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PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT • PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE
ПРОГРАММА ОРГАНИЗАЦИИ ОБЪЕДИНЕННЫХ НАЦИЙ ПО ОКРУЖАЮЩЕЙ СРЕДЕ

Global International Waters Assessment

Project Number GF/1100-99-01

Terminal Evaluation

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July 2006

EVALUATION OF THE GLOBAL INTERNATIONAL WATERS ASSESSMENT (GIWA) PROJECT

I. Background

1. The Global Environment Facility (GEF) Secretariat funded a project implemented by the United Nations Environment Programme (UNEP) entitled “the Global International Waters Assessment” or GIWA as a means of identifying critical and key issues facing the waters of the world. Its purpose was to establish a framework within which the GEF could prioritise potential projects to be executed within the framework of the GEF International Waters (IW) portfolio. The GIWA Project was implemented utilising funds provided in part through the Global Environment Facility.

2. The Global Environment Facility or GEF was created by the governments of the world as a financial mechanism whereby developing countries could be assisted in the design and implementation of activities required pursuant to their commitments as signatory nations under specific global conventions on the environment.¹ It was designed not as a new international organization but rather as a financial mechanism to be jointly administered and managed by existing international organizations or Executing Agencies; namely, the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and The World Bank (WB), each existing agency being envisioned as having a distinct role within the GEF. These roles were related to the agencies’ primary missions; to wit, institutional development and capacity building, environmental planning and strategy, and infrastructure and financing.²

3. In the mix of portfolios—international waters, biodiversity, climate change, ozone depletion, land degradation and persistent organic pollutants, the focal area of international waters differed from the other convention-based activities of the GEF, being based not upon a single overarching international convention as in the case of climate change, biodiversity conservation, land degradation and POPs, but on a multitude of binational regional, and international conventions, treaties and agreements that were constantly evolving. Consequently, the focus and scope of the international waters portfolio has been difficult to identify and articulate.

4. The GEF Operational Strategy defines “international waters” as including the oceans, large marine ecosystems (LMEs), enclosed or semi-enclosed seas and estuaries, and rivers, lakes, groundwater systems, and wetlands with transboundary drainage basins or common borders. The global hydrological cycle provides a common connection between many of these elements. The diversity and complexity of issues of concern within the international

¹ Initially, these conventions included the Convention of Biodiversity, the United Nations Framework Convention on Climate Change, the Montreal Protocol of the Vienna Convention on Ozone Layer Depleting Substances, and the United Nations Convention on the Law of the Sea, including its protocols. Subsequently, the GEF became the funding mechanism for the Stockholm Convention on Persistent Organic Pollutants (POPs) and the United Nations Convention to Combat Desertification.

² Subsequently, other United Nations (UN) bodies—namely, the Food and Agriculture Organisation of the United Nations (FAO) and the United Nations Education, Scientific and Cultural Organisation (Unesco)—were identified as GEF Executing Agencies with Expanded Opportunities.

waters portfolio has continued to be a hallmark of this part of the GEF strategy. Typical projects ranged from the very specific initiatives of the construction of facilities to receive shipboard waste, to the broad strategic initiatives of the Danube River Basin programme, with numerous other initiatives in between. Many international waters projects include cross-cutting elements that involve, complement, and support actions that relate to the other focal areas. In an effort to provide a more rational framework within which this breadth and range of projects could be considered and positioned, the GEF funded the Global International Waters Assessment project as a tool whereby the various international waters interventions could be framed, and as a mechanism for identifying and prioritizing future GEF international waters projects.

5. As of June 2005, the majority of the work elements that formed the GIWA were essentially completed (in some form), and the GEF funds allocated for the project had been expended. The project team was being dispersed and no further actions were contemplated, although several additional project outputs remained in process and were being completed utilising the remaining counterpart funds. This terminal evaluation was conducted by Dr. Jeffrey A. Thornton, an independent consultant to UNEP,³ during these final days of the project. The evaluation was based upon discussions, documents, and data examined during the course of an evaluation mission undertaken during mid-August 2005. The mission visited Kalmar, Sweden, and Nairobi, Kenya, during which visits Dr. Thornton interviewed project staff, consulted with the project management team, and held telephonic discussions with key personnel currently based in locations other than those visited.

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II. Overview of the Project

A. STATEMENT OF THE PROBLEM

1. Water resources are critical to the survival of humans and other life on the planet. Consequently, the countries of the world traditionally have viewed water resources issues as priority issues for economic development. More recently, water resources have also been recognised as an essential element in the global environment, with broad implications for all living things.

2. Water is unevenly distributed across the planet, with certain areas of the globe having more or less water, dominated by either marine waters or fresh waters, the latter being comprised of lakes, streams, impounded waters, and ice sheets, including the polar ice caps. The freshwater element of the global hydrological cycle is the smallest portion of the available water, yet vital for economic and ecologic purposes. Where freshwater resources are scarce, as in arid and semiarid regions, humans have constructed reservoirs and devised alternative water supply systems to make up, in part, for this deficiency.

3. Marine waters, too, have great economic import, as systems for the conveyance of goods by means of marine transportation systems, and as sources of protein for a large portion of the global community. More recently, the coastal zones of the continents have served as foci for the development of human settlements. All of these issues are stressors that modify the continued availability and viability of the oceans as sources of food and as avenues of economic activity, to the point that the approximately last 500 year period of the second millennium was marked by struggles for dominance of the world oceans, and the last 50 years by environmental crises associated with overexploitation of marine resources and water pollution concerns.

4. While numerous bilateral and multinational initiatives have been concluded over this period, there is no one single global convention on the waters of the Earth. The closest approximation to such an instrument is the United Nations Convention of the Law of the Sea (UNCLOS). This “lack” distinguishes the GEF International Waters portfolio from the other components of the Global Environment Facility (GEF), which are supported by global conventions targeting specific issues, such as biodiversity, climate and ozone depletion.⁴

5. Notwithstanding, however, the waters of the world have not been ignored. Many major transboundary rivers, regional seas, and even aquifers are subject to various treaties, agreements and conventions, and even the open ocean is subject to legal arrangements between and amongst governments [although most such agreements are tightly focused on specific concerns].⁵

⁴ The Project Document notes that “the lack of an International Waters 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.”

⁵ More than 400 treaties, conventions, agreements and protocols governing international freshwaters have been documented during the period 1820 through 2001; see UNEP (2002), *Atlas of International Freshwater Agreements*, United Nations Environment Programme, ISBN 92 807 2232 8. See also FAO/Unesco (2005), *Groundwater in International Law: Compilation of Treaties and Other Legal Instruments*, FAO Legislative

6. Consequently, the GIWA Project was conceived as a means of producing “a fully comprehensive and integrated Global International Assessment...to provide an overarching structure and framework for deciding those issues and problems, and those regions, that would receive priority in the GEF International Waters Portfolio.”⁶

B. PROJECT GOALS AND OBJECTIVES

7. The overall objective of the Global International Waters Assessment (GIWA), as stated in the Project Document, was “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.” This objective was restated in the Logical Framework Analysis, Annex II of the Project Document, as developing “a comprehensive and 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.” The first is a very specific and utilitarian objective that is, at once, practical and appropriate, and focused on the GEF. The second, although it, too, should be viewed in the context of the GEF given the fact that the Annex is a subsidiary document to the Project Document, indicates a much broader mandate. In the end, the final outcome of the project went beyond the GEF-specific mandate and attempted, in part, to distinguish issues, problems, and priorities on a global scale external to the GEF. While a laudable goal and consistent with the restated objective of the Logical Framework Analysis, this “confusion” has resulted in certain tensions and disconnects in the project, and its subsequent execution, not all of which are negative and some of which form a logical continuation of the project “concept” as it was executed by the project team.

8. There were four, stated components to the project; namely, establishment of the GIWA network and development of an assessment protocol, synthesis of regional knowledge acquired within the networks and preparation of the regional and thematic reviews, prioritisation and policy development, and dissemination of work products. Achievement of these goals and objectives would have produced a final product⁷ that is wholly consistent

Study No. 86, ISBN 92-5-105231-X. Examples of some of these agreements include the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, the Abidjan Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, the Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, the Guatemala Convention for the North-East Pacific, the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area, and the Oslo and Paris Conventions for the Protection of the Marine Environment of the North-East Atlantic, as well as the 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses, and regional agreements such as the Agreement on the Protection of the Meuse, the Convention on the Protection of the Rhine, the Treaty for Amazonian Cooperation, and the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, among others.

⁶ GEF Project Database: Global—Global International Waters Assessment (GIWA), “Description.”

⁷ The GIWA produced a series of documents, identified in Annex I and Annex III, which contributed to the formulation of the final report on the Assessment: United Nations Environment Programme (2005), *Challenges to International Waters—Regional Assessments in a Global Perspective*, University of Kalmar (Sweden), ISBN 91-89584-47-3. The term “final product” refers to the cumulative output of the GIWA, both published and

with the role of the United Nations Environment Programme, in general, and specifically with the role of that entity within the GEF; to wit, UNEP is specifically tasked within the GEF to provide strategic guidance through the Scientific and Technical Advisory Panel (STAP), promote regional and multi-country cooperation to achieve global environmental benefits, advance knowledge for environmental decision-making, develop and demonstrate technologies, methodologies and policies, and build capacities to implement environmental strategies.⁸

C. PROJECT IMPLEMENTATION

9. The GIWA project was executed from the University of Kalmar (Sweden) by an international project team with support from Nairobi. Significant elements of the project were executed by small teams,⁹ coordinated by regional staff, subsidized by the project, and supported, in part, by the project core team in Sweden. Project management services were provided by UNEP with the support of the United Nations Office at Nairobi (UNON).

10. The GIWA project was expected to complete its work within four years (48 months), following a twelve month project preparatory phase funded through the GEF Project Development Facility (PDF), Block B, grant facility.

11. The implementation of the GIWA project predates the GEF-Secretariat requirement for the identification of monitoring and evaluation indicators.¹⁰ However, these indicators—process indicators, stress reduction indicators and environmental indicators—can be inferred, in part, from the project brief. Consequently, the following elements have been employed in the place of stated indicators in the conduct of this evaluation:

Process Indicators:

- a. Subregions identified—(during the PDF-B phase) 66 subregions to be employed in the project execution
- b. GIWA Network established—nine regional task teams of 10 to 15 members each, supported by a 4 to 6 member core team of specialists under the general direction of a 12 to 15 member steering group
- c. GIWA Assessment Protocol published—a methodology for conducting causal chain analyses and root cause assessments for use in transboundary diagnostic

unpublished, and to the totality of thought, writings and philosophy encompassed within the Global International Waters Assessment, summarised in the aforementioned document.

⁸ United Nations Environment Programme (2005) *UNEP in the Global Environment Facility: Annual Report 2004*.

⁹ The project teams were comprised of experts who participated in the development of the sub-regional reports. These professionals received travel support and subsistence allowances to attend meetings, but did not receive other remuneration from the project. For this reason, these individuals served in an essentially voluntary capacity and are referred to herein as “volunteers” to distinguish their contributions from those of the paid staff.

¹⁰ See GEF Council Document GEF/C.22/Inf.8, PROGRAM PERFORMANCE INDICATORS FOR GEF INTERNATIONAL WATERS PROGRAMS (Prepared by the Monitoring and Evaluation Unit), dated November 11, 2003.

- analyses (TDAs),¹¹ the principal mechanism for defining strategic action programs (SAPs) to address priority water resources issues
- d. Thematic economic task team established—geopolitical data reassembled as transboundary regional data and included within (draft) reviews of topics identified by the United Nations Commission on Sustainable Development (UNCSD)
 - e. Predictive and policy option methodology defined—by the core team
 - f. Case studies selected and Regional topic reviews published—complementing but not duplicating the work of existing programmes
 - g. Global and regional products produced—products “freely available” in electronic form, CD-ROM or, “where strictly necessary,” in hard copy to popular and professional audiences.

Environmental Indicators:

- h. Information assembled and analysed at the subregional level—regional metadatabases and bibliographies completed and used to derive “major water related concerns and principal issues” and guidelines for the preparation of causal chain analyses and diagnostic analyses
- i. Scenario analysis and policy option analysis completed—the task teams and core team will define current trends and forecast the consequences of countries internalizing environmental externalities and incremental costs of modifying social and economic trends
- j. Regional and subregional scenarios developed—the future state of the 9 regions and 66 subregions and “a significant number of global reviews” will be available

12. Of these presumed indicators, items a through c were to be produced during year 1 of the project, items d to f and h were to be produced during year 2, items i through j were to be produced during year 3, and item e was to be produced during year 4.

13. In addition to these indicators, the Logical Framework Analysis identified several indicators of achievement. In terms of the outputs, six indicators were identified:

- a. development of a global overview of the relevance of the major concerns and principal issues by region
- b. conduct of a global assessment of the societal causes of the major concerns and principal issues
- c. completion of 66 sub-regional reviews
- d. preparation of 9 regional and 66 sub-regional scenarios of the future state of international waters

¹¹ The causal chain methodology is a process whereby various issues and concerns that are merely symptoms of a causal effect are traced back to their root cause; this methodology is also known as a root cause analysis. For any given symptom or environmental manifestation of a problem or concern, there are underlying causes that relate to immediate (physical, biological, chemical) variables that, in turn, are related to sectoral causes that reflect socio-economic factors, political-legal factors, and cultural factors, the root causes of which may be institutional, capacity-related, or reflective of conflicting or misplaced incentives (regulatory, economic, or policy related).

- e. publication of the causal chain and transboundary diagnostic analysis methodologies
- f. provision of approach to incremental cost analysis.

14. Additional indicators to determine if the project served its intended purpose and met its goals were developed:

- a. Production of a detailed scheme for determining priorities among issues and projects
- b. Adoption of the framework by the GEF for use in the International Waters focal area
- c. Adoption of the framework by donors and organisations for selection of priority projects in the area of international waters management.

15. While the detailed analysis of project implementation is set forth in the next Section, it would be appropriate to note at this juncture that the project was boldly conceived (and, on the whole, well executed) but probably doomed to fail in an absolute sense from the outset. The primary cause of this programmed failure is obvious in hindsight; namely, the fact that the project proposed to deliver four major work products/programmes in four years utilizing an essentially voluntary staff with full time commitments in their home institutions—ignoring momentarily the full time project staff. This overly ambitious timeline for the project could not accommodate the staffing and personnel issues facing the project in its early days. Advertising, interviewing, and acquiring appropriate staff consumed vital time that should have been devoted to the execution of the project activities. Further, changes in personnel that occurred in the early days of the project also led to disruptions in the production of work products and also consumed valuable time.

16. The timeline also could not accommodate the trial-and-error approach to the development of methodologies; the development of new methodologies, especially innovative methodologies such as that envisioned in the GIWA project document, is unpredictable, and, in the event, was subject to at least one “false start.” The initial attempts to devise a “GIWA methodology” resulted in a formula that proved unworkable in both developed and developing countries.¹² However, to reach this stage, considerable time was devoted to the effort, and the project team had to essentially “start from scratch” in developing a workable methodology. While this re-start eventually led to a workable methodology,¹³ it delayed the next stages of project implementation and made it impossible for the project to meet its timeline.

17. In the end, the impossible timeline influenced the future execution of the project to such an extent that unconditional success was impossible. However, and notwithstanding this limitation, the project did accomplish the major part of its goals and potentially surpassed

¹² See item 6: Report of the second meeting of the GIWA Steering Group, Doc. SG2:10, March 2000.

¹³ Global International Waters Assessment (2001), GIWA Methodology: Stage 1: Scaling and Scoping—Guidance to the Methodology and its Use, Kalmar University; Global International Waters Assessment (2002), GIWA Methodology: Detailed Assessment: Causal Chain Analysis and Policy Option Analysis, Kalmar University.

these through the creation of the task teams that executed the bulk of the day-to-day work of the project.

18. The next section of this evaluation addresses the specific indicators established for the project, its outcomes and its management. However, the comments offered should be viewed against the background of the foregoing concerns, which mitigate many of the issues raised by previous reviewers which suggested that the project as a whole was at risk of failure. Clearly, the project did not fail, and the outputs, both completed and incipient, have considerable value in the future development of the international waters portfolio of the GEF. Specifically, the outputs provide guidance as to possible areas for GEF project development, by highlighting representative issues and concerns, and refinements to the causal chain-root causes analysis, transboundary diagnostic analysis, and strategic action planning processes are already guiding GEF international waters projects.

III. Project Results

A. PROJECT OUTPUTS

19. The GIWA project anticipated the generation and dissemination of 66 subregional reports and 9 regional syntheses, in addition to an unspecified number of other reports, documents, thematic papers, and informational materials. While the project did not fully meet this expectation, the GIWA project team did generate a substantial and significant number of work products. A summary of these outputs is attached hereto as Annex I. In fact, the GIWA project team published 28 reports, comprised of 14 printed regional and subregional reports, 1 printed thematic report, and 13 regional and subregional reports available on the Internet. A further 11 regional and subregional reports and 9 thematic reports have been prepared, but not published in either print or web format. Of the balance, 9 regional and subregional reports remain in various stages of completion, and there has been no progress of 12 other regional and subregional documents. Of the latter, 11 of the 12 regions and subregions are located in proximity to the national coastlines of the United States and Canada—the exception being the report on the Antarctic. Numerous other work products were prepared, typically for public events and scientific conferences.

20. While the recommended responses to the GIWA project are synthesised at the end of this evaluation report, at a minimum, this reviewer would strongly urge that the completed but unpublished reports be finalised, and that all finalised reports be made available in print format for distribution by UNEP to the respective governments tributary to the transboundary waters discussed in each document. Further, completion of those documents that are in an advanced state of preparation is indicated. These actions will maximize the value added of the GIWA project and encourage the local project teams to pursue further action in regard to the recommended actions set forth in the documents with their respective governments.

B. EVALUATION INDICATORS

21. In accordance with the Terms of Reference for this evaluation, the project was appraised utilizing nine sets of indicators, ranging from the degree to which the project met its proposed outputs, to the scientific validity of those outputs, to the value of the methodologies developed, in addition to an evaluation of the management of the project and its cost effectiveness. These indicators are reported on in detail below.

Scope, quality and usefulness of the project outputs

22. As shown in Annex I, the GIWA project has successfully completed a range of work products covering all major portions of the globe, with the exception of the northern portion of the western hemisphere (the United States and Canada). In discussing this gap with project staff, the evaluator was informed that, at least in the case of the United States, the collaborators identified to produce these reports failed to follow through with this commitment, allegedly because the GIWA methodology differed significantly from the methodology adopted and employed by the national government. This gap, consequently, did not arise as a result of lack of information on the water resources of these subregions,

nor from the lack of an appropriate entity capable of participating in the project. Indeed, the United States participated actively in the steering committee activities of the project.

23. The scope of the effort, notwithstanding the failure of some participants to generate the desired work products, was truly global, and this scale has caused certain criticisms to be directed at the level of detail inherent in the analyses and reports prepared and produced. Indeed, reducing the significant issues of major international waters to single keyword-based issues can be viewed as overly simplistic. While such criticisms are potentially valid in an absolute sense, they fail when viewed in light of the project objectives. Many of the critics of, and some of the participants in, the project have lost sight of the fact that the GIWA was primarily a means of identifying **issues of concern relevant to the GEF** (emphasis added). By definition, these are shared transboundary issues, and hence tend to be broad concerns shared by a number of riparian countries. They do not always reflect site specific or small scale issues of concern relevant to individual countries or even municipalities. Clearly issues of contamination, pollution, and over exploitation of resources, and their human consequences, are “global” issues, present to a degree in every transboundary water system.¹⁴ Nonetheless, certain of these systems provide better opportunities for the GEF to support multinational interventions that will result in experiences and approaches that later can be transferred between all sites. Consequently, the reports were intended to highlight information that would allow the GEF to identify these areas and evaluate the degree to which an issue is of global concern (and thereby prioritise their investments). Informing national or local level actions is, to some extent, superfluous to the project goals and an additional benefit to be derived from the project activities.¹⁵

24. While it was not possible to gain a full understanding of the extent of the influence of the GIWA on national and local level actions, the evaluator is aware that the GIWA recommendations have not only been considered but have guided the development and implementation of GEF projects in Latin America; to wit, the informational and capacity concerns identified within the Amazon Basin have been influential in the decision of governments to strengthen Treaty Organization for Amazonian Cooperation (OTCA) and develop a GEF-supported project within this basin of global significance,¹⁶ while the la Plata River Basin initiative has been given effect through a GEF-funded project for the Formulation of a Water Resources Management Framework for the la Plata River Basin.¹⁷

¹⁴ The GEF Operational Strategy identifies degradation of the quality of transboundary water resources, physical habitat degradation, introduction of nonindigenous species, and excessive exploitation of living and nonliving resources as “global environmental concerns.” The GIWA validated these concerns.

¹⁵ While the Project Document is specific with regard to the linkage between the GIWA and the GEF, the Logical Framework Analysis was more general, suggesting that the national and local benefits were to be considered by the project. Consequently, the Policy Options chapters of the GIWA reports provide important sub-regional guidance that specifically meets this broader challenge.

¹⁶ UNEP (2004), Barthem, R.B., Charvet-Almeida, P., Montag, L.F.A., and Lanna, A.E., *Amazon Basin*, GIWA Regional Assessment 40b, University of Kalmar. ISSN 1651-9402.

¹⁷ UNEP (2004) Mugetti, A., Brieva, C. Giangiobbe, S., Gallicchio, E., Pacheco, F., Pagani, A., Calcango, A., Gonzalez, S., Natale, O., Faure, M., Rafaelli, S., Magnani, C., Moyano, M.C., Seoane, R., and Enriquez, I., *Patagonian Shelf*, GIWA Regional Assessment 38, University of Kalmar. ISSN 1651-9403. See, inter alia, GEF Project 2095, Formulation of a Water Resources Management Framework for the la Plata River Basin and GEF Project 613, Environmental Protection of the Rio de la Plata and Its Maritime Front: Pollution Prevention and Control and Habitat Restoration, which implement recommendations set forth in the GIWA assessment.

25. Of course, all GEF projects should be “country-driven.” Thus, there is, or should be, a true link between the regional scale issues of concern and those of a local or national level of concern.¹⁸ This link is best made at the local level. Hence, there is a pressing need, noted above, for the publication and dissemination of all of the GIWA reports to the relevant participating countries. To this end, UNEP is well positioned to distribute copies of the GIWA documents to the relevant ministries and agencies of government, and to distribute these reports according to the countries affected by specific transboundary waters; hence, the need for print copies of the documents—most governments continue to operate on the basis of “paper” in this increasingly “paperless” world.

26. Each geographic work product was prepared using the same outline, and, to the extent possible, provides a summary and synthesis of the state of knowledge on the respective transboundary waters. These documents, upon casual inspection, may appear to be uneven in their content and quality; however, each reflects the current state and availability of knowledge and information within any given region. Upon due consideration, however, there should be no reason to expect all transboundary waters to have the same information and same level of information available on all aspects of the systems. Information and data collection is frequently driven by specific local needs, while the ability to acquire even this level of information is often limited by lack of an appropriate organisational base, lack of appropriate funding, and lack of appropriately qualified staff.

27. These same factors also can affect the quality of the data set, although the selection of methodologies utilised in the data collection process may vary based upon a number of factors, not the least of which is the reliability of the electricity supply! (Lack of a consistent source of power precludes the use of sophisticated electronic data collection devices, for example; however, use of traditional, non-electronic methods does not invalidate or diminish the value and utility of data collected.) While this example is, in part, somewhat facetious, the fact remains that the need for and ability to collect water resources data differs globally from country to country, as does the capacity of each country to compile, analyse and utilise these data. Consequently, variations in the type, quantity, and quality of data presented in each of the reports should not be viewed in a negative sense, but as a reflection of the state-of-the-art in each of the countries riparian to the transboundary waters, and as gaps to be filled potentially through targeted GEF or other funding mechanisms.

28. The utility of the GIWA project outputs, therefore, can, and should, be assessed on a variety of levels. While the project focused on the information needs of the GEF, the data compilations and syntheses can be utilised by countries to refine and define national research and management programmes. One example of where such information has been used by countries at the sub-regional scale is the la Plata River Basin project currently being executed by UNEP. This project was informed by the recommendations set forth in the GIWA Regional Assessment for the Patagonian Shelf.¹⁹ Of course, the scale of each

¹⁸ See GEF Operational Strategy, Chapter 1.

¹⁹ UNEP (2004) Mugetti, A., Brieva, C. Giangiobbe, S., Gallicchio, E., Pacheco, F., Pagani, A., Calcango, A., Gonzalez, S., Natale, O., Faure, M., Rafaelli, S., Magnani, C., Moyano, M.C., Seoane, R., and Enriquez, I., *op. cit.*

transboundary water system is such that the sheer magnitude of the water resource can appear overwhelming, and, frequently, the reductionist approach utilised in the GIWA methodology was such that the identified root causes and resulting recommendations for action seem overly simplistic or universal in nature, as a result. Notwithstanding, the la Plata River Basin project is conceived as a framework within which several other GEF-funded projects are being housed, including projects on the binational basin of the Bermejo River, the Upper Paraguay River and Pantanal, the Maritime Front of the la Plata River, and the Guarani Aquifer.²⁰

29. Criticism of the conclusions and recommendations set forth in each regional assessment report (see Annex III) appear to stem from the use of certain terminology that obscures the actual intent of the concluding remarks in each report. While these actions are presented as recommendations for specific action, the actual intent is not to demand that governments take specific remedial actions—although it is possible that some governments may be in a position to do so, and hence this should not be precluded—but rather that the regional and subregional coalitions of governments could approach the GEF to develop appropriate international waters projects focusing on certain priority concerns shared by the countries riparian to a specific waterbody. When viewed in this light, the recommendations set forth in each report tend to become starting points for action, rather than end points, and the specific actions that may be indicated would be the point of entry into the GEF pipeline for projects focusing on critical shared issues. These issues would then be refined and placed into their socio-economic context utilising the TDA-SAP approach refined by the GIWA project to address the transboundary elements of these concerns. By better focusing the GEF funding and country-based efforts, the goal of identifying a “tool kit” of strategies to address shared global issues becomes better directed.

30. That said, however, the GEF is, as has been noted, country-driven. While the GIWA project can provide strategic direction to the GEF in assessing proposals and allocating resources, it remains up to the individual countries and regional or subregional organizations to develop proposals and seek such funding. The old adage about “leading a horse to water...” may be an appropriate way of viewing the GIWA reports and their potential outcomes. Indeed, it is unlikely that the GEF could sustain an onslaught of project proposals should every recommendation identified in the GIWA reports result in a proposal for GEF funding. Fortunately, there are many international and regional mechanisms that can be accessed, and coordinated national actions to address GIWA-identified issues are not precluded.

31. Each report presents a simple, yet complex, snapshot of conditions within a specific transboundary water system: simple, from the perspective that each report ultimately focuses on a few major priority issues; complex, from the perspective that each priority issue may be the result of an interlocking group of laws, economic endeavours, and human actions—superimposed on natural hydrologic and climatic variations—that have resulted in the current conditions. For this reason, dissemination of the reports, and their “internalisation” by governments, is an essential step that will prove the usefulness of the GIWA analyses.

²⁰ See the GEF Projects database—www.gefonline.org/home.cfm—for details on these individual projects.

32. The foregoing contributions to the GIWA form the basis from which the final assessment at the global level was compiled. This document synthesises the issues and concerns identified at the regional and subregional levels and identifies their commonalities and differences. This report, entitled *Challenges to International Waters: Regional Assessments in a Global Perspective*, referenced above, confirms the priorities identified in the GEF Operational Strategy and extends these priorities with a focus on freshwater resources. The four GIWA priorities were identified as pollution (= degradation of the quality of transboundary water resources), unsustainable exploitation of fish and other living resources (= excessive exploitation of living and nonliving resources), habitat and community modification (= physical habitat degradation) (= introduction of nonindigenous species), and unsustainable use of freshwater. The report presents these issues in terms of priority based upon their frequency of occurrence within the project areas: freshwater was a top priority transboundary concern in 25 regions and subregions, pollution in 20 regions and subregions, and unsustainable exploitation and community modification, each, in 17 regions and subregions. Based upon this analysis, compiled utilising proven scientific methodologies and peer reviewed, the project was successful in the “production of a detailed scheme for determining priorities between and among transboundary water-related issues and areas.”²¹

33. Finally, as discussed below, the GIWA reports and work products have an intrinsic value as compendia of knowledge on specific systems, and hence have wider purpose than simply informing the GEF. While they do have limitations, they also have the potential to inspire a new generation of researchers, administrators, and citizens to live in harmony with their environment. To the extent that the concepts embodied in at least two of the regional assessments (Amazon Basin and Patagonian Shelf) have influenced GEF projects currently being formulated or underway, the GIWA can be considered to have met the means of verification of the project goal, as established in the Logical Framework Analysis; namely, “selection by the GEF...of projects which address the priority areas identified by the GIWA.”²²

Extent to which the outputs have the weight of scientific authority

34. All of the published products, and many of the completed draft reports, have been subjected to scientific peer review, the normal prepublication process by which scientific manuscripts are examined by qualified professionals prior to publication. While this process is not flawless, it typically does eliminate the more egregious errors and omissions and results in a technically valid product. This review process reflects the fact that the project was largely conceived and executed by research scientists, and testifies to the scientific and technical rigour of the publication process. Consequently, each report represents the “snapshot” of the state of knowledge on specific transboundary waters at the turn of the 21st Century. While this snapshot is limited in part by the fact that the local task teams were largely self-selected—and thus limited to a degree by the individual’s knowledge and experiences—the application of good scientific publication procedures has ensured a quality output, given the limitations noted above.

²¹ See Annex II, Logical Framework Matrix, of the Project Document: Purpose, Indicators of Achievement.

²² Given that the la Plata Basin project includes associated financing from international donors, including the European Union, the GIWA project can be considered successful in meeting the “and other donors” criterion as well.

35. Notwithstanding, participation in the project was, for the greater number of participants, voluntary. Certainly funds were made available for a regional coordinator and to convene meetings of relevant professionals, but these funds, when divided between more than 60 ecoregions, were woefully few. Consequently, as has been noted, participation was inconsistent between ecoregions and the reports are somewhat uneven as a result. This is not unusual in such large-scale projects where participants are, at least in part, self-selected. From a review of the list of contributors in the published reports, it appears that the regional coordinators made a reasonable effort to include most prominent water resources professionals from each region in the project activities. This reviewer would suspect that more invitations were issued than were accepted. And it is equally likely that the list of invitees reflected the skill and experience of the regional coordinators in identifying appropriate people. Given that many of project participants were marine-oriented professionals, it is not surprising that freshwater systems and groundwater aquifers were poorly integrated into the ocean-based reviews. It is unfortunate that such integration did not occur; however, given the disciplinary biases inherent in the water resources profession, such a lack is not surprising—although, given the opportunity for freshwater and marine researchers to exchange views and information, it soon becomes clear that the presence of salts in solution confers distinctions upon freshwater and marine systems that are more matter of degree than difference!²³ This integration provides a possibility for the future evolution of this global assessment.

36. Finally, to return to a recurrent theme, the scientific validation of the GIWA reports is dependent in large part upon their dissemination and utilisation by governments, academic institutions, and water resources professionals. These themes are discussed further below.

Extent to which the project implementation mechanisms have been utilised

37. The GIWA project was designed to provide a sound basis for the conduct of Transboundary Diagnostic Analyses (TDAs) utilising a “causal chain” approach and “root causes” analysis. This approach was designed to take an environmental symptom, such as excessive algal growth, and track it through its societal cause(s), such as discharge of untreated or poorly treated wastewater, to its ultimate cause or “roots” in public policy, such as unregulated settlement patterns without proper wastewater treatment (associated with land tenure and sanitation issues). (The “causal chain” links the “observed symptom” with its “root cause.”)

38. While the GIWA model suggests that this process could be followed through four stages, the fourth stage begins to identify specific governance issues that may need to be addressed to resolve the observed symptom. These factors frequently include the identification of policy and subsidy conflicts that, for example, would subsidise housing developments with public funds along shorelines that, in terms of public policy, should be preserved for common usage. Identifying these types of conflicts allows determination of legislative programmes to resolve and regularise these conflicts, or, at least, an understanding of the conflicts so that decision-makers are sensitive to how sectoral

²³ See, for example, CHAPMAN, P. & J. A. THORNTON (1986). Nutrients in aquatic ecosystems: An introduction to similarities between freshwater and marine ecosystems. *J. Limnol. Soc. sth. Afr.*, 12:2-5.

decisions “ripple” across economic sectors with unidentified and/or unintended consequences for other sectors.

39. This methodology is now required to be used in all GEF International Waters Diagnostic (TDA) and Strategic (SAP) projects.²⁴ The IW:LEARN training course on the TDA/SAP approach utilised in the GEF International Waters Programme notes that “the TDA is an objective, non-negotiated assessment using best available verified scientific information to examine the state of the environment and the **root causes** for its degradation [emphasis added].”

1. Soundness and effectiveness of the various methodologies developed

40. Two aspects of the GIWA methodology were evaluated; namely, (i) the methodologies employed in executing the GIWA project and developing the GIWA work products, and (ii) the methodologies developed by the GIWA project as work products and their subsequent utilisation within the GEF programmes.

41. The methods of the GIWA project were essentially sound, with regional contributions being generated by task teams from within the various LMEs and ecoregions of the world. This local level collaboration through the GIWA Network has resulted in lasting benefit for water resources professionals across the globe. The Network is a lasting legacy of the GIWA project and one that will create ongoing benefits for the water resources communities and participating institutions and countries. These task teams brought water resources professionals into closer contact and established friendships and relationships that will last long after the completion of the GIWA project.

42. That said, the methodology employed during the GIWA project had limitations:

a. First, the process was designed by water resources professionals and managed by persons with a technical orientation. Many of the individuals had worked in the international community previously and had experiences with the formulation and execution of global projects of various kinds. This previous experience proved to be both a benefit, in expediting relations with the Implementing Agency (IA), and a liability, in that it did not foster the broader, integrated perspective consistent with the entire hydrological cycle, wherein transboundary rivers and aquifers are as important elements in the global water cycle as the oceans.

b. Second, the limited funding available to contract with individual researchers, in at least some cases, had the consequence of shifting the burden onto younger professionals. While there are benefits to including younger professionals, increasing their skills and knowledge, the liability is the reduced knowledge base and influence that such individuals have in the scientific community. Hence, the range of contacts known to these individuals was limited, further reducing the potential scope and integration of the various elements of the hydrologic cycle within the GIWA process.

c. Third, there was limited interaction between the GIWA project team and the project teams of other GEF-funded IW projects that might have been under execution in the same ecoregion. For example, the Inter-American Water Resources Dialogue, held in Foz do

²⁴ ALFRED DUDA, Monitoring and Evaluation Indicators for GEF International Waters Projects, Monitoring and Evaluation Working Paper No. 10, November 2002; see also IW:LEARN Training Course on the TDA/SAP Approach in the GEF International Waters Programme, 2006.

Iguazu, Brasil, provided an opportunity for project staff from the approximately half-dozen GEF-IW projects in Latin America to meet and discuss issues of common concern. This meeting, held under the auspices of the GEF IW:LEARN project and facilitated by the Organization of American States (OAS), was a unique opportunity for project managers to establish within-region contacts, many of which have led to ongoing dialogue between project staff. While the GIWA staff were part of this meeting, there appeared to be little or no follow-up by GIWA staff (with the possible exception of interaction between GIWA regional staff and the Sao Francisco River basin project staff). This limitation further exacerbated the gap between the freshwater and marine communities, and represents a missed opportunity for better integration of freshwater and marine concerns.

d. Finally, the failings noted in subparagraph c above were not all the consequence of the GIWA methodology. At least in part, the focus of GEF-IW projects and the budgetary constraints within which they operate limit the ability of project teams to interact, except in such exceptional circumstances as the Inter-American Water Resources Dialogues or World Water Fora. Travel by project teams within project areas is encouraged and budgeted into projects; travel between projects is infrequently considered. Granted, the GEF approach encourages local investment in the GEF-funded projects, but budgetary realities generally do not encourage international travel outside of the project area. That said, exchanges by electronic mail have been known to occur as a result of the informal contacts made during international water resources events and represent an important “spin off” of such events.

43. The methodologies developed during the GIWA project have, as noted above, been widely employed within GEF-IW projects, with success.²⁵ These methods have been found to be workable and sound across a broad spectrum of cases, divergent economic and political systems, and types of projects. Granted, there was considerable delay introduced into the execution of the project when the first attempt at developing a workable methodology for use within the GIWA project proved to be unworkable during its pilot applications in both a developed and undeveloped country context. Unfortunately, the timetable of the GIWA project did not accommodate this situation and pushed the period of execution of the GIWA project beyond the envisioned 4-year project period. Fortunately, the host institution and governments, in cooperation with the IA, were able to reallocate funds and utilise reserves to ensure continuity in the project, and development of a workable methodology. This flexibility among the executing agency, local governments and IA resulted in the successful completion of the GIWA project, although, consequently, not all of the work products were published due to time and funding constraints.

44. The GIWA project was designed as a research and discovery project. However, the timeline and funding of this project was allocated as if the project was a more typical planning and implementation project of the type generally funded by the GEF. Consequently, as has been noted, the “false start,” during which the methodology developed proved unworkable in practice, severely disrupted the execution of the project. In hindsight, two alternative approaches to project design suggest themselves: first, the project could have been designed in two phases with the methodological development being the first phase and the application being the “implementation” phase of the project; or, second, the project could have been developed with a longer timeframe that could have accommodated the “trial and error” approach to methodological development. Of these, the first alternative

²⁵ See IW:LEARN Training Course on the TDA/SAP Approach in the GEF International Waters Programme, 2006.

may be most workable, especially with the adoption by the GEF of the project concept approach, wherein the budgetary implications of the two-phased project approach could have been spelled out in advance of the work being approved. This approach would not necessarily affect the project budget, but it would have made adjustment for the need to develop a workable methodology less critical to the overall conduct of the project.

2. Extent to which the project implementation benefited from ongoing and past research and operational activities of the scientific community

45. The GIWA project made excellent use of existing knowledge and data. The project did not seek to collect new or supplemental data, and, therefore, was very economical in the level of funding devoted to data acquisition. Without the groundwork laid by water resources professionals and researchers from each of the participating regions and transboundary water resources inventories, the project would not have been able to be completed in the time and with the budget allowed.

3. Extent to which external scientific and technical information and knowledge have been incorporated

46. As has been noted, the GIWA project depended totally on the available data and knowledge that existed within each of its regions. This dependency resulted in the appearance of “uneven-ness” in the content and quality of the various reports that were completed under the auspices of the project. It also allowed the project to be completed within the very limited budget allocated for such a large undertaking. The US \$ 6.8 million of GEF funds, distributed over the 66 possible subregional units, allows for about US \$ 100,000 per unit, with nothing left over for project administration!²⁶ This level of funding did not allow for collection of new data, and represented a relatively small sum for acquisition and analysis of existing data.

47. For the most part, data and information were offered by researchers from within each of the regions and subregions who elected to participate in the regional and/or subregional meetings convened under the auspices of the project. The available funds were used to offset these meeting costs, rather than to contract for services. This was a very effective use of limited resources, but may have resulted in some data and information sources being overlooked or ignored (if, for example, their authors or holders did not participate in the meetings). The possible effect of this fact—the voluntary participation and process of self-selection in the regional teams—has been noted above.

48. The data used in conducting the GIWA assessment were assembled from a variety of sources. These included national data gathering programmes, ongoing international data gathering programmes such as GEMS-Water, and local monitoring programmes being carried out by governments, NGOs and citizens. GIWA was not conceived as a monitoring programme and few new data were gathered as a result of the GIWA initiative. Rather, the programme made use of existing information provided by participating scientists and institutions.

²⁶ Not all of the transboundary waters were within GEF eligible countries; hence the distribution of funds was not equal across all 66 areas. This comment is used for purposes of establishing a scale of investment only.

4. Project management, monitoring and response

49. The project management arrangements proved viable; however, comments received from participants in the project would suggest that there were instances in which these arrangements were far from ideal. It is a fact that all projects go through a period of team building and adjustment to new procedures and approaches to operations. This project was no exception, but there were additional challenges presented by the fact that the project support team of the IA, UNEP, was located at UNON in Nairobi, Kenya, and the project management team was located in Kalmar, Sweden, with the regional project teams being located around the globe. Time zone differences, language differences, and cultural differences also added to these challenges. In addition, the stresses imposed by individual personalities resulted in an uneasy start to the project and tensions between participants. All of these factors initially hampered project operations.

50. Notwithstanding, early replacement of key personnel and hiring of new staff obviated many of these challenges and brought the project back to an effective management structure. While certain other staff changes continued to occur through the project, these transitions were less radical and disruptive to project functioning than those experienced early on.

51. IA staff made regular monitoring and evaluation visits to the project at Kalmar. These visits were usually in concert with steering committee meetings, so as to minimize disruption of the program and higher costs. However, project staff noted that, unfortunately, IA staff changed frequently during the course of the project. With the exception of the financial staff at UNEP, there were at least three reported changes to IA personnel involved in the administration of this project. This did not encourage the development of good or consistent working relationships between the groups of people working within the project. As these changes were usually associated with staff turnover, it would be difficult to plan for such transitions in the project. Consequently, this aspect of the project must be accepted as normal risk.

52. A Steering Committee—overseeing the strategic implementation of the project—and an Executive Committee—overseeing the day-to-day management of the project—were established to guide the implementation of the project. In the end, these committees can be considered to have provided adequate and appropriate guidance for the project. However, the effectiveness of these groups was limited by the fact that the membership of these Committees, in terms of specific individuals as noted above, was not consistent over the life of the project. While these changes reflected staff turnover, they also limited the consistency with which decisions by the Committees were carried out—this limitation was to an extent overcome once the project management team achieved a degree of stability. Likewise, the lack of specific participation by the GEF staff constituted a significant disconnect. There is some justification for the GEF staff to maintain some distance from the project, in that their participation could potentially result in “conflict” between the IA and the GEF Secretariat—creating a matrix management situation in which the project staff might feel a need to defer to GEF staff rather than IA staff. But, this distance was such that the scope of the project drifted from the provision of guidance to the GEF to a less focused and more general analysis of transboundary waters aimed at countries, potentially reducing the value of the project to the GEF. In the end, the Executive Committee achieved a degree of stability that allowed for the efficient, if somewhat tardy, conduct of the project.

53. In addition to this committee structure, the project was subjected to several reviews and evaluations, conducted during the period of project execution. The mid-term evaluation, which was reviewed during the final evaluation process, was critical of many aspects of the GIWA project. The criticisms offered during this process appeared to be influential in shifting the emphasis of the GIWA project, and guiding the project to a successful conclusion. This review provided an important mid-course correction that allowed the project to successfully complete its objectives. Consequently, in terms of the final products generated by the GIWA project, the monitoring and evaluation process provided valuable guidance in achieving this outcome, albeit following at least one “false start.”

54. Despite these hiccoughs, the project did seem to develop a rhythm. The relationship between the UNEP financial officer and project administrator was especially effective, and resulted in the project making good use of its available human and financial resources, even though the project extended beyond the original 4-year horizon. This is a testimony to the good will of the host agency and municipality, and to the flexibility and ingenuity of the staff. That the project accomplished the quantity and calibre of work that it did reflects very well on the project team and their abilities.

5. Cost-effectiveness

55. At the end of the day, so to speak, this project represents a very small investment by the GEF for a substantial return. While the project did not result in the publication of all of the products envisioned at its inception, the published products are of high quality, both technically and scientifically. They are work products of which all of the participants should be justly proud. Completing the publication those reports not yet published or available only in electronic form is strongly recommended. This recommendation stems from the fact that (a) this is the only reward that many of the volunteers will receive, and (b) the work products, as scientific and technical documents, represent a valuable snapshot of the condition of many of the world’s waters at the close of the 20th Century. The time and talents of the volunteers, at the regional and subregional levels, contributed the data, knowledge and synthesis that give the world a glimpse of the state of its waters over a large portion of the Earth’s surface. This work is to be commended.

56. The GIWA project set out to leverage the GEF funds in the amount of US \$ 7.3 million. This level of funding was far exceeded by the time and efforts that the volunteers devoted to the project. These individuals and organizations are recognised in the acknowledgement of the reports. Estimating the contribution of these persons to the project, assessed at a professional remuneration rate of US \$ 300 per day, suggests that this contribution alone amounted to more than US \$ 2.5 million. This contribution was supplemented by additional contributions from donor countries, in cash and in kind, of US \$ 5.1 million, in-kind contributions by other governments and non-governmental organizations of US \$ 0.2 million, and by contributions from the host municipality and institution of US \$ 1.4 million. Combined, these co-financing amounts total US \$ 9.2 million. An additional amount of US \$ 0.85 million, in cash and in kind, was provided by UNEP. The actual project budget is summarised in Annex 2.

6. Effectiveness of supervision and administrative and financial support

57. The degree and extent of supervision and administrative oversight was limited by the available funding. To the degree that funds allowed, the project was well-run. Supervision

was adequate. Administrative and financial support both in Kalmar and in Nairobi represented the most consistent aspect of the project in terms of personnel. The meagre funds were fully and appropriately utilised, and those products that were generated of high quality.

58. Nevertheless, the project did suffer from administrative delays that affected the hiring and replacement of staff. Changes in accounting and human resource policies imposed on the project from UN Headquarters contributed to these delays, but were imposed to increase transparency and accountability as demanded by the countries of the world. Hence, these impacts on the timeliness of completion of the project cannot be held against the project; no time was allowed in the project timetable for such externalities. Indeed, many of these changes could not have been foreseen and represent true “factors beyond the control of the project team.”

59. The role and faithfulness of the University of Kalmar and the Kalmar municipality should be recognised. These entities, together with the Nordic governments, effectively “bank-rolled” the project when cash contributions were needed. This support by these entities of this global project contributed greatly to the success of this enterprise.

60. Also worthy of note is the dedication of the project team that contributed many hours of their own personal time and energies to this endeavour. Their service frequently exceeded the “call of duty.”

61. Finally, all of the many volunteers and project participants from around the globe, who contributed time, talents and resources to the project deserve recognition not only in the published products generated by the project but also in this review. As previously stated, final publication of the available reports provide testimony of their faithfulness and dedication.

C. SUMMARY

62. The GIWA project, as a nontraditional GEF International Waters project, was not without faults. However, while some of the delays and failures were the result of staff turnover and related managerial shortcomings, a major portion of the delays was the result of an unrealistic timeline and budget that beset the project from the start. Complicated by the academic nature of the project, confounded by early staff turnovers, and condemned by the failure of an entire portion of the western hemisphere to follow through on commitments and undertakings, it is, frankly, a testimony to the dedication of staff and participants that the project resulted in any outputs at all. Yet, of an anticipated 66 regional and subregional reports, 27 were published either as print copy or in electronic form, with a further 11 reports in an advanced state of completion, awaiting publication. Of the thematic papers, one was published and nine are in an advanced state of preparation awaiting publication. All have been peer-reviewed, and all have the potential to be widely utilised, as they offer a snap shot of the state of much of the world’s water resources at the start of the 21st Century.

IV. Technical Review

63. The GIWA project physically published 15 regional and subregional reports of the anticipated 66 transboundary water documents. As has been noted, a further 13 were published electronically. Another 11 documents have been prepared for publication, through the peer review process, but have not been finalised.

64. These publications have been created to the highest technical production standards and represent a significant achievement, even though the actual numbers fell well short of the initial goal.

65. Further, these publications, as has been noted, have been subject to the full rigour of science through a peer review process akin to that utilised by scientific journals. Review of both the process and the publication provides testimony to the benefit of this process. The resultant documents are fully reflective of the highest scientific standards, and provide a full and fair statement of the state of certain of the world's waters at about the turn of the 21st Century. As noted above, these documents are a tribute to those that prepared them, and will form a lasting legacy of the GIWA project.

66. With respect to those documents which are in an advanced state of preparation, but as yet unpublished, completion of the publication process is strongly recommended. Indeed, print publication as well as electronic publication of all of these products is strongly recommended. As noted above, print copies are generally recommended for distribution to governments, while the electronic copies can be accessed by educators, students, officials, and citizens worldwide.

67. To this end, it is recommended that UNEP continue to house these outputs in an electronic form so that they remain available to, *inter alia*, the public-at-large, decision-makers and water resources professionals.

68. As of early 2006, the internet search term "International Waters Assessment" resulted in approximately two million "hits." Limiting the search term to "Global International Waters Assessment" reduces this number of "hits" to approximately one million, while limiting these terms to the whole phrases "GIWA" and "Global International Waters Assessment" reduces this number of "hits" to approximately two thousand. Subsampling these records indicates that about one-quarter of these "hits" relate to web sites that are sponsored by NGOs and universities, while the balance are largely sites sponsored by the UN system—including other GEF IAs (WB and UNDP) and the GEF Secretariat, as well as the United Nations Education, Scientific and Cultural Organization (Unesco), the Food and Agriculture Organization of the United Nations (FAO), and related specialised organizations; news media—including list servers, professional publications, and related print media; regional intergovernmental organizations—including the Organization of American States and South Pacific Commission; and, national agencies, many from countries that participated in the GIWA—including, *inter alia*, the governments and agencies of the United States, Denmark, and Kenya. While many of these sites included reports on the launch and progress of the GIWA, a significant number appeared to be well-maintained and current, providing solid content as well as links to the GIWA and UNEP

web sites where readers could access additional information. While relatively few of these sites included a record of numbers of people accessing the sites, those that did indicated a wide range of numbers of visits from dozens to thousands of “hits” which suggest continuing interest in, and relevance of, the GIWA.

69. As a final note, with regard to the citation of the GIWA and its products, it should be recognised that as the GIWA methodologies are fully integrated into the GEF IW focal area requirements, the citation of the GIWA reports and publications may, of necessity, lose their specific identity and simply become part of the project cycle requirements. This loss of identity should be anticipated and should be viewed as a measure of the success of the project in achieving its goals of standardising good practice within the GEF. Unfortunately, such an occurrence makes a quantitative impact of the assessment of the GIWA project impossible.

V. Lessons Learned

70. The GIWA project is one of a handful of nontraditional GEF projects commissioned by the GEF to provide insights and direction for the GEF programmes. As such, the project has several major points of departure from the more traditional types of GEF project. Foremost amongst these is the fact that the project was not “country-driven.” The audience and output was clearly intended to be the GEF itself, although this objective was seemingly lost during the course of the project execution, possibly as a result of the frequent staff changes within and without the project in its early days. Consequently, from the perspective of lessons learned, there are relatively few that can be gleaned from this project, and few that can be transferred to other, more traditional projects being conducted under the auspices of the GEF.

71. Notwithstanding, there are aspects of the GIWA programme that can illuminate approaches to future projects of this nature. These are summarised in the following paragraphs.

1. Staffing issues proved a major concern during the execution of the GIWA project. While many of the staffing-related concerns were beyond the control of the project team, the following observations are offered:
 - a. Continuity of Staffing: To the extent practicable, efforts should be made to avoid staff turnover during the project period, both from the point of view of the IA and of the executing agency. Obviously, such issues are frequently beyond the control of these entities; however, it appears that, at one point in the process, a different staff member from the IA was attending each steering committee meeting, making it difficult to track concerns from meeting to meeting. Understandably, this reflected the availability of staff to fill in for the staff member lost during the initial transition, and the time needed to replace staff following such a transition.
 - b. Provision for Project Staffing: The “flip side” of the IA staffing issue is the issue of staffing the project. Granted, some of the early staff turnover appears to have been the result of “personality clashes” or issues of “corporate culture” that are difficult to anticipate. Notwithstanding, one lesson arising from this project is that adequate time should be provided in the work programme for staff to be acquired, and project teams assembled. The “lag time” involved in assembling the project team should be built into the project timeline, especially in cases where new staff are being sought for the conduct of a project. In this specific case, given that there were no counterpart governmental agencies involved in project execution that could provide interim and/or project staff, the time necessary for staffing the project led to a “late” start from which the project never recovered.
 - c. Use of Self-Selected Staff: Volunteers were an essential element of the GIWA project; whether they were local coordinators who received a stipend or meeting participants who received a per diem. The self-selection process

limits the scope of participation to those individuals who have the time, interest, and ambition to participate in a project such as the GIWA. While the peer-review process ultimately endorsed this process by declaring the work products scientifically valid, it is possible that some data or insights were missed as a result—the majority of participants generally appeared to be younger scientists, although this was not the case across the board. Targeting specific [potential] contributors, and using these “names” to focus task teams may prove more efficient in future such endeavours. Notwithstanding, encouraging broad participation outside of those individuals who traditionally participate in international projects of this nature does promote diversity, generation of new ideas and approaches, and a broader cadre of individuals whose experience can be drawn upon in future projects—to an extent, the key participants in the GIWA project were individuals well-known to the UN system and who were familiar with the *status quo*, a fact that perhaps prolonged the separation of marine and freshwater interests within the GIWA project.

2. Timing issues also plagued the project, almost from its inception. Some of these issues were also beyond the control of the project, but others perhaps could have been foreseen, as in the case of the absolute need to develop the GIWA methodology before it could be employed in the conduct of other elements of the project. In future, where projects require the development of a methodology prior to other portions of the project being conducted, either the project should be divided into two phases, during the first of which the methodology can be developed and field tested, or there should be adequate time allowed for the application of trial-and-error approaches to defining an appropriate methodology and allowing it to be field tested. The former would be preferable from a project management point of view, while the latter may be warranted from the strategic funding point of view.

3. Issue identification proved a challenge, especially when the issues facing most waters of the world, both fresh and saline, tend to be of a rather universal nature, especially given the scale of the transboundary waters, so highlighting one or two major challenges facing particular systems appeared trivial or ill-informed. This appearance, unquestionably, reflects the fact that the objective of the project was “lost;” rather than being a project to define potential areas for GEF interventions, the project sought to identify issues of concern to governments whose focus is national rather than regional in many cases. This wrinkle would reinforce the role of regional entities, whether Regional Seas Programmes or regional intergovernmental organisations, in bringing issues to the attention of groups of governments. Likewise, communicating these issues to governments proved to be a challenge for project teams comprised of water resources professionals. Notwithstanding, the GIWA products clearly identify roles of country governments individually as well as within their regional frameworks. In certain situations, both countries and regional organisations have utilised the GIWA outputs to formulate activities proposed for funding by the GEF (e.g., the Sao Francisco River Basin project of Brazil) or other multilateral organisations (e.g., the Mediterranean Regional Seas Programme).

4. Country-driven-ness, a key concept of the GEF, proved to be a necessary element in the allocation of personnel, funds, staff time, and resources. In those areas of the world that are GEF-eligible, countries and individuals responded to the GIWA initiative with enthusiasm. Elsewhere—North America being the prime example, response to the GIWA was muted.
 - a. This issue really relates to the definition of the client: in this case, the client was the GEF itself, yet the GEF Secretariat played a minor role in project development and management, much less of a role, in fact, than most client governments would do in the development and management of similar, traditional IW projects. From hearsay evidence supplied during the evaluation mission, this lack of participation seems to have translated into a lack of support for the GIWA findings. This, of course, places the outcome of the project in some doubt, although the GEF Secretariat has endorsed and supports the use of the root cause and causal chain analyses in TDA-SAP IW projects.
 - b. A further issue is the transfer of the outputs to the relevant governments: UNEP, as the IA, should disseminate those completed printed report to the respective governments riparian to the transboundary waters. This would encourage those governments to act upon these findings, either through existing Regional Seas initiatives in the case of the Large Marine Ecosystems (LMEs) or through national or multilateral action in other cases. Indeed, in a few cases, these transmittals may also encourage governments to seek GEF involvement, which could be guided by the issues identified in the GIWA reports. Again, completion of those documents in a final state of readiness but not published and those only published in web format would be encouraged and appropriate to facilitate transmission of those reports as well. Action by the target governments would then conform to the accepted and traditional GEF process.

72. In summary, of the lessons learned, the only real lessons that could have changed the outcome of the GIWA project would be: (i) the separation of the methodology development from the application of the methodology into two project phases, and (ii) the clearer definition of the client, and the more active involvement of the client—the GEF Council, Secretariat, and countries—in the conduct of the project. Such involvement should not have been so overt as to bias the execution of the project, but, on the other hand, it would have provided better direction to that execution so that the results better fitted the GEF's needs. In the end, the project did produce a goodly number of scientifically accepted products—the remaining completed reports requiring publication, perhaps, by UNEP—as well as a workable methodology. The challenge now is to implement that methodology—which challenge is set to the GEF.

VI. Conclusions

73. Pursuant to the Terms of Reference provided to the evaluation mission, the following table provides a summary of the success of project implementation, rated on a scale from ‘highly unsatisfactory’ to ‘highly satisfactory’.

74. Many of the indicators could have been answered by a range of conditions. This reflects the fact that, while the project was subject to some deficiencies that affected performance and outputs, the eventual outcome of the work was acceptable. These qualifications are elaborated, in summary, below:

- a. Achievement of outputs: Clearly not all 66 outputs were produced, but the 28 finalised outputs were of excellent quality and scientific calibre. In this case, a score of unsatisfactory relates to the number of outputs, while the score of satisfactory relates to the quality of the products.
- b. Stakeholder participation: From the point of participation by the client—the GEF Council, Secretariat and countries, the lack of consistent representation by the GEF at the steering committee and the lack of participation in the project activities led to “scope drift” and loss of direction, which clearly are unsatisfactory outcomes, but beyond the control of the IA. Nevertheless, the fact that so many professionals participated in the project, formed the (ongoing) networks, and created those reports that were published speaks highly of the dedication of these individuals, as stakeholders, to the project. This fact, and the continuity of the networks, is highly satisfactory.
- c. Country ownership: As with stakeholder participation, the lack of consistent GEF involvement led to many of the situations that previous reviewers have indicated as failures or deficiencies. In other words, the “country”—in this case, the GEF Council and Secretariat—lacked the ownership necessary for this project to be wholly successful. However, it is noted that the root cause and causal chain analytical methodologies developed by this project have been adopted and are being used by the GEF. Further, the participation of countries—with a few notable exceptions—showed that the project had value at the national and regional levels. The remaining challenge will be to continue to disseminate the results of the project and encourage countries to act positively to address the major transboundary issues identified in the analyses. In this, UNEP, through its Regional Seas Programme and related initiatives, is ideally and presently equipped to fully realise the potential of this project to influence local/national decision-making.

Table 1: Project rating scores

Rating Criterion	Ranking	Notes
Attainment of objectives and planned results	Satisfactory	The GIWA has provided a sound and workable methodology for GEF IW projects.
Achievement of outputs and activities	Satisfactory	While the full number of products was not achieved, those reports and work products that were produced were of high quality; numbers of activities went beyond those envisaged at the start of the project.
Cost-effectiveness	Highly Satisfactory	The project leveraged funds in excess of those anticipated at the outset.
Impact	Satisfactory	The results of the project—guidance necessary for the development of project documents and the conduct of TDA-SAP projects—are being utilised by the GEF.
Sustainability	Highly Satisfactory	The results of the project are being utilised by the GEF, and the procedural guidance has been incorporated into IW:LEARN training.
Stakeholders participation	Satisfactory	This was reflected in the numbers of water resources professionals participating in the GIWA project.
Country ownership (Note: Due to the special nature of the project, the evaluator may consider not to rate this aspect (N/A))	Satisfactory	This is reflected in the numbers of governmental agencies participating in the GIWA project, and in the numbers of governments providing funds and support.
Implementation approach	Satisfactory	Despite an unsteady start, the project achieved a rhythm and was successful.
Financial planning	Highly Satisfactory	The GIWA project attracted contributions in excess of the budgeted amount.
Replicability	Satisfactory	The GIWA methodology is in use by the GEF.
Monitoring and Evaluation	Satisfactory	The mid-term evaluation led to changes in the project that directly contributed to its success.

75. Based upon careful consideration of the evidence, comprised of notes from meetings, documents of official consultations, and project outputs, this reviewer would conclude that, in spite of some serious shortcomings and concerns during the early stages of the project, the GIWA project satisfactorily fulfilled its objectives. Like many complex and

complicated projects, the GIWA project was subject to amendments, the most serious and most critical being the changes made as a result of the mid-term evaluation mission, which proved highly critical of the project. This reviewer recognises the value of those comments in causing the executing agency to implement corrective actions that have significantly altered the outcome of this project. Without those “mid-course correction,” it is likely that the project would not have achieved the success that it has ultimately achieved.

76. In conclusion, therefore, the GIWA project can be deemed a qualified success. The future will confirm this conclusion as the GIWA documents are more widely distributed, and as countries begin to act upon the concerns that the GIWA documents have identified.

VII. Recommendations

77. The primary recommendation of this reviewer is that UNEP, as the IA of the GIWA project, complete the process of publication, in both hard copy and electronic copy, of the completed GIWA reports, especially those that have been left in an advanced state of completion but remain, as yet, unpublished.

78. It is also the recommendation of this reviewer that UNEP, as the IA, take the initiative of disseminating the completed and published reports to the respective governments within each of the transboundary water systems, with the request that governments seriously consider the issues raised and initiate actions to investigate and remediate those concerns that are within their power so to do, while acting in concert with their neighbours to develop and implement strategies to address those issues that are of a transboundary nature.

79. It is the further recommendation of this reviewer that UNEP, as one of the IAs that form the GEF, liaise with the GEF Secretariat and other GEF IAs to fully implement the root cause and causal chain analysis methodologies as an element of GEF IW project briefs.

80. Finally, it is the recommendation of this reviewer that this global assessment be periodically updated by UNEP, possibly as part of the production of the Global Environment Outlook, or GEO, reports, with financial support for such an effort being provided, in part, by the GEF.

Annex I: Terms of Reference for the Evaluation

TERMS OF REFERENCE

Terminal Evaluation of the UNEP GEF International Waters Project Global International Waters Assessment (GIWA) GF/1100-99-01

1. BACKGROUND

Project rationale

The Global International Waters Assessment (GIWA) is a project designed to develop a comprehensive, strategic framework for the identification of priorities for remedial and mitigation actions in international waters having the objective of achieving significant environmental benefits at national, regional and global levels.

The objective of the Global International Waters Assessment (GIWA) is to develop a comprehensive strategic framework that can be used by GEF and its partners for identification of priorities for remedial and mitigation actions in international waters; designed to achieve significant environmental benefits at national, regional and global levels.

The expected outcomes of the project include strategic information for GEF use at a programmatic level through the provision of a framework for:

- Identification of regional and global priority areas for GEF and its partners in the focal area of international waters;
- Decision making concerning appropriate management interventions;
- Identification of more sustainable approaches to the use of water and its associated resources;
- Approaches to incremental cost analysis;
- Protocols for the preparation of approaches to incremental cost analyses
- Protocols for conduct of causal chain and transboundary diagnostic analyses in GEF International Waters projects; and
- Increases in leveraged co-financing.

Relevance to GEF and UNEP Programmes

The GIWA project is consistent with the following GEF Operational Programs:

GEF's OP 8 Waterbody-based
GEF's OP 9 Integrated Land and Water Multiple Focal Area
GEF's OP 10 Contaminant-Based Operational Program
GEF's OP 2 Coastal, Marine, and Freshwater Ecosystems

Executing Arrangements

The project was executed by the Marine Biological Centre of the University of Kalmar and assisted by a UNEP appointed Core Team of scientists. The Core Team was headed by a Scientific Director also appointed by UNEP. All activities were managed and coordinated on a day-to-day basis by the UNEP Core Team, in consultation with UNEP/DEWA. It was expected that a half-time focal point would be designated for the implementation of this project in DEWA. The Core Team would be advised by, and report to, the Steering Group, chaired by the Director of UNEP/DEWA. Each of the 66 sub-regions that were the basis units of assessment of GIWA would have a Focal Point. The Regional Task Teams were to consist of between 10-15 individuals appointed in their personal capacity and/or serve a sub-regional Focal Point. The role assigned to the Thematic Task Team was to review on a global scale, specific issues and problems.

Project activities

Initial project duration was from March 1999 to February 2003. The duration of the project was extended five times from 49 months to 76 months with planned completion in June 2005.

Project activities were implemented in four phases of initially 12 months each:

- Phase 1: Establishing the GIWA Network and methodologies
- Phase 2: Gathering and analyzing information
- Phase 3: Evaluating alternative scenarios
- Phase 4: Disseminating GIWA products

Budget

The total budget was US\$ 13,165,000, with US \$ 6,495,000 (49.3 %) funded by the GEF Trust Fund, and US \$ 272,000 (2.1 %) in cash and US \$ 580,000 (4.4 %) in kind from the UNEP Environment Fund. Counterpart contributions, including contributions from Finland, Norway, Australia and New Zealand, and in kind contribution from the Supporting Organization accounted for US \$ 4,618,000 (35.1 %) and US \$ 1,200,000 (9.1 %) of the total budget. Final total cost of the project (as of December 12th, 2004) was US \$ 13,211,852 reflecting additional contributions from Finland and the US.

2. OBJECTIVE AND SCOPE OF THE EVALUATION

The objective of this terminal evaluation is to establish project impact (ref. objectives & outcomes), project performance, and review and evaluate the implementation of planned project activities and outputs against actual results. The focus will be on two questions:

- 1) Have the assessment produced credible scientific information for wider application to the portfolio of GEF International Waters projects?
- 2) Has the GIWA project been relevant, timely and effective in generating strategic information on international waters issues and to what extent has it leveraged co-financing?

The evaluation will assess, among other things;

- Delivered outputs: Assessment of the project's success so far in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Project outcomes and impact. Evaluation of the project's success so far in achieving its outcomes.
- Sustainability
- Execution performance: Determination of effectiveness and efficiency of project management and supervision of project activities.

The analysis of impact and outcomes achieved should include, *inter alia*, an assessment of attempts to use outputs and information generated by GIWA as a framework for evaluating GEF projects underway or within the GEF pipeline, of value to the GEF, regional international organizations, and governments participating in the GEF. The evaluator shall include in his analysis an assessment of risk management of the project based on the assumptions and risk identified in the project document.

The sustainability assessment should address financial sustainability, stakeholder ownership and national institutional framework and governance and identify how the outcomes of the GIWA project have leveraged co-financing as a result of improved focusing and credibility of future interventions and projects in the area of international waters.

The evaluator will rate the overall implementation success of the project and provide individual ratings of implementation aspects as described in Section 3 of this TOR. The ratings will be presented in the format of a table with brief justifications based on the findings of the main analysis.

The evaluator shall make recommendations on how the outcomes and outputs of GIWA project can be used to facilitate the development and implementation of the new GEF International Waters projects and make recommendations that may assist GEF and UNEP future interventions in assessing the status of transboundary water issues.

Furthermore, the evaluation should highlight lessons learned, both the positive as well as the negative, from the standpoint of the design and implementation of the project geared towards enhancing assessment and analysis of ecological priorities at the regional and global scales and how to make scientific work useful to the GEF, relevant organizations, governments and other decision-makers.

The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNON/DGEF Fund Management Officer of the project (table attached in Annex 1).

The scope of the evaluation is as specified in the "Global Environment Facility Guidelines for Implementing Agencies to conduct Terminal Evaluations, May 2003" to evaluate the activities supported by GEF through this project. The "achievement" indicators provided in the log frame of the project document should be used together with the evaluation parameters of appropriateness, effectiveness and efficiency, impact and sustainability.

3. TERMS OF REFERENCE

In particular but not restricted to, the evaluator shall;

6. Evaluate how, and to what extent, the stated project objectives have been met; taking into account the “achievement indicators”;
7. Assess the scope, quality and usefulness of the project outputs produced in relation to its expected results;

Assess to what extent project outputs produced have the weight of scientific authority necessary to influence policy makers, particularly the GEF and its Implementing Agencies. Ascertain the nature and significance of the contribution of the project outcomes to the wider portfolio of GEF International Waters Projects;

8. Ascertain to what extent the project implementation mechanisms developed and approved by the Steering Group of the project have been implemented (e.g. development process for the methodology) and assess results;
9. Assess the soundness and effectiveness of the various methodologies developed as well as their relevance for undertaking the GIWA assessment;
10. Ascertain to what extent the project implementation benefited from relevant ongoing and past research and operational activities of the scientific community, the GEF, UNEP and the University of Kalmar, and indicate how such potential synergies have been realized;
11. Determine the extent to which external scientific and technical information and knowledge have been incorporated and have influenced the execution of the project activities;
12. Evaluate project management with a view to deriving lessons learned. The evaluation should make specific reference to:
 - The effectiveness of organizational/institutional arrangements for collaboration between the various agencies and institutions (UNEP (DEWA and GEF Coordination Office), University of Kalmar, the Municipality of Kalmar and the various bilateral donors) involved in project arrangements and execution;
 - Evaluate the effectiveness of project management in terms of assignment and execution of project activities by the staff paid through co-financing and the GEF contribution looking at the effectiveness of the management/execution arrangements at all levels (1) policy decisions; Steering Group, Executive Committee; (2) day to day project management; the Core Team and proposing necessary adjustments as well as appraising the potency of the scientific leadership mechanism of the project proposing any alternative measures should the need arise.
 - The effectiveness of the monitoring mechanisms employed throughout the project’s lifetime; and how effectively the project responded to the challenges identified through these mechanisms; and
 - Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.
13. Assess the cost-effectiveness the activities of the project which was funded by GEF and whether these activities achieved the goals and objectives within planned and/or reasonable time and budget.

14. Assess the effectiveness of supervision and administrative and financial support provided by UNEP/DGEF, UNEP/DEWA and GEF;
15. Provide recommendations, on how the outcomes and outputs of GIWA project can be used to facilitate the development and implementation of the new GEF International Waters projects and make recommendations that may assist GEF and UNEP future interventions in assessing the status of transboundary water issues.

4. METHODOLOGY AND RATING

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach where by the UNEP/GEF Senior Programme Manager, UNEP/DEWA Senior Environmental Affairs Officer and other relevant staff is kept informed and regularly consulted throughout the evaluation. The consultant will consult with the UNEP/EOU and UNEP/DGEF Senior Programme Officer on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible given the circumstances and resources offered.

The findings of the evaluation will be based on the following:

1) A desk review of GIWA documents including, but not limited to:

- a) The project document
- b) Progress and review reports
- c) Notes from the Steering Group and the Executive Committee meetings.
- d) The methodology guidelines
- e) Regional reports
- f) Other material produced by the GIWA team
- g) GIWA Web site, www.giwa.net

2) Interviews with key individuals involving in the implementation of GIWA including:

- a) The GIWA Scientific Director
- b) GIWA Core Team members
- c) Staff of UNEP's Division of Early Warning and Assessment (DEWA) and Division of Global Environment Facility Coordination (DGEF)
- d) Selected regional GIWA focal points
- e) The GIWA Ambassador
- f) University of Kalmar staff

3) The Consultant shall determine whether to approach other representatives of

donor agencies or stakeholder groups for further information. In particular, this would include GIWA Steering Committee members, representatives of the GEF Secretariat, and staff of other UNEP Divisions. The task should then be performed by e-mail or telephone communication.

The success of project implementation will be rated on a scale from ‘highly unsatisfactory’ to ‘highly satisfactory’. The following items should be considered for rating purposes:

- Attainment of objectives and planned results
- Achievement of outputs and activities
- Cost-effectiveness
- Impact
- Sustainability
- Stakeholders participation
- Country ownership (Note: Due to the special nature of the project, the evaluator may consider not to rate this aspect (N/A))
- Implementation approach
- Financial planning
- Replicability
- Monitoring and Evaluation

A brief terminology of the implementation aspects is available upon request. Each of the items should be rated separately and then an overall rating given. The following rating system is to be applied:

- HS = Highly Satisfactory
- S = Satisfactory
- MS = Moderately Satisfactory
- MU = Moderately Unsatisfactory
- U = Unsatisfactory
- HU = Highly Unsatisfactory

6. EVALUATION REPORT FORMAT AND PROCEDURES

The evaluation report shall be a detailed report, written in English, of no more than 25 pages (excluding annexes) and include:

- i) An executive summary (no more than 3 pages)
- ii) Introduction and background
- iii) Scope, objective and methodology
- iv) Project Performance and Impact
- v) Conclusions and rating of project implementation success
- vi) Lessons learned
- vii) Recommendations
- viii) Annexes, if any, fully typed.

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief, Evaluation and Oversight Unit
UNEP, P.O. Box 30552
Nairobi, Kenya
Tel.: (254-20) 624181

Fax: (254-20) 623158
Email: segbedzi.norgbey@unep.org

With a copy to:

Ahmed Djoghlaif, Director
UNEP/Division of GEF Coordination
P.O. Box 30552
Nairobi, Kenya
Tel: + 254-20-624166
Fax: + 254-20-624041/4042
Email: ahmed.djoghlaif@unep.org

Sheila Aggarwal-Khan
Acting Deputy Director
UNEP/Division of GEF Coordination
P.O. Box 30552
Nairobi, Kenya
Tel: 254 20 62 3265
Email: sheila.aggarwal-khan@unep.org

Vladimir Mamaev
Senior Programme Officer, International Waters
United Nations Environment Programme (UNEP)
Division of GEF Coordination (DGEF)
PO Box 30552
Nairobi, Kenya
Tel: 254 20 624607
Fax: 254 20 624041/42
Email: vladimir.mamaev@unep.org

Salif Diop
Senior Environmental Affairs Officer
Head, Ecosystems Section and Water Unit
Division of Early Warning and Assessment (DEWA)
United Nations Environment Programme
P.O.Box 30552 - Nairobi, 00100 Kenya
Tel: (254-20) 622015
Fax: (254-20) 622798
E-Mail: salif.diop@unep.org

The evaluation report will be printed in hard copy and published on the Evaluation and Oversight Unit's web-site www.unep.org/eou. Subsequently, the report will be sent to the GEFSEC for their review and inclusion on the GEF website.

7. RESOURCES AND SCHEDULE OF THE EVALUATION

The contract for this evaluation will be prepared as a “lump sum contract” and begin on 12 August 2005 and end on 14 October 2005 (9 weeks). The consultant will submit a draft report to EOU on 19 September 2005, with a copy to the Senior Programme Officer, DGEF and the DEWA for initial comments. Comments to the final draft report will be sent to the consultant by 3 October 2005 the latest after which the consultant will submit the final report no later than 14 October 2005.

In accordance with UNEP/GEF policy, all GEF projects are evaluated by an independent evaluator contracted by the EOU. The evaluator should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit. The evaluator should have the following minimum qualifications: (i) experience with project management and implementation and in particular with projects that generate policies/strategies, knowledge and information; (ii) scientific expertise in water related assessments, (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable.

The evaluator will travel to Kalmar, Sweden and interview/meet with:

- The GIWA Scientific Director
- GIWA Core Team members
- University of Kalmar staff
- GIWA Ambassador

The evaluator will also travel to Nairobi, Kenya and interview/meet with:

- Staff of UNEP’s Division of Global Environment Facility Coordination (DGEF)
- Division of Early Warning and Assessment (DEWA); and
- Staff of UNEP’s Evaluation and Oversight Unit (EOU)

8. SCHEDULE OF PAYMENT

The evaluator will receive an initial payment of 40% of the total amount due upon signature of the contract. Final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual SSA of the evaluator and is *inclusive* of all expenses such as travel, accommodation and incidental expenses.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

Co-financing and Leveraged Resources

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)		Co-financing
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
- Grants											
- Loans/Con- cessional (compared to market rate)											
- Credits											
- Equity investments											
- In-kind support (by source)											
- Other (*)											
Totals											

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Annex II: Work Products and Outputs

GIWA Regional Reports status January 2006

PUBLISHED

(1) Published/printed (15)

Final Report “Challenges to International Waters – Regional Assessments in a Global Perspective

- 1a. Russian Arctic
- 3a. Caribbean Sea/Small islands
- 4. Caribbean Islands
- 11. Barents Sea
- 17. Baltic Sea
- 24. Aral Sea
- 36. East China Sea
- 38. Patagonian Shelf
- 39. Brazil Current
- 40b. Amazon
- 43. Lake Chad
- 45b. Indian Ocean Islands
- 54. South China Sea
- 62. Pacific Islands

(2) Thematic report printed (2)

- 22 a. Eutrophication in the Black Sea Region
- 22 b. Transboundary Waters in the Black Sea – Danube region

(3) Published/web only (14)

(Ready to be printed when needed)

- 13. Faeroe Plateau
- 15. East Greenland Shelf
- 16. West Greenland Shelf
- 1b. Arctic Greenland
- 23. Caspian Sea
- 27. Gulf of California
- 34. Yellow Sea
- 41. Canary Current
- 42. Guinea Current
- 44. Benguela Current
- 47. East African Rift Valley Lakes
- 56. Sulu -Celebes Sea
- 57. Indonesian Seas
- 64. Humboldt Current

NOT PUBLISHED – Editing work ongoing

(4) Peer reviewed, final version in house (6)

- 30. Sea of Okhotsk
- 31. Oyashio Current
- 3b&c. Caribbean Sea
- 55. Mekong River
- 65. Eastern Equatorial Pacific

(5) Peer reviewed, final version in house: not GEF eligible (5)

- 58. North Australian Shelf
- 59. Coral Sea Basin
- 60. Great Barrier Reef
- 61. Great Australian Bight
- 63. Tasman Sea

(6) Not ready (3)—great input needed to finalize

- 2. Gulf of Mexico (have not fulfilled the contract)
- 46. Somali Coastal Current
- 51. Jordan, politically difficult (have not fulfilled the contract)

(7) Section reports (6)—final report missing

- 31. Kuroshio Current
- 28. Bering Sea
- 33. Sea of Japan
- 40a. Northeast Brazil Shelf
- 45a. Agulhas Current
- 53. Bay of Bengal (have not fulfilled the contract)

(8) Thematic reports (9)

- 21. North Africa and Nile River basin
- 49. Red Sea and Gulf of Aden
- 50. Euphrates and Tigris River Basins
- 52. Arabian Sea

Northeast Atlantic Report

- 12. Norwegian Sea
- 14. Iceland Shelf
- 18. North Sea
- 19. Celtic-Biscay of Biscay Sea region
- 20. Iberian Coastal Sea

(9) No Progress (12)

- 1c. Arctic European/Atlantic
- 1d. Arctic North American
- 5. Southeast Shelf
- 6. Northeast Shelf
- 7. Scotian Shelf
- 8. Gulf of St Lawrence
- 9. Newfoundland Shelf
- 10. Baffin Bay, Labrador Sea, Canadian Archipelago
- 25. Gulf of Alaska
- 26. California Current
- 37. Hawaiian Archipelago
- 66. Antarctic

Products	Date
Workshop material for the UNEP Children's Summit for the Environment, Aichi, Japan.	July 2005
Diploma to the Focal Points	June 2005
CD-ROM with four Regional reports (3a, 4, 45b, 62) and flyers for the SIDS meeting, Mauritius.	January 2005
Flyer for Globetree Baltic Sea/Lake Victoria project for the International Roots Meeting in Nairobi, Kenya.	November 2004
Posters for '12 th Baltic Sea States Subregional Cooperation conference' in Malmö, Sweden	October 2004
Flyers for the World Water Congress in Marrakech, Morocco	September 2004
Posters for '2004 2 nd National Conference on Coastal and Estuarine Habitat Restoration', Seattle	September 2004
Seminar, poster presentation and flyer for the World Water Week in Stockholm	August 2004
Poster presentation and flyer. Press conference and launch of the Barents Sea report, Stavanger, Norway	August 2004
CD-ROM with four Regional reports (42, 43, 47, 45b). Lake Chad Basin Commission meeting, Abuja, Nigeria.	June 2004
Poster presentation and flyer. Launch of the Barents Sea report, Tromsø, Norway	May 2004
Flyer on the Baltic Sea report, Water Conference Seagull; Regional Council meeting	May 2004
2 nd Announcement 'Troubled Waters Conference'	May 2004
Posters for the 'UNEP 8 th Special Session of the Governing Council in Korea/Global Ministerial Meeting'	March 2004
Poster presentation and pamphlet for the 'Pan-	December 2003

Products	Date
African Implementation and Partnership Conference on Water'	
Invitation to the 'Troubled Waters Conference'	December 2003
Seminar, poster presentation and flyer for the World Water Week in Stockholm	August 2003
Information Brochure/Annual report	July 2003
Exhibition and brochure 3 rd World Water Forum, Kyoto, Japan	March 2003
Information material on the UN Freshwater Year for school children age 8-13 in the Kalmar region.	February 2003
Pamphlet 'Transboundary Waters Conference' call for papers	February 2003
Poster presentation for the 'Model UN' at Stagnelius High School, Kalmar, Sweden. Honorary guest was the Queen of Sweden.	January 2003
Annual report 2001	August 2002
Brochure	November 2000

Annex III
Financial Leverage

Co financing (Type/Source)	IA own Financing (US \$ million)		Government (US \$ million)		Other* (US \$ million)		Total (US \$ million)		Total Disbursement (US \$ million)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
- Grants	--	0.27	--	3.39	--	1.40	--	5.06	--	5.06
- Loans/ - Concessional	--	--	--	--	--	--	--	--	--	--
- Credits	--	--	--	--	--	--	--	--	--	--
- Equity investments	--	--	--	--	--	--	--	--	--	--
- In-kind support	--	0.58	--	1.69	--	2.52	7.33	4.79	--	4.79
- Other (*)	--	--	--	--	--	--	--	--	--	--
Totals	--	0.85	--	5.08	--	3.92	7.33	9.85	7.33	9.85

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Project costs and financing as of June 2006

Source of Funds	Nature of Contribution	US \$	%
UNEP Environment Fund	Cash	272,000	1.7
GEF	Cash	6,495,000	39.7
Government of Finland	Cash	1,245,931	7.6
Government of Norway	Cash	53,775	0.3
Government of Sweden	Cash	2,091,248	12.8
City and University of Kalmar	Cash	1,400,000	8.6
Sub-total: Cash	Cash	11,557,954	70.7
UNEP	In kind	580,000	3.5
Governments of Australia and New Zealand	In kind	94,000	0.6
Government of the Seychelles	In kind	20,000	0.1
Government of Denmark	In kind	72,000	0.4
Government of the United States (NOAA)	In kind	1,500,000	9.3
World Wildlife Fund (California)	In kind	17,198	0.1
Expert Meetings (Teams)	In kind (163 days)	702,600	4.3
Expert Meetings (Regional)	In kind (6,000 days)	1,800,000	11.0
Sub-total: In-kind	In kind	4,785,798	29.3
Total	--	16,343,752	100.0

Annex IV

Documents Reviewed

Reports

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Laane, A., Kraav, E. and Titova, G. 2005. "Global International Waters Assessment: Baltic Sea," *GIWA Regional Assessment 17*, UNEP/GEF/University of Kalmar, 69 pp. ISSN 1651-940X.

Working Documents

Global International Waters Assessment, *GIWA Methodology: STAGE 1: Scaling and Scoping – Guidance to the Methodology and its Use*, July 2001.

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United Nations Environment Programme, Global International Waters Assessment (GIWA) Expert Workshop on the Formulation of a Geographic Framework for the Analysis of International Waters Issues of Transboundary or Regional and Global Significance: Geneva, 9-13 June 1997—Report of the Workshop, UNEP(WATER)/GEF-GIWA/3.3, June 1996 [sic].

United Nations Environment Programme, First Meeting of the Steering Group for the Global International Waters Assessment (GIWA): Geneva, 24-27 February 1997—Report of the Meeting, GIWA.1/13, March 1997.

United Nations Environment Programme, Global International Waters Assessment (GIWA) Expert Workshop on Water-Related Issues of Transboundary and Global Concern: Geneva, 21-25 April 1997—Report of the Meeting, UNEP(WATER)/GEF-GIWA/2.4, April 1997.

United Nations Environment Programme, Second Meeting of the Steering Group for the Global International Waters Assessment (GIWA): Geneva, 14-15 June 1997—Report of the Meeting, UNEP(WATER)/GEF-GIWA/4.2, July 1997.

United Nations Environment Programme, Management Meeting for the Global International Waters Assessment (GIWA): Geneva, 11-12 September 1997—Report of the Meeting, UNEP(WATER)/GEF-GIWA/5.3, September 1997.

Miscellaneous Documents

GIWA, *Water—the most essential of life sustaining elements*, s.d. [brochure]

Annex V

Interviews Conducted

Programme in Kalmar

14.08.2005 (Sunday)

Venue: Arrival to Packhuset Hotel at 9.30 p.m.

15.08.2005 (Monday)

Venue: The GIWA Coordination Office, Landgången 3

Session: Evaluation of the GIWA Project

Time: Interview with:
Open: Dag Daler, former Scientific Director
No: +47 333 21 950, +47 920 43 291

Open: In person:
Open: Dr Elina Rautalahti-Miettinen, former Coordinator Northern Hemisphere
13.00: Dr Ulla Li Zweifel, former Scientific Advisor & Head of the Editorial Team
Prof. Olof Linden, former Scientific Advisor

16.00: Meeting with the Vice Chancellor, Dr Agneta Bladh, University of Kalmar

Lunch: 12.30-13.30 at Kajplats 4, Kalmar
Dinner: at Hamnkrogen, Kalmar

16.08.2005 (Tuesday)

Venue: The GIWA Coordination Office, Landgången 3

Session: Evaluation of the GIWA Project

Time: Telephone conference, participants see annex 1.
09.00

Open: Telephone meeting with the Ambassador Prof. em. Dr. Gotthilf Hempel, Kiel
No: +49 431 650 773

Lunch: 12.30-13.30 at Stekhuset, Kalmar
Dinner: Small reception with former staff in the Giwa premises

17.08.2005 (Wednesday)

Departure from Kalmar Airport 8.55 a.m.

Programme in Nairobi

18.08.2005 (Thursday)

Arrival from Nairobi Airport 10.45 p.m.

19.08.2005 (Friday)

Venue: UNEP, Gigiri

Session: Evaluation of the GIWA Project

Time: Interview with:
Open Salif Diop
Vladimir Mamaev
Pinya Sarasas
Ganesh Rauniyar
Ivar A. Baste
Michael Spilsbury
Halifa Omar Drammeh
Carmen Tavera

Session: Meeting with UNEP Executive Director on the GIWA Project

Time: Interview with:
17.00 Dr Klaus Topfer

20.08.2005 (Saturday)

Venue: Norfolk Hotel, Nairobi

Session: Evaluation of the GIWA Project

Time: Interview with:
Open Takehiro Nakamura

21.08.2005 (Sunday)

Departure from Nairobi Airport 10.35 a.m.