

GEF PROJECT BRIEF COVER PAGE
AS APPROVED BY THE GEF COUNCIL MEETING NOVEMBER 1997

<u>Project Title:</u>	Global International Waters Assessment (GIWA)
<u>Implementing Agency:</u>	United Nations Environment Programme (UNEP)
<u>Country:</u>	Global
Host Country:	Sweden
<u>Country Eligibility:</u>	Not applicable
<u>GEF Focal Area:</u>	International Waters , with relevance to aquatic biological diversity
<u>Operational Programs:</u>	Operational Programs 8, 9 & 10 (with particular relevance to the Regional/Global Technical support component of OP 10) and relevance to Operational Program 2
<u>Project Linkage to National priorities:</u>	see paragraph 1.4
<u>Executing Agencies:</u>	UNEP in collaboration with the University of Kalmar, Sweden, GESAMP¹, SCOPE², ACOPS³, WWC⁴, ICSU⁵, NOAA⁶ and other Regional Intergovernmental Bodies and National Institutions

Summary of Project Rationale, Objective and Expected main outcomes

Rationale:

Lack of an International Waters Assessment comparable with that of the IPCC⁷, the Global Biodiversity Assessment, and the Stratospheric Ozone Assessment, is a unique and serious impediment to the implementation of the International Waters (IW) Component of the GEF, since there exists no basis on which to identify areas of global priority for GEF intervention. There is a need for a globally coherent incremental study of transboundary water issues, based on the many existing, but thematically narrow studies at national, regional and global levels. The GEF is in a unique position to facilitate such a study by assembling groups of specialists at a regional level following comparable methodologies to investigate the ecological status of international waters and the causes of degradation. From the different regional and sub-regional assessments a global picture will emerge.

Objective:

The overall objective is to develop a comprehensive, strategic framework for the identification of priorities for remedial and mitigatory actions in international waters, designed to achieve significant environmental benefits, at national, regional and global levels.

Expected Outcomes:

Strategic information for GEF use at a programmatic level through the provision of a framework for: the identification of regional and global priority areas for the consideration of the GEF and its partners in the focal area of international waters, and decision making concerning appropriate management interventions, including identification of more sustainable approaches to the use of water and its associated resources. Preparation of approaches for the elucidation of incremental cost analyses, and protocols for the conduct of causal chain and transboundary diagnostic analyses in GEF-IW projects. Increase in leveraged co-financing.

¹ Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection supported by the International Maritime Organization (IMO); the Food and Agriculture Organization of the United Nations (FAO); the Intergovernmental Oceanographic Commission (IOC) of UNESCO; the World Meteorological Organization (WMO); World Health Organization (WHO); the International Atomic Energy Agency (IAEA); the United Nations Division for Ocean Affairs and the Law of the Sea; and the United Nations Environment Programme (UNEP).

² Scientific Committee on Problems of the Environment (of ICSU);

³ Advisory Committee on Protection of the Sea

⁴ World Water Council

⁵ International Council of Scientific Unions

⁶ National Oceanic and Atmospheric Administration of the US Department of Commerce

⁷ Intergovernmental Panel on Climate Change

1. Background

1.1 A GEF objective in the International Waters focal area is *"to contribute primarily as a catalyst to the implementation of a more comprehensive, ecosystem-based approach to managing international waters and their drainage basins as a means to achieve global environmental benefits"*. The present proposal addresses the issues of priority setting within the context of the International Waters Portfolio of the GEF and seeks to elucidate the societal causes of water-related issues and problems.

1.2 The GEF Operational Strategy identifies four major areas of concern relating to International Waters, including: *degradation of the quality of transboundary water resources; physical habitat degradation; introduction of non-indigenous species; and excessive exploitation of living and non-living resources*. Whilst these major concerns are, if not universal then at least widespread, their extent and relative importance varies considerably from geographic region to region. The Operational Strategy states that *"GEF's activities will focus on seriously threatened waterbodies and the most imminent transboundary threats to their ecosystems"*. It also identifies certain problems including persistent organic pollutants (POPs), thought to be of global significance but requiring further assessment. Deciding on which waterbodies and which threats should receive priority attention is difficult in the absence of a comprehensive assessment of the ecological status of international waters and related causes of degradation.

1.3 At its fourth meeting in Nairobi, 15-17 February 1996, the GEF Scientific and Technical Advisory Panel (STAP) noted that: *"Lack of an International Waters Assessment comparable with that of the IPCC, the Global Biodiversity Assessment, and the Stratospheric Ozone Assessment, was a unique and serious impediment to the implementation of the International Waters Component of the GEF"*. STAP further noted that *"While there exist a number of assessments of separate aspects of International Waters, there is no holistic assessment of the kind needed to develop an intergovernmental consensus on priorities for action by the GEF"*.⁸ Subsequently during the sixth STAP session, in Amsterdam, 9-12 September 1996, it was agreed that there is a necessity for a region by region assessment of water systems which, taken together, would place these issues within a global context. In the absence of an overall, comprehensive, global assessment of the nature, extent, and distribution of particular issues and problems affecting international waters, and their societal causes, the strategy for GEF in the International Waters portfolio lacks adequate criteria for priority setting. Selection of projects in this portfolio to date has been undertaken in the absence of a clear understanding of the global priorities for action and information concerning the optimum sites for maximising global environmental benefits.

1.4 The urgent need for an assessment of the causes of environmental degradation has been highlighted in recent international fora such as **the UN Special Session on the Environment (UNGASS)** 23 June 1997, where commitments were made regarding the work of the UN Commission on Sustainable Development (UNCSD) on freshwater in 1998 and seas in 1999. In two recent international Declarations, the **Potomac Declaration on Oceans and Security** (Washington, D.C., May 21, 1997), and the **Stockholm Statement on Interaction of Land Activities, Freshwater and Enclosed Seas** (Stockholm, August 14, 1997), specific emphasis was placed on the need for an assessment which examines the root causes of degradation of the transboundary aquatic environment and options for addressing them. In his recent speech to the UN General Assembly, the Secretary General, Mr. Kofi Annan noted the achievements of GEF and the need to replenish the fund. He also stressed the importance of UNEP's role "as the forum for development of international policy, law and negotiation and implementation of co-operative arrangements to deal with environmental issues, as a bridge between science and policy-making". In the light of all of these developments, this assessment would appear to be both appropriate and timely.

1.5 The GEF is in a unique position to facilitate such an assessment by assembling groups of specialists at a regional level following compatible methodologies to investigate the ecological status of international waters and the causes of degradation. From the different regional and sub-regional assessments a global picture will emerge. The challenge faced by GIWA though timely, is onerous. In effect, GIWA, through the GEF should be in a position to provide technical information necessary to support much of the political dialogue undertaken within the forum of the UNCSD as a follow-up to initiatives such as UNGASS.

⁸ UNEP/GEF/STAP/4/6

2. Project Rationale and Objective

2.1 Lack of an International Waters Assessment comparable with that of the IPCC, the Global Biodiversity Assessment, and the Stratospheric Ozone Assessment, is a unique and serious impediment to the implementation of the International Waters (IW) Component of the GEF, since there exist no basis on which to identify areas of global priority for GEF intervention. There is a need for a globally coherent incremental study of transboundary water issues, based on the many existing, but thematically narrow studies at national, regional and global levels.

2.2 The overall objective is **to develop a comprehensive strategic assessment that may be used by GEF and its partners to identify priorities for remedial and mitigatory actions in international waters, designed to achieve significant environmental benefits, at national, regional and global levels.**

2.3 To meet this objective the project aims to produce a fully comprehensive and integrated Global International Waters Assessment, encompassing the ecological status of and causes of environmental problems of transboundary freshwater basins and their associated coastal and ocean systems. The GIWA will undertake this from the perspectives of: water quality and quantity; associated biodiversity and habitats; their use by society; the societal causes of the regionally identified issues and problems; and scenarios of future conditions based on projections of demographic, economic and social changes associated with the process of human development.

3. Baseline Course of Action

3.1. The most recent comprehensive global assessment of the environmental problems of the Oceans is that published by GESAMP⁹ in 1990. The recently completed Comprehensive Freshwater Assessment (1997), undertaken by relevant UN organisations and the Stockholm Environment Institute at the request of the UNCSO, provides an overview of freshwater resources and their present use. This assessment provides scenarios of the probable situation in 2025, based on existing driving forces of change and as such is the first assessment in this area to take a forward looking approach. However it is inadequate in the assessment of transboundary freshwater basins and associated transboundary groundwaters.

3.2 Several thematic assessments and compilations of data relevant to the GEF International Waters portfolio are available or planned by the FAO, IOC, IUCN, WWF, UNEP, World Bank, SCOPE, GESAMP, GEMS, IGBP/LOICZ¹⁰, and World Water Council, amongst others, whilst numerous regional and sub-regional assessments of freshwater and marine problems are available, including the transboundary diagnostic analyses completed to date within the framework of GEF project activities. On-going regional assessments of the impact of land-based activities on the marine environment are also being conducted within the framework of the GPA/LBA¹¹. A preliminary bibliography prepared during the PDF-B phase lists several hundred relevant assessments and access points for meta-data catalogues and holdings, providing a substantial basis on which to build a comprehensive global assessment of International Waters issues and problems.

3.3 Past assessments have generally lacked the holistic, systems approach advocated by the GEF, since they have concentrated on specific issues such as biodiversity, or have treated freshwater independently of the associated marine and coastal systems. Assessments tend to be sectorial and it has been difficult to achieve a holistic approach with the existing international institutional structures. Such activities will continue in the absence of the overarching framework that will result from **this project which is itself an incremental activity** that is unlikely to be initiated without the intervention of the GEF.

4. Alternative Course of Action

4.1 Description of the GEF Intervention

4.1.1 The geographic scope of the project is **global with a defined regional focus**. It is

⁹ GESAMP: State of the Marine Environment. UNEP/RSRS No. 115, UNEP 1990.

¹⁰ Food and Agriculture Organization of the United Nations; Intergovernmental Oceanographic Commission of UNESCO; IUCN - The World Conservation Organization; World Wildlife Fund; Global Environment Monitoring System (of UNEP); International Geosphere-Biosphere Programme, Land Ocean Interactions in the Coastal Zone.

¹¹ Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

anticipated that governments having interests in transboundary fresh waters (both surface and subsurface) and marine waters and their dependent resources will participate through **involvement of national scientific and technical experts, managers and policy makers.**

4.1.2 The scientific and technical scope of the project is primarily defined by **the linkage between transboundary freshwater and marine systems**, but encompasses other issues relating to freshwater and marine systems separately. The substantive scope of the project includes an integrated assessment of the environmental, managerial, scientific, legal, social and economic aspects of water-related environmental problems.

4.1.3 GIWA is **not foreseen as primarily a data gathering exercise.** It will gather only that information required to complete a stepwise, iterative analysis of transboundary water-related problems and their causes. This information **will be used to generate scenarios** reflecting continuation of current practices, and adoption of environmentally sustainable alternatives. The analysis requires a broad base of information from the physical and social sciences, that accounts for the geographical and geopolitical peculiarities of countries and regions and reflects the different rates of change in social, cultural and economic practices characterising the process of "human development".

4.1.4 On the one hand, GIWA must conduct a **globally coherent assessment of the ecological status of transboundary waters.** On the other, it will probe **societal causes** of the identified issues whether or not these are geographically located on the rivers or seas themselves. It will quantify some of the hidden environmental costs or externalities of existing domestic, industrial, agricultural and transport practices and compare prevailing practices with more environmentally, socially and economically, sustainable approaches.

4.1.5 Specifically, the scope of the project will encompass the completion of: a regional (region by region) assessment of the ecological status and causes of degradation of transboundary water systems, including cross-cutting elements of widespread practices; assessment of societal causes of identified major concerns and principal issues; up-to-date, issue-related global reviews of selected issues of relevance to International Waters; a global overview of inter-regional transboundary issues in the area of international waters; and scenarios of future trends and state of the aquatic environment and resources under various planning bounds of social and economic change and development

4.2 GIWA Activities Leading to Expected Outcomes and Results

4.2.1 The pre-project preparatory phase

4.2.1.1 This phase, **already completed**, had the main objectives of defining the thematic analytical scope of GIWA and establishing the operational geographic units of assessment, the documents available from this phase are listed in Annex I. The first expert group examined internationally recognised water-related environmental issues with transboundary consequences at the regional or global levels (Annex II); identified the primary socio-economic forces causing water related environmental degradation (Annex III); and developed a matrix illustrating the interactions between the major concerns and principal issues (Annex IV). The group was able to evaluate suitable approaches for examining the status and causes of the identified problems through a "causal chain approach" and demonstrate how alternatives and options for subsequent action involving the GEF may be identified (Annex V). The approach is applicable, with small variants, to all types of international waters: seas; rivers; lakes and groundwaters. It needs to be extended to examine uncertainties, policy options and barriers to addressing the causes, but the power and utility of the methodology are amply illustrated.

4.2.1.2 The second expert group developed the geographical framework for GIWA. The task was to divide the world into a series of areas based upon a mix of environmental, biogeographical and geopolitical factors which seemed the most appropriate for the purposes of this project. The main determining factor was the integrity of each unit in terms of encompassing the major causes and effects of environmental problems associated with each transboundary water area, whether river basin, groundwater, lake or sea. In many cases a drainage area and associated marine basin (often a Large Marine Ecosystem) were the most appropriate units. Sixty six of these sub-regions were identified and grouped into nine Regions, for the convenience of project management only. **The 66 sub-regions will be the basic units of assessment of GIWA and are listed in Annex VI.**

4.2.1.3 In order to illustrate the plausible utility of GIWA's analytical approach, a preliminary table (Annex VII) was developed as an indication of the potential regional importance of each of the major water-related environmental concerns and principal issues identified by the first expert group. This table provides a means of scoping the full assessment and will be further developed during execution of GIWA, through the iterative analysis of quantitative information and scientific reviews, gradually becoming more objective and detailed in its geographical coverage.

4.2.2 The Establishment of the GIWA network and development of an assessment protocol¹²

4.2.2.1 The network established to accomplish the work of GIWA (**the GIWA network**) will consist of national experts and institutions, regional and global collaborating bodies organised around the geographic units of assessment and grouped into nine major regions. A preliminary list of possible collaborating agencies is provided in Annex VIII. Wherever and whenever possible existing regional and thematic networks will be used. Overall co-ordination of the work of the participating individuals and institutions will take place through **Focal Points** for each of the sub-regions who will participate in the work of **Nine Regional Task Teams**, of (between 10 and 15 members) supported and assisted by a **Core Team** of (between 4 and 6) full-time specialists covering both regional and thematic concerns. The Core Team will be advised by, and report to, a **Steering Group** of (between 12 and 15) senior scientists and representatives of the major co-sponsoring organisations. Individual members of the Core Team will function as links to, and focal points for, one or more of the Regional Task Teams. During the first three months, the primary task of the Core Team will be to build upon the work undertaken during the preparatory phase, establish the major components of the network and prepare recommendations concerning the establishment of the components of the GIWA network, for consideration by the Steering Group.

4.2.2.2 The first meeting of the Steering Group, will be convened within four months from commencement of the project to agree upon the **principal components of the GIWA Network**, namely the composition of the Regional Task Teams, and the regional organisations hosting the Task Teams. The network is intended to be "open-ended", to consist, at least in part of a network of networks and is expected to grow according to the needs and in-kind contributions of sponsors and participants. During the subsequent six months, the Core Team will convene the necessary expert consultations for the completion of a preliminary **GIWA Assessment Protocol** and will convene first meetings of all Regional Task Teams to review the protocol. They shall also draw upon the experience of the regional teams in order to design an approved methodology for conducting causal chain analyses to examine societal root causes of water related environmental problems and guidelines for the conduct of transboundary diagnostic analyses - a primary GIWA product applicable to GEF IW projects particularly in the GEF Operational Programme 8. In addition, the expert consultations will identify the needs for establishment of **Thematic Task Teams** and should also identify needs for case studies where strictly necessary, particularly in the socio-economic domain. The Thematic Task Teams may need to meet twice during the first year in order to assist the Core Team with the development and finalisation of the assessment protocols. The Regional Task Teams will convene once during the first year and working closely with the Core Team shall complete **the initial products of GIWA by the end of project year one**.

4.2.2.3 **The anticipated products at the end of year one are:** a global network of collaborating institutions/organisations and individuals in governmental and non-governmental organisations; a meta-data catalogue of existing/completed projects in all regions; a GIWA assessment protocol including an agreed methodology for conducting causal chain analyses to examine societal root causes of water related environmental problems, an agreed methodology for conducting transboundary diagnostic analyses at regional scales; detailed approaches to the application of incremental cost analysis in International Waters projects; a preliminary analytical tool for the analysis of the ecological status of water-related environmental issues and their societal causes (this will subsequently be a component of all TDAs).

4.2.3 The analytical phase of GIWA

4.2.3.1 During the second twelve months the national experts and institutions shall **gather and analyse the information**, necessary for applying the GIWA assessment protocol at the sub-regional level. They will be assisted in this task by the Regional Task Teams, the Core Team and where necessary the Thematic Task Teams. Based on the products of the sub-regional

¹² See section 8. Institutional Framework for detailed information on the various components of the GIWA Network

assessments, the Thematic and Regional Task Teams, together with the Core Team shall commence, and as far as possible complete the regional level assessments. This process will be designed in an iterative manner in order to review the quality and relevance of the information gathered and to ensure comparability and compatibility of the analyses. There will be differences in the approach required in each region as some regional studies have already consolidated the information required by GIWA, whereas others have very scarce and fragmented information.

4.2.3.2 **GIWA products** resulting from these activities will include: regional meta databases and bibliographies to be issued on CD ROM; contributions to the Internet site prepared by IW-learn; approximately 66 sub-regional reviews of the transboundary ecological status and major water related concerns and principal issues, including analyses of their causes; published guidelines for preparation of a causal chain analysis for use in GEF regional level transboundary diagnostic analyses; guidelines for the application of transboundary diagnostic analyses in GEF IW projects particularly in the GEF Operational Programme 8; and regional reviews of issues and their societal causes for widespread dissemination.

4.2.3.3 Of particular concern during this phase will be the information requirements for socio-economic analyses as these will be the major driving forces built into the possible scenarios. A major task will be to dis-aggregate existing data (generally assembled on the basis of geopolitical divisions and without regard to their relationship to the environment and the distribution of natural resources) and regroup it according to environmentally relevant geographical areas describing transboundary systems. A **Thematic Economic Task Team** will be established to: oversee this work; provide advice and assistance to some regions; and to ensure consistency in the application of the GIWA assessment protocol. Simultaneously the Core Team, assisted by the Thematic Task Teams will develop the draft methods and approaches to be used during the predictive and policy options analysis phase.

4.2.3.4 It is anticipated that the **Regional Task Teams** will need to meet an average of two times during the analytical phase. Much of the work will depend on day-to-day electronic mail communications established by the Regional Task Team members and the individual experts working at national level. It is hoped that some of the GIWA donors may be prepared to establish scholarships at relevant postgraduate research departments in order to provide additional dedicated intellectual input to the GIWA process. In addition to the meetings of the Regional Task Teams, there will be a number of **Thematic Task Team** meetings in which experts from the regional groups, and outside specialists will meet together, in order to: discuss progress with implementation; facilitate improved quality of GIWA products; and to bring peer pressure to bear on any team that is performing inadequately. The participation of experts from established international bodies such as ICSU and GESAMP will be essential in this work. The expertise needed to cover transboundary freshwater, marine, coastal and groundwater issues as well as societal causes of degradation and driving forces of change, cannot presently be found within any single international body.

4.2.3.5 The GIWA Core Team shall ensure that the necessary support is provided to the Regional and Thematic Task Teams during this phase of the project. They shall facilitate the provision of additional expertise to regions requiring such support and actively promote GIWA to additional potential donors.

4.2.3.6 The Thematic Task Teams in collaboration with the Core Team, shall begin the elaboration of a series of global reviews based on the outcomes of the work of the UNCSD. These will be developed through integration of information from the regional studies and historical information and will be completed and published in the third year of GIWA. In some cases, these reviews will be based upon existing programmes/reviews conducted by the contributors to GIWA. The work of existing bodies will not be duplicated and GIWA will serve to provide added value where possible.

4.2.4 The predictive/policy options analysis phase

4.2.4.1 During the third year of GIWA, dedicated to scenario development and policy options analysis, the work of the Task Teams and the Core Team will be focused upon **the evaluation of alternative scenarios**. The analyses will incorporate a number of scenarios developed on the basis of projected actions taken to address the identified societal causes of environmental degradation. The initial starting point for these scenarios will be "current trends". In effect, from an economic perspective, the analyses will consider the implications of measures to internalise

environmental externalities in the evaluation of alternative options for water use. Different alternative approaches will be considered in order to reach a given objective (alternative scenarios, policy changes, investment in technological solutions, etc.). From a social perspective, the analysis will consider the incremental cost of measures to encourage the modification of unsustainable social and economic development trends. The **uncertainties** in the scenarios must also be identified and clearly stated.

4.2.4.2 The predictive phase of the assessment will build on the studies and analyses undertaken over the entire three-year period of GIWA. The products will be finalised in the third year when sufficient validated data from the sub-regional and regional analyses become available. This phase will require the participation of well-recognised regional and international experts, supported where possible from the bodies and donors contributing to GIWA itself. This phase of the work will not be treated as a merely academic exercise but will actively involve stakeholders from governments, industry and all levels of society. The **principal product** from the third year of GIWA will be a detailed scheme for placing priorities on transboundary environmental issues in the various sub-regions.

4.2.4.3 Products at the end of year three will be: nine regional and 66 sub-regional scenarios of the future state of international waters based on planning bounds reflecting differing rates of change and industrialisation, population and development trends; a global analysis of the societal causes of identified water-related, major concerns and principal issues; a global overview of the relative importance of the various major concerns and principal issues by region; and a significant number of global reviews of topics through the regional reviews and the work of UNCSO;

4.2.5 Dissemination of the GIWA products

4.2.5.1 The final phase of GIWA will be dedicated to the preparation and dissemination of the global and regional GIWA products. Whilst numerous intermediate products will have been produced and disseminated during the earlier phases of the project many of these will be of a highly technical nature. During this phase emphasis will be directed towards the preparation of **reviews that are easily comprehensible to various sectors of society**. GIWA should not remain a desk exercise but should be made available to the public in general, to educational institutions and to national and regional authorities. The GIWA meta-data base and regional reports should be **freely available** through electronic communications, on CD ROM and, where strictly necessary, in hard copy. The GIWA Core Team and the Task Teams together with specialists on public education and awareness will complete this work. **Anticipated products** from this phase include: popular educational and information materials concerning transboundary water-related environmental problems on a regional basis; CD-ROM's of data and information for use in decision making; a meta-data catalogue of relevant assessments, data and information sources available via the Internet; and substantive contributions to an Internet website for international waters to be established in close co-operation with the GEF IW-Learn project implemented by UNDP.

4.3 Expected Outcomes/Results

4.3.1 Expected outcomes of the project will be:

- strategic assessments of ecological status of transboundary waters for GEF use at a programmatic level through the provision of an assessment of ecological priorities at the regional and global scales concerning issues and problems in the focal area of international waters;
- provision of a framework for GEF projects to decide upon appropriate management interventions including remedial and mitigatory actions in international waters, of value to the GEF, regional international organisations, and governments participating in the GEF;
- identification of more sustainable approaches to the use of water and its associated resources, at national regional and local levels;
- protocols for the conduct of causal chain and transboundary diagnostic analyses for use in GEF International Waters Projects by the Implementing Agencies;
- a considerable increase in leveraged co-financing as a result of improved focusing and credibility of future interventions and projects;
- a baseline of information at the regional and sub-regional level which will facilitate the regional task of preparation of Transboundary Diagnostic Analyses within new projects

and improve the capacity to evaluate projects underway or within the existing GEF pipeline.

5. Project Risks and Sustainability

5.1 As noted in the Logical Framework Matrix (Annex IX) the success of project implementation is based on the assumptions that governments will support the process of GIWA execution and will actively contribute to it and further that governments and donors will accept the results of the assessment.

5.2 Progress to project completion is dependent upon the preparation of sub-regional reviews and analyses in an orderly and timely manner to permit their aggregation to regional and global scales. It is also assumed that the sub-regional reviews and analyses will be of comparable quality permitting regional level aggregation of information and analysis at broader scales. Both these assumptions seem likely to be met through the proposed organisational structure.

5.3 One further assumption relates to the nature in which social and economic data are normally aggregated on the basis of political and administrative boundaries and without regard to environmental boundaries. Handling such data during the analytical phase will require their disaggregation and re-aggregation and it was the opinion of the second working group that although time consuming such a re-aggregation was possible.

6. Dissemination of Project Results

6.1 As noted in section 4.2.5 the final phase of GIWA will be dedicated to the preparation and dissemination of the global and regional GIWA products. Throughout the life of the activity information and analyses will be produced in a variety of forms and disseminated widely by various means including Internet, CD ROM's and in print media where necessary.

8. INSTITUTIONAL FRAMEWORK AND EVALUATION

8.1 Institutional Framework

8.1.1 Supporting Organisation:

8.1.1.1 The project will be executed by the University of Kalmar at the Global level, assisted by a UNEP appointed Core Team of scientists. The Core Team will be located in the City of Kalmar, Sweden, at the Marine Biological Centre of the University of Kalmar.

8.1.1.2 The University of Kalmar has a well established profile in natural science and technology with special emphasis on the environment and marine biology. There are established Chairs in Natural Resource Management, Aquatic Ecology and Technical Environmental Science. Doctoral studies in Agenda 21 have been established at the University. Nautical Officers and Marine Engineers are trained at the Merchant Marine Academy, which is equipped with advanced simulator capacity.

8.1.1.3 The Host Country Agreement between UNEP and the Swedish Government and the Agreement between UNEP, the University of Kalmar and the Municipality of Kalmar are provided in Annexes XIV and XV. Annex XV provides details of the support to be provided by the University of Kalmar to the work of the Core Team. The University of Kalmar will be responsible for managing the funds provided to support the work of the Core Team and all components of the GIWA Network, and for timely production of financial reports to UNEP.

8.1.2 The Core Team:

8.1.2.1 The Core Team will consist of between 4 – 6 professionals (depending upon available co-financing) headed by a Scientific Director, and appointed by UNEP, see Figure 1. The Terms of reference for the Core Team and for individual professional staff within the team are attached as Annexes XVI and XVII to this document. All the proposed substantive activities will be managed and co-ordinated on a day-to-day basis by the UNEP Core Team, in consultation with UNEP HQ (Division of Environmental Assessment and Early Warning) and the University of

Kalmar. UNEP will designate a Programme Officer in the Division of Environmental Assessment and Early Warning as the half-time focal point for the implementation of the project.