wastewater aims to accomplish this by:
 - (a) Promoting global consensus on best practices and procedures to address municipal wastewater thus setting the standard in the approach to municipal wastewater management (the normative component);
 - (b) Distributing up-to-date knowledge on best practices and procedures and promoting their replication (the demonstration component);
 - (c) Supporting the efforts of municipalities and States to address the serious public health problems, economic losses and the degradation of coastal ecosystems that result from the disposal in coastal areas of inadequately treated municipal wastewater (the capacity-building component).

II. DESCRIPTION OF THE STRATEGIC ACTION PLAN

8. The Strategic Action Plan on Municipal Wastewater covers the full policy life cycle, from problem identification and assessments, to priority setting, selection of appropriate measures and action.
9. The Strategic Action Plan on Municipal Wastewater takes into consideration the fact that the water supply and wastewater treatment are closely linked. However, bearing in mind that it is wastewater or sewage that impacts on the coastal and marine environment, the Strategic Action Plan focuses on the sanitation component.
10. At the global level, the Strategic Action Plan relies upon and supports ongoing assessment activities conducted by, for example, the UNEP-Global International Waters Assessment (GIWA), the Global Environment Outlook (GEO), the Millennium Ecosystem Assessment, the Global Water Supply and Sanitation Assessment jointly sponsored by WHO, United Nations Children's Fund (UNICEF) and WSSCC and other assessments by the United Nations agencies and partners.

11. At the regional level a series of assessments have been conducted by the Global Programme of Action Coordination Office, in the framework of the UNEP Regional Seas Programme, which include the prioritization of land-based sources and activities (see UNEP/GPA/IGR.1/3).

12. At the national and local levels there is a need for more detailed and targeted studies, once the source category sewage has been established as one of the priorities. These studies, amongst others, address priority areas for action, socio-economic aspects, cost-benefit analyses, benefits and costs of action - or non-action, as the case might be -; the studies are also aimed at defining goals, partners, funds, targets and timetables. Such studies enable States to take immediate preventive and remedial action using existing knowledge, resources, plans and processes. Pre-investment studies are one of the next steps to ensure appropriate action.

13. The Strategic Action Plan on Municipal Wastewater promotes the conversion of the global, regional, national and, eventually, local assessments concrete and sustainable actions. To accomplish this, three main components are addressed: normative, demonstration and capacity-building.

1. The normative component

14. The normative component of the Strategic Action Plan comprises the development of a globally accepted guide for local and national decision-makers and professionals on appropriate and environmentally sound wastewater management systems. The envisaged guide is made up of three parts, each having its interlinked process for development and adoption: key principles, annotated checklists on recommended practices and procedures, and regional annexes. The guide is backed by a global knowledge base.

15. The key principles highlight approaches in wastewater management, which are recommended to be adopted and where global consensus is needed to set the standard in the approach to municipal wastewater management.

16. The annotated checklists detail different approaches, infrastructures and tools available to practitioners and decision makers. The checklists address, among others:

(a) Integrated and stepwise approaches, including supply and demand driven approaches, consideration of environmental requirements and social and economic needs of the population, combined water supply and sewage handling, catchments based on planning, storm water and sludge;

(b) Enabling environment and sustainability, including regulations, legislation, operation and maintenance, responsibilities and accountability, enacting emission limits, standards, quality control, surveillances and enforcement, wastewater management criteria and evaluation;

(c) Institutional arrangements, including the structure of the administrative system, public participation and information, stakeholder involvement, role of private and non-profit sectors, voluntary initiatives;

(d) Appropriate financial mechanisms, including domestic resource mobilization, international resource mobilization to supplement the domestic resources, public-private partnerships and other new and additional financial instruments, cost recovery, water service user and water polluter-pays principles;

(e) Innovative technologies, including cleaner production and best practices to minimize wastewater production at the source, on-site treatment, wastewater collection infrastructure, low cost treatment techniques including natural self-purification capacity and natural attenuation, ecological engineering, lagoons, options for re-use and waste valorization, dry sanitation.

17. The regional annexes provide a subset of the annotated checklists, selected by the regions as being of particular relevance to their areas. They translate and complement the global guideline, addressing the specific priorities and needs of particular regions.

18. The global knowledge base details the information contained in the guide on municipal wastewater management. The global knowledge base comprises technical information and review of existing experiences. It is linked directly to the Sanitation Connection database www.sanicon.net and other relevant sources of information. Sanicon is in partnership with the Global Programme of Action Coordination Office, WHO, the International Water Association (IWA), the World Bank/Water and Sanitation Programme for South Asia (WSP) and WSSCC. It provides a range of services, including information on policies, legal and regulatory frameworks, institutions, finance and economics, social and health aspects and technical issues; and an interactive help desk.

19. The global knowledge base which is currently being prepared, is accessible through the Global Programme of Action clearing-house mechanism and will be regularly updated (see UNEP/GPA/IGR.1/INF/9).

20. The key principles and annotated checklists are distilled from the global knowledge base, and further developed through expert meetings and regional consultations. The regional annexes are the results of consultations with national and local experts, private sector, international financial institutions, potential donors, non-governmental organizations and other stakeholders, within the appropriate regional context.

21. As a consequence of these review processes the guide on municipal wastewater evolves continuously. The process and approach followed to come to global consensus is described in detail in document UNEP/GPA/IGR.1/5. Following the guidance of the Intergovernmental Review Meeting, and further to consultations with regional and national partners, the final revised version of the guide will be submitted to the UNEP Governing Council at its twenty-first session for endorsement.

2. The demonstrative component

22. The Strategic Action Plan on Municipal Wastewater aims at: providing a platform for sharing experience and expertise with regard to appropriate and sustainable technical, administrative and financial approaches; demonstrating that the alternative and innovative approaches as called for in the guide are actually being implemented; promoting the replication of best practices and lessons learned; and providing access to available regional expertise for use in ongoing and new projects.

23. Through a series of regional meetings, organized in collaboration with the UNEP Regional Seas Programme, the UNEP regional offices and other partners, the exchange of experience and expertise referred to above is realized. Other purposes of these regional meetings are to review the key principles and checklists, and to draft regional annexes to the guide on municipal wastewater, as appropriate. The information and experiences gained are included in the evolving global knowledge base, *inter alia*, through the regional nodes of the Global Programme of Action clearing-house mechanism, and are used in the capacity-building exercises in the regions.

3. The capacity-building component

24. A major component of the Strategic Action Plan on Municipal Wastewater is capacity-building to improve the skills and increase the capacity of local and national authorities in addressing wastewater management. It promotes the actual application of the sustainable practices advocated in the guide, and replication of best practices and experiences from demonstration projects. It also includes, as appropriate, the identification, development and negotiation of high quality contracts and well established partnerships with the private sector and other partnerships.

25. Capacity-building is being realized by initiating and executing pilot projects, which put into practice an appropriate selection of the alternative approaches advocated in the guide, such as innovative investments in treatment facilities, new partnerships, or the use of alternative cost-effective technologies. Following the principle of “learning by doing” the pilot projects support concrete action on municipal wastewater. By working in a regional framework the scope for replication is enhanced. Candidate pilot projects are identified at the regional and national levels. In each region the Strategic Action Plan on Municipal Wastewater focuses on two or three pilot projects, either through supporting ongoing or developing new projects.

26. Training strengthens the capacity-building component. Specific training is provided within the context of the pilot projects. Besides this project-based training, generic training on municipal wastewater management is provided, through, *inter alia*, participation in the existing training network of the United Nations Development Programme/Division of Ocean Affairs and Law of the Sea (UNDP/DOALOS) Train-sea coast programme. Other partners in developing training modules include the UNEP/Division of Technology, Industry and Economics (DTIE) International Environmental Technology Centre (IETC, Japan) and the International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE, the Netherlands), which is to become the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Water Education by November 2001. The training courses instruct people on how to dispense guidance and promote wider adoption of best management practices.

27. The pilot projects and the training courses are supported by the global knowledge base and the interactive Global Programme of Action clearing-house mechanism. In reverse, the pilot projects and training courses will feed into the clearing house, thus making it an integral part of the capacity-building component (see UNEP/GPA/IGR.1/6 and UNEP/GPA/IGR.1/INF/9).

28. Addressing sewage management adequately needs long-term commitment (20 to 30 years), sustained action and continuing investment. Consequently, implementation of the pilot projects will need an appropriate time-span, necessary to develop capacity and foster an enabling environment for sustainable action. The duration of the pilot projects under the Strategic Action Plan on Municipal Wastewater may therefore be up to four or five years. Since circumstances may change over a long period, regular review of issues by all parties is required so that appropriate adjustments can be made to respond to the realities of changing situations. Ongoing training might be necessary. The identification and development of regional resource centers (e.g. UNDP/DOALOS Train-sea coast programme), is an integral part of this long-term objective.

4. Coordination

29. The Strategic Action Plan on Municipal Wastewater is a joint initiative of the Global Programme of Action Coordination Office, WHO, the United Nations Centre for Human Settlements (Habitat) and WSSCC. Active participation is solicited from other partners, including UNEP/DTIE International Environmental Technology Centre (IETC), UNEP regional offices, UNESCO, UNICEF, the World Bank, the European Union, the Organization for Economic Cooperation and Development (OECD), the International Council for Local Environmental Initiatives (ICLEI), the World Wildlife Fund (WWF), Greenpeace, the International Water Management Institute (IWMI), IHE, universities and regional organizations.

30. The Strategic Action Plan on Municipal Wastewater also requires the participation of donor agencies, financial institutions and development assistance agencies.

31. Significant outreach to both the international and professional community is being realized through participation and collaboration in global conferences, organized by international and professional associations or other partners (for example the WSSCC Global Forum in Foz do Iguacu, Brazil, November 2000, the UNESCO Conference on Urban Water Management in Marseille, France, June 2001, the Water Conference in Bonn, Germany, November 2001, the Third World Water Forum in Kyoto, Japan, March 2003). The Strategic Action Plan on Municipal Wastewater and its implementation are presented at these conferences, and participants are invited to contribute to the review of the guide on municipal wastewater.

32. The global knowledge base on municipal wastewater is an integral part of the Global Programme of Action clearing-house mechanism, and is linked to the Sanitation Connection database and other relevant clearing-house initiatives (see UNEP/GPA/IGR.1/INF/9).

33. Since funding is required to adequately implement the Strategic Action Plan on Municipal Wastewater as described in the above paragraphs, the Global Programme of Action Coordination Office is soliciting financial support from various donor countries and international organizations, and the private sector (see also UNEP/GPA/IGR.1/6). The Global Programme of Action Coordination Office wishes to seize the opportunity to thank all those donors that generously contributed to the implementation of the first phase of the Strategic Action Plan.

34. The Strategic Action Plan on Municipal Wastewater and its activities have direct links with other projects initiated and supported by the Global Programme of Action Coordination Office, including the national programmes of action on land-based activities, strategic action plans on other source categories, national and regional partnership market meetings, voluntary initiatives involving the private sector, other pollutant source categories (e.g. physical alterations and destruction of habitats, nutrients) and innovative financial mechanisms.

Annex

PROGRESS OF THE GLOBAL PROGRAMME OF ACTION'S STRATEGIC ACTION PLAN
ON MUNICIPAL WASTEWATER OVER THE PERIOD 2000-2001

	Item of the Strategic Action Plan	*	Deliverables
0.	Development of the Strategic Action Plan on Municipal Wastewater	✓	UNEP/GPA Working paper, November 2000.
0.1	Amended version of the Strategic Action Plan on Municipal Wastewater	✓	UNEP/WHO/UNCHS-Habitat/WSSCC Strategic Action Plan incl. Status of implementation, September 2001. (document UNEP/GPA/IGR.1/4)
0.2	Process & approach to develop the guide on municipal wastewater	✓	UNEP/WHO/UNCHS-Habitat/WSSCC Process & approach to develop recommendations for decision-making on municipal wastewater, September 2001. (document UNEP/GPA/IGR.1/5)
1.	<u>Assessment</u>		
1.1	Global overview of the state of affairs	✓	* See: WHO/UNICEF/WSSCC Global Water Supply and Sanitation assessment report 2000 * Contributions to relevant assessments
1.2	Cost/benefit and socio-economic opportunity analyses	+ ✓ ✓ ✓ + + ✓ + +	* North-West Pacific * East Asia * South Asia * South Pacific * Wider Caribbean * Latin America * Eastern Africa * Western Africa * Western Asia * Black Sea
2.	<u>Normative component</u>		
2.1.	Global knowledge base on sewage	✓ ✓ +	* IHE, Delft-NI – Strategy options for sewage management to protect the marine environment, background document * Global knowledge base installed in GPA clearing house * Updates global knowledge base * Guidance on methods for cost-benefit analyses
2.2.	Sanitation connection and other source links	✓ +	* Link to sanicon installed in GPA clearing house * Updates source category node on municipal wastewater
2.3.	Guide on municipal wastewater	✓ ✓	* UNEP-GPA/WHO/UNCHS-Habitat/WSSCC working document, recommendations for decision-making on municipal wastewater, version 1.0, November 2000, containing key principles and annotated checklists * UNEP-GPA/IHE/WHO/UNCHS-Habitat/WSSCC revised working document, guide on municipal wastewater, version 2.0, September 2001, containing key principles and annotated checklists (document UNEP/GPA/IGR.1/INF/4)

	Item of the Strategic Action Plan	*	Deliverables
			<ul style="list-style-type: none"> * UNEP-GPA/IHE/WHO/UNCHS-Habitat/WSSCC revised working document 3.0 * UNEP-GPA/IHE/WHO/UNCHS-Habitat/WSSCC revised working document 4.0 * UNEP-GPA/IHE/WHO/UNCHS-Habitat/WSSCC final document for endorsement
2.4.	Regional annexes to the guide on municipal wastewater	<ul style="list-style-type: none"> + + + + + + 	<ul style="list-style-type: none"> * North-West Pacific * East Asia * South Asia * South Pacific * Wider Caribbean, first draft, background documents available * Latin America, first draft * Eastern Africa, first draft, background documents available * Western Africa * Western Asia * Black Sea
2.5.	Regional meetings, in collaboration with the regional offices and coordination units, to <ul style="list-style-type: none"> - review and improve the key principles and checklists of the guide on municipal wastewater and prepare regional annexes, where appropriate - share experiences (see demonstration component) - identify pilot projects (see capacity building component) 	<ul style="list-style-type: none"> ▼ ▼ + + + 	<ul style="list-style-type: none"> * Wider Caribbean, Ocho Rios, Jamaica, February 2001 (document UNEP/GPA/IGR.1/INF/3a) * Eastern Africa, Dar es Salaam, Tanzania, June 2001 (document UNEP/GPA/IGR.1/INF/3b) * Latin America, Mexico City, Mexico, September 2001 * Eastern Asia & North-West Pacific, Toyama, Japan, September 2001 * South Pacific, Majuro, Marshall Islands, October 2001 * West Asia * Western Africa * Black Sea
3.	<u>Demonstration component</u>		
3.1.	Regional meetings, in collaboration with the regional offices and coordination units, as forums for exchange of expertise and experiences	<ul style="list-style-type: none"> ▼ ▼ + + + 	<ul style="list-style-type: none"> * Wider Caribbean, Ocho Rios, Jamaica, February 2001 (document UNEP/GPA/IGR.1/INF/3a) * Eastern Africa, Dar es Salaam, Tanzania, June 2001 (document UNEP/GPA/IGR.1/INF/3b) * Latin America, Mexico City, Mexico, September 2001 * Eastern Asia & North-West Pacific, Toyama, Japan, September 2001 * South Pacific, Majuro, Marshall Islands, October 2001 * West Asia * Western Africa * Black Sea
4.	<u>Capacity-building component</u>		
4.1.	Identification of pilot projects	<ul style="list-style-type: none"> + + 	<ul style="list-style-type: none"> * Wider Caribbean: provisional listing of candidate pilot projects and follow up * Eastern Africa: provisional listing of candidate pilot projects and follow up * Latin America * Eastern Asia & North-West Pacific * South Pacific

	Item of the Strategic Action Plan	*	Deliverables
			* West Asia * Western Africa * Black Sea
4.2.	Pre-investment studies		
4.3.	Partnership forums		
4.4.	Project-based training		
4.5.	Generic training courses on municipal wastewater management	+	* Proposal GEF-funded project Sea-Train-Coast UNDP
4.6.	Identification regional resource centres		
5.	<u>Coordination</u>		
5.1.	Cooperation with other partners, programmes and institutes (United Nations/non-United Nations)	∨ +	* Cooperation with UNESCO-IHE, NI (MOU) * Cooperation with UNEP-IETC, Japan
5.2.	Preparation/follow-up of regional meetings		
5.3.	GPA clearing-house mechanism	+	ongoing
5.4.	Outreach to international and professional community & review	∨ ∨ + +	* WSSCC 5 th Global Forum, Foz do Iguacu, Brazil, November 2000 * UNESCO Conference on Urban Water Management, Marseille, France, June 2001 * Water Conference, Bonn, Germany, November 2001 * 3 rd World Water Forum, Kyoto, Japan, March 2003
5.5	Fund raising	+	ongoing
5.6	Links to other UNEP/GPA projects	+	National programmes of action
		+	Other source categories
			Partnership-market meetings
		+	Innovative financial mechanisms
		+	Voluntary initiatives involving the private sector

*: legenda

∨ : Accomplished

+ : In progress
