

## INTERNATIONAL WATERS FOCAL AREA STRATEGY AND STRATEGIC PROGRAMMING FOR GEF-4

### I. INTRODUCTION

1. This brochure presents the International Waters focal area strategy and strategic programming for GEF-4 (2007 – 2010), approved by the GEF Council in September 2007.
2. At the replenishment of the GEF Trust Fund in 2006, the GEF Council requested the GEF Secretariat to review and revise as necessary the strategies for the six focal areas of the GEF, taking into account issues such as sustainable forest management and sound chemicals management.<sup>1</sup>
3. In December 2006, the CEO presented to the Council a plan to increase the efficiency and impact of the GEF. A central element of this reform package is to move away from the previous single project interventions towards a more programmatic focus for the GEF. The purpose is two-fold: a) to focus the limited funding resources of GEF-4 on a set of priority issues of global environmental concern; and b) to link projects together to achieve stronger impacts.
4. The strategy for International Waters presented here is the result of a consultative process involving external advisory groups and contributions from the GEF Council Members, Convention secretariats, GEF agencies, the Scientific and Technical Advisory Panel (STAP) and other GEF partners.<sup>2</sup>
5. The strategy builds on previous GEF achievements and experience within International Waters. The long term objectives of this focal area were established in the GEF Operational Strategy approved by the GEF Council in 1995. The twofold objectives are: to foster international, multi-state cooperation on transboundary water concerns and to play a catalytic role in addressing those transboundary water concerns by assisting countries to utilize the full range of technical assistance, economic, financial, regulatory, and institutional reforms that are needed.
6. The GEF international waters (IW) focal area addresses sustainable development challenges faced by states sharing transboundary surface, subsurface, and marine waters. These cross-border challenges range from pollution, loss of critical habitats and biodiversity, ship waste and alien species, to overuse and conflicting uses of surface and groundwater, over-harvesting of fisheries, and adaptation to climatic fluctuations (e.g., associated droughts, floods, sea level rise, reef bleaching).

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<sup>1</sup> GEF/R.4/32, Policy recommendations for the Fourth Replenishment of the GEF Trust Fund.

<sup>2</sup> Working documents and comments received from GEF partners are accessible at the GEF website [www.thegef.org](http://www.thegef.org) under GEF policies.

7. The 1995 GEF Operational Strategy defined the kinds of transboundary concerns to be addressed under the IW focal area and recognized links between the focal area and Agenda 21 Chapters 17 and 18 on oceans and freshwater. The term “international waters” is specified in the GEF Instrument, and the GEF Council in 1995 adopted the use of the word “transboundary” in describing the shared water and basin systems that are the subject of GEF interventions, including the extent of basins that constitute those water systems. In support of Agenda 21, the Rio Declaration, and the transition to sustainable development, the IW focal area also contributes to human well-being and poverty eradication by sustaining livelihoods, securing food sources, promoting equitable access to water, and reducing water-related health risks as a result of its interventions. With transboundary complexities, these results take time to produce as trust and confidence must first be built among states in a bottom-up process before progress can be made on water and ocean security. This patience can pay off in generating political commitments that may sustain collective, multi-country action over time.

8. As a step towards a more programmatic approach for GEF, strategic programs have been developed in support of the long term objectives. These strategic programs define the GEF’s focus during GEF-4. The strategic programs have been selected and defined in view of their importance, urgency and cost-effectiveness from a global environment perspective. Priorities identified by countries, as well as overall guidance from the multilateral environmental agreements and conventions have also been taken into consideration. The strategic programs provide an intermediate link between the project level and the long term objectives of the GEF within the focal areas.

9. Four strategic programs will support achieving the objectives for the focal area during the GEF 4 period: (a) restoring and sustaining coastal and marine fish stocks and associated biological diversity, (b) reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in Large Marine Ecosystems consistent with the Global Program of Action (GPA); (c) balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature, and (d) reducing persistent toxic substances and testing adaptive management of waters with melting ice.

10. The long term objectives and strategic programs that are redefined for this GEF 4 replenishment period replace the previous structure of operational programs and strategic priorities. The new structure, summarized for the International Waters Focal Area in the table below, balances continuity and flexibility and supports the emphasis on results.

*Table 1: Long term objectives and strategic programs for International Waters in GEF-4*

Long-term Objectives	Strategic Programs for GEF-4
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<p><b>1:</b> To foster international, multi-state cooperation on priority transboundary water concerns</p> <p><b>2:</b> To catalyze transboundary action addressing water concerns</p>	<p>1. Restoring and sustaining coastal and marine fish stocks and associated biological diversity</p> <p>2. Reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in LMEs consistent with the GPA</p> <p>3. Balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature</p> <p>4. Reducing persistent toxic substances and testing adaptive management of waters with melting ice</p>
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11. The focal area strategy is aligned with the Results Based Management (RBM) Framework for the GEF, in order to direct the strategies towards tangible global environmental benefits and to enable adequate reporting on the implementation of the strategies. Long-term expected *impacts* on the global environment are assigned to each of the objectives, and intermediate expected *outcomes* are assigned to each of the strategic programs. The projects are thus expected to support the achievement of the impacts and outcomes identified at the programmatic level.

12. Provisional indicators have been identified for each expected impact and for each expected outcome. These indicators will allow a systematic monitoring of the actual achievement of the expected impacts and outcomes. The indicators will be further developed in connection with the Results Based Management for the GEF.

13. The strategy for International Waters presented here seeks to guide project proponents in countries and in GEF agencies and other GEF partners in preparing and reviewing project proposals for GEF-4. The GEF Secretariat will initiate the development of long term objectives and strategic programs for GEF-5 in 2008 with a view to presenting proposed strategic programming for GEF-5 to the GEF Council at its first meeting in 2009.

## II. BACKGROUND

14. A decade of GEF experience with IW projects shows that interventions in multiple countries with regional projects are more cost-effective than individual country projects in gaining commitments to transboundary action. In addition, GEF builds trust and confidence for sovereign states working together on shared water-related concerns in order to avoid political conflicts among neighboring states and pursue joint development benefits. This approach has resulted in building sustainable regional institutions for collective action after GEF support ends. This strategy of using foundational processes to stimulate political commitment to collective action and then scaling up with innovative

policy, legal, and institutional reforms and demonstrations may take a decade of successive projects to achieve in some transboundary waters, and longer to record improvements. Past experiences with transboundary water resources in the Rhine River Basin, the North Sea, and the North American Great Lakes Basin actually took many decades to catalyze action, and there are continuing cross-border concerns for water, fisheries, habitat, and pollution that need further attention.

15. During GEF-4, the GEF Council-approved mandate of utilizing integrated, ecosystem-based approaches to management of transboundary water resources will be stressed. This GEF support places human activities at the center of the transboundary waters and bases interventions on modifying those human activities so that multiple benefits may be sustained. GEF has a long history of stimulating development of multi-agency collaboration in this focal area and will continue to promote this collaboration to meet water-related development targets agreed to by the international community, such as the Johannesburg targets that were set at the 2002 World Summit on Sustainable Development<sup>3</sup>. Partnerships among agencies will continue to be pursued to assist them in working together more coherently within comparative advantages consistent with country priorities and the United Nations reforms currently being undertaken. Such collaboration among agencies contributes to increased development effectiveness and synergies among GEF focal areas and is essential to mobilize the billions of dollars necessary to scale-up GEF work.

16. The third independent Overall Performance Study of the GEF (OPS3) in 2005 and internal reviews have documented success in use of GEF-recommended processes for achieving the first strategic objective through its special capacity building or foundational projects (equivalent to GEF enabling activities in other focal areas)<sup>4</sup>. OPS3 reported that outcomes have been robust, targets set by the second and third replenishments were exceeded, and the focal area had proven to be an effective agent for policy, legal, and institutional reforms and for the creation of enabling environments. OPS3 concluded that the IW focal area was ready to move from a testing and demonstration mode to scaling-up of full operations in support of agreed incremental costs of reforms, investments, and management programs needed to reduce stress on transboundary freshwater resources and marine systems. This transition to implementing on-the-ground reforms and stress reduction measures to meet the second Council-approved objective is the primary focus of work for international waters during GEF-4. A modest start can be made with the resources provided.

### **III. DIFFERENCES BETWEEN GEF-3 AND GEF-4**

17. The GEF IW focal area was the only focal area to receive a decrease for GEF-4 over GEF-3. The GEF-3 allocation was \$430 million while the GEF-4 amount is \$355 million in the GEF 4 Replenishment<sup>5</sup>. In addition, further reductions to support the GEF Small Grants Program and other priorities reduced this to \$335 million. With less

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<sup>3</sup> [http://www.un.org/esa/sustdev/documents/WSSD\\_POI\\_PD/English/POIToc.htm](http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm)

<sup>4</sup> E.g. Biodiversity: [http://www.thegef.org/interior.aspx?id=224&ekmense=c580fa7b\\_48\\_124\\_btnlink](http://www.thegef.org/interior.aspx?id=224&ekmense=c580fa7b_48_124_btnlink).

<sup>5</sup> <http://www.thegef.org/interior.aspx?id=62&terms=replenishment>

funding, fewer accomplishments should be expected in GEF-4 as indicated by simple targets approved in the replenishment programming. The availability of funding also results in a distinct focusing of the GEF-4 strategy on just a few top priority transboundary water themes in order to better deliver results. Many of the other transboundary concerns not listed as a priority have been requested to be added back in the comments on previous drafts of this strategy. However, these suggestions have not been incorporated.

18. While GEF-3 programmed resources through Operational Programs 8, 9, and 10, GEF-4 resources are programmed through four limited Strategic Programs. Projects previously supported in GEF-2 and GEF-3 often addressed general cooperation on transboundary waters and preventive interventions. With limited resources, there will need to be a sense of country-driven urgency about an imminent transboundary concern included in the strategy in order for resources to be programmed. In addition, oil-related ship pollution, inland fisheries, general pollution concerns in basins, protected areas for transboundary wetlands, and general monitoring of transboundary water resources would not be supported unless one of the four programming themes is also involved. This does not mean that GEF will not address these important concerns in the future. The priority setting included herein is just for GEF-4.

19. Changes have also been made in comparison to the draft strategy which the Council reviewed in December 2006. Based on comments from the Council and the International Waters Technical Advisory Group, the third objective related to innovative demonstrations was incorporated into the other two objectives and they are now expressed using wording from the original GEF Operational Strategy. The two strategic objectives for GEF-4 represent a simplification and focusing with respect to the three objectives included in December 2006 version. With existing levels of GEF resources, focus will be placed on only a few globally significant transboundary issues in order to increase the likelihood of significant impacts as part of a delicate balancing of interests and pressing transboundary concerns of significance.

#### **IV. STRATEGIC OBJECTIVES**

20. Realizing the complexity of these challenges, including the difficulties that even developed states continue to have in addressing large transboundary water resources, and the decade or longer time frame for results to be measurable in large systems, the GEF Operational Strategy in 1995 adopted a stepwise catalytic approach reflected in the two objectives for the IW focal area:

*Table 2. Strategic Objectives for the International Waters Focal Area*

<b>Strategic Objective</b>	<b>Expected Impacts</b>	<b>Indicators</b>
1. To foster international,	Political commitments to improved multi-country cooperation	Multi-country agreements

multi-state cooperation on priority water concerns	supporting sustainable economic development opportunities, stability, and water-related security in transboundary water systems	Co-financing Goal- 1:1
2. To catalyze transboundary action addressing water concerns	Participating states demonstrate the necessary ability to reduce over-exploitation of fish stocks, reduce land-based coastal pollution, and balance competing water uses in basins and report subsequent water-related improvements	Trend analysis supported by the GEF through a new Transboundary Waters Assessment Program and additional states meet Johannesburg (JPOI) targets on sustainable fisheries, IWRM, and ICM compared to 2006  Co-financing Goal- 2:1

- a. To foster international, multi-state cooperation on priority transboundary water concerns through more comprehensive, ecosystem-based approaches to management
- b. To play a catalytic role in addressing transboundary water concerns by assisting countries to utilize the full range of technical assistance, economic, financial, regulatory, and institutional reforms that are needed

21. These two objectives adopted by the GEF Council remain valid today and serve as the strategic objectives (SOs) for GEF-4 in this focal area (see Table 1).

22. In the past, GEF has supported interventions addressing many different, globally significant, cross-border water concerns. Because GEF-4 resources are insufficient to continue addressing all of these transboundary issues, the focal area will focus on four major transboundary, water-related priorities for GEF-4. These global concerns have emerged in recent assessments such as the Millennium Ecosystem Assessment and the GEF Global International Waters Assessment<sup>6</sup> as posing grave risks to transboundary water resources as well as serious barriers to achieving sustainable development. The four global concerns are:

- (a) Depletion of coastal and marine fish stocks and associated biological diversity
- (b) Nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in Large Marine Ecosystems (LMEs)
- (c) Overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature
- (d) Pollution from persistent toxic substances (PTS) and complex problems in areas of melting ice in high-altitude basins and polar systems that include contamination from PTS

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<sup>6</sup> <http://www.giwa.net/>

23. As proposed in the GEF Replenishment Programming Paper (GEF/R.4/33<sup>7</sup>), greater resources will be devoted during GEF-4 to on-the-ground implementation and innovative demonstrations to meet Strategic Objective Two: 65-75 percent for implementation and demonstrations compared to 25-35 percent for foundational capacity building and targeted learning for the portfolio.

24. Partnerships among agencies will be sought to leverage the billions of dollars of resources necessary to secure the socioeconomic benefits that transboundary waters provide to the communities that depend on them. These partnerships for scaling-up implementation consistent with OPS3 recommendations for this focal area have been termed “International Waters Partnership Investment Funds” beginning with approval of the Danube/Black Sea Basin Investment Fund by the GEF Council in 2001<sup>8</sup>. The expedited procedures and predictability of resources in these investment funds provide incentives for multilateral banks to make decisions to set internal priorities for sector action that can leverage the scale of resources necessary to address such large-scale transboundary concerns. GEF experience has been that piecemeal approaches are unable to provide the necessary attention within multilateral banks to internalize these transboundary concerns, and GEF would thereby not be successful in scaling up its operations to meet SO-Two.

25. An increased emphasis on targeted experience sharing and learning among the new and existing GEF IW projects in the portfolio is planned to improve capacity of projects to achieve objectives and to identify and replicate good practices before project completion. South-to-South experience sharing among IW projects contributes to quality enhancement for the GEF IW portfolio, development of knowledge management tools to capture good practices, and accelerated replication of good practices. With the help of its focal area learning and experience sharing program known as GEF IW:LEARN, the IW:LEARN web-based resource center ([www.iwlearn.net](http://www.iwlearn.net)), and the GEF International Waters Task Force, this portfolio learning is an important feature of GEF programming and will be enhanced with a focus on many Africa IW operations now underway.

## **V. STRATEGIC PROGRAMS IN GEF-4**

26. The following sections describe four strategic programs in the IW focal area for GEF-4 that focus on the four priority global themes. They concentrate GEF resources on the four concerns rather than scattering the resources. The two objectives for the focal area from 1995 remain overarching SOs for GEF 4. The two SOs are applied to the programming themes to direct the GEF level of effort, the outcome of which can be considered more specific application of the SOs to each strategic program. For consistency with the GEF-4 Replenishment Programming Paper, project results will be aggregated under each of the two strategic objectives for reporting purposes.

### **Strategic Program 1: Restoring and Sustaining Coastal and Marine Fish Stocks and Associated Biological Diversity**

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<sup>7</sup> <http://www.thegef.org/interior.aspx?id=62&terms=replenishment>.

<sup>8</sup> [http://www.thegef.org/Documents/Council\\_Documents/GEF\\_C17/c17\\_wp.html](http://www.thegef.org/Documents/Council_Documents/GEF_C17/c17_wp.html)

27. Serious depletion of coastal and marine fish stocks and use of unselective and destructive fishing practices are threatening coastal economies and the communities depending on them as well as causing adverse impacts on biological diversity. \$60 billion in international trade in marine fisheries products are at risk from this depletion as the oceans are being emptied of larger species. In addition, substances toxic or harmful to fish, biodiversity, and humans (hazardous algal blooms and paralytic shellfish disease as well as invasive alien species) are transferred across borders in ship ballast water. The IW focal area has supported a number of projects during the last decade to catalyze improvements in joint management of fish stocks in marine ecosystems.

28. The impact of decline of fish stocks, destructive practices, and habitat loss has serious implications for loss of species and biomass and ecosystem structure, integrity, and stability. Consequently, the GEF IW focal area will join forces with biodiversity during GEF-4 in a number of regions to achieve cost-effective solutions where funding from each focal area can be focused on marine fisheries and their habitat. So far, 123 different states have requested GEF help to work with their neighbors in GEF IW foundational capacity-building projects for almost one-half (14) of the planet's LMEs that are shared by developing countries in recognition of these social and economic concerns. GEF-recommended processes are underway toward development of ministerially-agreed collective programs of action on fish stocks and habitat conservation for the LMEs that should benefit from use of marine protected areas (MPAs) through funding from the biodiversity focal area. The International Code of Conduct for Responsible Fisheries (Code of Conduct) was adopted by the Food and Agriculture Organization in 1995. GEF projects will be encouraged to utilize this instrument in their work toward the Johannesburg targets.

29. Where capacity is built and action programs agreed, GEF will support policy, legal, and institutional reforms and multi-agency partnerships that contribute to the Johannesburg targets for sustaining fish stocks, including regional and national-level reforms in governance, access rights, and enforcement, mostly in LMEs in order to utilize ecosystem-based approaches to assessment and management of fish stocks in these critical systems. Also supported would be investments in sustainable alternative livelihoods (such as aquaculture), habitat restoration, fish refugia, limited use designations (including MPAs from the biodiversity area, especially in East Asia), technical assistance, less destructive gear to reduce stress on wild fish stocks and biological diversity, and tools to support effective implementation of the 1995 Code of Conduct<sup>9</sup>. Solutions to concerns on the high seas will be pursued as will engagement of the business community and fishing industry to develop and implement solutions and work with GEF IW projects. Where multi-country action programs are adopted, some single-country projects will be tested with a view to possible future programming needs.

30. A number of these interventions are appropriate for implementation within the frameworks of Integrated Coastal Management (ICM). Consistent with the ecosystem-based approach in addressing multiple stresses through ICM and linkages to upstream

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<sup>9</sup> [http://www.fao.org/fi/website/FIRetrieveAction.do?dom=org&xml=CCRF\\_prog.xml&xp\\_nav=2](http://www.fao.org/fi/website/FIRetrieveAction.do?dom=org&xml=CCRF_prog.xml&xp_nav=2)



basin management through Integrated Water Resources Management (IWRM), the focal area will pursue collaboration on inter-linkages among GEF focal areas (especially biodiversity) that can sustain livelihoods, food security, and coastal habitats as a contribution to the marine-related Johannesburg targets. These approaches can assist communities and states to adapt to fluctuating fish stocks and coastal climatic regimes. Where small island developing states (SIDS) are located in LMEs with continental states, they will be supported as part of the GEF LME interventions as well as in possible interventions in areas of high seas.

31. Where capacity and agreement among states is not yet achieved for reducing depletion of living resources, an enabling environment for action will be created through foundational projects in states sharing a few additional LMEs as well as limited demonstrations addressing invasive species in ship ballast water. Targeted learning projects will be undertaken for the IW portfolio to enhance South-to-South experience sharing and learning, knowledge management (KM), and capacity building to replicate good practices.

**Strategic Program 2: Reducing Nutrient Over-Enrichment and Oxygen Depletion from Land-Based Pollution of Coastal Waters in LMEs Consistent With the Global Program of Action (GPA)**

32. Global assessments identify land-based pollution of coastal and marine waters and resulting eutrophication as creating economically and ecologically problematic “dead zones” of oxygen-deficient water. The problem is worsening globally and is caused by excessive levels of nitrogen and phosphorus pollution and oxygen-demanding substances from agriculture, human sewage, and industrial effluents. Recent projections forecast a doubling of nutrient loadings by 2050 in some areas such as Asia, with major impacts on communities and coastal economies.

33. In 1995, a global action program known as the GPA (Global Program of Action for the Protection of the Marine Environment from Land-based Activities) was adopted by over 100 countries in Washington, D.C. and a special provision was included by the GEF Council in the 1995 GEF Operational Strategy for support to countries for demonstration activities and catalytic action toward policy, legal, and institutional reforms. With the situation of “dead zones” and nitrogen stimulation/degradation of reefs worsening, more attention will be placed by GEF on this transboundary concern.

34. Many bilateral and multilateral programs focus on sanitation and ignore sewage and agriculture pollution, which are major contributors to the growing problem that contributes to decline of coastal and marine fisheries. As a result of projections showing major nutrient pollution and “dead zone” concerns developing in Asia, the GEF IW focal area will join forces with the land degradation focal area on this in East Asia and will assist countries elsewhere to reduce land-based pollution, including a focus on SIDS to protect reefs and lagoons.

35. GEF will foster ecosystem-based approaches to assessment and management of LMEs that include reducing land-based pollution and the resulting eutrophication of

coastal “dead zones” (including local hotspots) in support of the GPA. Where capacity is built and collective action agreed upon, support will be provided for national and local policy, legal, and institutional reforms to reduce land-based inputs of nitrogen and other pollutants consistent with agreed transboundary action programs and the GPA. This includes incorporation of nutrient reduction into national and local ICM strategies and in IWRM in basins. Innovative partnerships, investments, and financing will be pursued (including testing of a revolving fund) addressing agriculture, municipal, and industry-sector pollution, and for wetland restoration/enhancement. This will include use of locally acceptable ecological sanitation and simple treatment in support of Johannesburg targets – especially in SIDS. Attention would be given to Asia to incorporate nutrient management and cycling in agriculture to address non-point sources of pollution of reef and lagoon systems, with a focus on nitrogen pollution reduction with its cross-media transfers. The business community will be engaged in developing solutions, especially for agriculture sources of nutrients, and attention will be paid to environmental flows in rivers and use of IWRM to ensure sustenance for downstream coastal ecosystems.

36. Where capacity is not yet built to address these GPA-related concerns, an enabling environment for action will be created. Initial capacity can be developed through foundational projects for a limited number of new transboundary waters and working with external networks related to pollution sources and external initiatives. Targeted learning will be undertaken for the IW portfolio in special projects to enhance South-to-South experience sharing and learning, knowledge management, and capacity building to replicate good practices.

### **Strategic Program 3: Balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature**

37. Overuse and conflicting uses of water resources in transboundary surface and groundwater resources result in significant ecological and economic damage, reduced livelihoods for the poor, and increased political tensions among upstream and downstream states. With more frequent droughts and floods, conflicts and water scarcity increase dramatically. Additionally, shallow groundwater over-extraction and saline intrusion along coasts are becoming major global threats to human development and environmental sustainability, and a combination of these concerns poses grave risks for the water supplies and coastal waters of SIDS.

38. Use of IWRM policies has been identified as the answer to balancing competing and conflicting uses of water resources to inform and consider tradeoffs being made in socioeconomic development objectives and ecosystem protection. These hydrologic unit-based IWRM approaches provide a framework for practical considerations in tradeoffs among water resource uses with participation of stakeholders and support the incorporation of benefits across boundaries into decision-making. Targets related to IWRM were adopted at the Johannesburg Summit. Links between IWRM in basins and ICM at downstream coasts are of pivotal importance as transboundary cooperation contributes to securing not only local water uses but also global public good that benefit all stakeholders.

39. With GEF assistance, capacity is being built in many African states through foundational projects in a dozen surface and groundwater basins to take the next steps in implementing IWRM and other modern water resource management policies. These projects will improve water security for communities, reduce conflicts among states, improve ecological flows in basins, and adapt to fluctuating climatic regimes in transboundary waters. Over time, these interventions will contribute to improved community livelihoods, increased crop yields where unsustainable irrigation practices are used, improved environmental flows, and reduced health risks where pollutants create such risks. The global water crisis results from a crisis of governance that has to be addressed at the transboundary scale in addition to the national and local scales.

40. Where capacity is built to work jointly on transboundary surface and groundwater resources, GEF will support the balancing of conflicting/competing water uses through: application of IWRM; enhanced functioning of joint management institutions; integrated natural resources management across focal areas, with groundwater being systematically incorporated into surface water management; improved flow regimes from infrastructure development, protected water supplies, enhanced groundwater recharge, and fostering increased resilience to fluctuating climatic regimes. With only modest resources available during GEF-4, this program is aimed primarily at quantity issues where competing water uses create priority and urgent concerns. Priority is also accorded to integrated approaches across GEF focal areas where multiple benefits may be generated because of inter-linkages such as with sustainable forest management. This may entail reforestation to protect groundwater recharge areas or to control erosion and soil loss in the upper reaches of watersheds with benefits in flow regulation and the hydrological balance of upper watersheds. Such cases of watershed intervention may include tests of payments for environmental services in various forms.

41. A limited number of innovative demonstration activities will be undertaken to test promising approaches, financing, and technologies for introducing IWRM as well as to protect/enhance groundwater supplies, especially in SIDS where multiple benefits can be gained in: protecting drinking water supplies; reducing coastal pollution; and adopting ICM strategies. Groundwater-related and water reuse demos in the North Africa/Middle East region would be pursued in collaboration with the GEF land degradation focal area.

42. The approaches in this strategic program are recognized as being quite broad. There have been few requests to GEF in the past for these types of interventions compared to requests for marine assistance. Since the last replenishment, the potential importance in balancing these competing uses among states and among sector uses within cooperating states has increased as a result of security and stability concerns. Sovereignty interests among states need such a broad, initial approach to catalyze progress. Where capacity is not yet built, an enabling environment for IWRM will be pursued in states sharing transboundary freshwaters. Additionally, targeted learning will be undertaken for the IW portfolio to enhance experience sharing and learning, KM, and replication of good practices that contribute to sustaining livelihoods as well as food and water security.

#### **Strategic Program 4: Reducing Persistent Toxic Substances and Testing Adaptive Management of Waters with Melting Ice**

43. Ice is a dominant characteristic of transboundary water resources in polar and high altitude ecosystems. Recent global assessments identify significant accelerated reduction of the spatial extent and mass of polar and glacial ice, creating significant ecological and economic changes of global significance and water stress for downstream communities and downstream states in surface and groundwater basins. The problem is worsening globally and is accelerated by global warming that affects the national productivity of goods and services of marine polar ecosystems and the ice-water balance of high altitude glacial basins. With literally billions of people depending on slow ice and snow melt for downstream water supplies, the future stability and sustainability of many cities and villages are at risk.

44. Adding to stress in both cold region water systems as well as in the tropics are toxic compounds like heavy metals and other chemicals that are deposited from distant sources as a result of rapid industrialization and energy use. In fact, many of these toxic substances have been stored in ice from airborne releases since the start of the industrialization on the planet, and additional risks are posed to ecosystems and human health from melting and remobilization. Many of these compounds are toxic and persist in the environment as they cross national borders to bio-accumulate in freshwater and ocean food chains and pose risks to ecosystem and human health. While persistent organic pollutants (POPs) are a small subset of 12 such compounds, persistent toxic substances (PTS) pose significant health risks in food such as finfish, shellfish, and wildlife consumed by predators ranging from birds to polar bears and humans in large water systems as well as locally in water supplies and through inhalation pathways where they are released into air or water.

45. The GEF Council included demonstration projects to reduce releases of these PTS in the IW focal area as part of the 1995 GEF Operational Strategy. With many waters becoming unusable because of toxic pollutants – and the accompanying risks to ecosystem and human health (especially with endocrine disruptors and mercury) – there is a need to increase GEF attention on the reduction of PTS and other land-based sources of toxic/hazardous substances. The adverse effect of land-based sources of PTS in coastal and marine environments is one of the emerging and shared concerns in the world.

46. A limited demonstration program is proposed for GEF-4 that can provide results to inform a potentially much larger program in GEF following the next GEF replenishment. This strategic program consists of two components, one that is global in nature for reducing releases of PTS and related toxic substances beyond POPs and another for testing adaptive management strategies for melting ice in polar and high-altitude basins. With the limited nature of this demonstration program – and the multiple benefits that should accrue with the reduction of PTS both locally for human health and in marine systems (even in the tropics) – it is appropriate to place both these components in one related program. Additionally, more benefits would accrue under this strategic

program if interventions in other GEF focal areas like climate change and POPs would be programmed to complement those in IW.

47. With regard to PTS, a limited demonstration component beyond POPs will be supported to test effectiveness of policies, innovative instruments, and technologies for reducing releases of these toxic substances and for engaging the business community in developing cost-effective solutions and “pollution prevention pays” strategies in support of the GEF sound chemicals management strategy. A number of economic sectors, especially those with mercury releases, and transboundary river basins with risks from PTS and other toxic substances would be the subject of pilot demonstrations, with the results and experiences compiled for possible future GEF application following replenishment. While these PTS reduction demonstrations are not limited to cold regions, some benefits are expected in areas with melting ice from less deposition.

48. With regard to areas with melting ice, GEF will foster ecosystem-based approaches to adaptive management in a test case of a polar LME and in glacially-dominated high-altitude river basin systems. Ecosystem-based approaches involving living resources of the Arctic LMEs and basins from headwater ice to downstream coastal areas (consistent with IWRM strategies) would be utilized to undertake the demonstration projects. Where capacity is being built and collective action agreed upon in transboundary settings (or among ministries in national basins), support may be provided for national/local policy, legal, and institutional measures for adaptive management to adjust to the reductions in ice cover and melt. This may include the establishment of IWRM in basin organizations, drought management planning, demonstrations of water-use efficiency in water-using sectors, and alternative sources of water supplies. In basins draining high-altitude ice, development of basin-specific IWRM adaptive management plans will provide a tool for downstream sectors and communities to adjust to new realities of water availability and drought management planning. Limited assessments would be supported, including mainstreaming assessments of polar marine systems and headwater ice fields into the GEF Transboundary Waters Assessment Program.

## **VI. SUMMARY OUTCOMES FOR STRATEGIC PROGRAMS IN IW**

49. The summary of outcomes for each strategic program and indicators to be tracked are included in Table 2. Some indicators would be tracked annually in the project performance reporting process and others only several times in the life of projects or in evaluations. The IW Tracking Tool tested in 2006 for annual performance reporting will be modified to support the roll-up of the indicators. Targets were previously established in the replenishment process and progress will be rolled up annually. A GEF Transboundary Waters Assessment Program is planned to support monitoring of trends globally in transboundary water systems on a five-year scale. This assessment program will be utilized to track progress toward GEF strategic objectives and to provide a more systematic, periodic global assessment of transboundary water resources at risk and early warning of potential conflicts and declining status.

Table 3: International Waters Strategic Programs

Strategic Program	Expected Outcomes	Indicators
<p><b>SP-1: Restoring and sustaining coastal and marine fish stocks and associated biological diversity</b></p> <p>Initial attention to global “hot spots” in Sub-Saharan Africa, Southeast Asia/Pacific, and Latin America/Caribbean LMEs, and accelerated entry into force of the global ship ballast water/ invasive species Convention.</p>	<ul style="list-style-type: none"> <li>• Political commitments made to ecosystem-based joint action on sustainable fisheries and ICM</li> <li>• Institutions and reforms introduced to catalyze implementation of policies reducing over-fishing and benefiting communities</li> <li>• Multi-agency partnerships catalyze replication of innovations</li> <li>• Increased coverage of MPAs</li> </ul>	<ul style="list-style-type: none"> <li>• National inter-ministry committees</li> <li>• Ministerially-agreed action programs and local ICM plans adopted</li> <li>• Regional, national, and local policy, legal, and institutional reforms adopted; project evaluations show implementation effectiveness</li> <li>• Fish stock and habitat assessments</li> <li>• Per capita incomes at demo sites</li> <li>• Incorporation in Country Assessment Strategy (CAS), UN Frameworks, Poverty Reduction Strategy Papers (PRSPs), One UN</li> <li>• Number/increase of MPAs in national PA systems</li> </ul>
<p><b>SP-2: Reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in LMEs consistent with the GPA</b></p> <p>Initial efforts expected on nutrient land-based pollution reduction in East Asia LMEs and the Mediterranean Sea LME, and creating enabling environments for action elsewhere.</p>	<ul style="list-style-type: none"> <li>• Political commitments made to nutrient and other pollution reduction and ICM</li> <li>• Institutions and reforms introduced to catalyze implementation of policies for coastal pollution reduction and ICM</li> <li>• Multi-agency partnerships catalyze replication of reforms and innovative investments for nutrient reduction</li> </ul>	<ul style="list-style-type: none"> <li>• National inter-ministry committees</li> <li>• Ministerially-agreed LME and basin action programs and local ICM plans adopted</li> <li>• National and local policy, legal, and institutional reforms adopted; project evaluations show implementation effectiveness</li> <li>• Monitoring reduced levels of nutrient releases at demo sites</li> <li>• Joint action adopted by regional institutions on nutrient reduction</li> <li>• Incorporation in CAS, UN Frameworks, One UN, Bilaterals</li> </ul>
<p><b>SP-3: Balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature</b></p> <p>Requests expected for the great basins of South America experiencing climatic fluctuations, in African basins and the Mekong to introduce IWRM policies. Special focus on SIDS included for protecting community surface and groundwater supplies while reducing sewage releases. Groundwater protection</p>	<ul style="list-style-type: none"> <li>• Political and legal commitments made to utilize IWRM policies towards sustainable water use</li> <li>• Institutions and reforms introduced to catalyze implementation of policies for basin-scale IWRM and increased water use efficiency</li> <li>• Communities benefit from access to water-related benefits in tests of innovative demonstrations of balancing water uses</li> <li>• In SIDS, water-related health</li> </ul>	<ul style="list-style-type: none"> <li>• National inter-ministry committees</li> <li>• Ministerially-agreed action programs and basin IWRM plans adopted</li> <li>• National water resource and IWRM reforms/policies adopted; evaluations show effectiveness</li> <li>• Regional agreements and institutions adopted; project evaluations show effectiveness</li> <li>• Monitoring improved water use efficiency in demonstrations</li> <li>• Access determined in evaluations</li> <li>• Monitoring improved sewage treatment and water supply protection measures in SIDS</li> </ul>

strategies would be tested.	risks reduced through protected water supplies	
<p><b>SP-4: Reducing persistent toxic substances and testing adaptive management of waters with melting ice</b></p> <p>A limited program testing strategies to reduce releases of PTS and to test adaptive management in areas of melting ice in polar and high-altitude basins in order to inform future GEF replenishments.</p>	<ul style="list-style-type: none"> <li>• Reduction of human and ecosystem health risks from PTS at demo sites</li> <li>• Incorporation of pollution prevention strategies for PTS into private sector operations</li> <li>• Adaptive management measures identified, agreed upon, and tested in limited basins with high-altitude headwaters and one polar LME</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring level of reduction of PTS releases at demonstration sites</li> <li>• Ministerially-agreed action programs or single-country IWRM plans for demonstration basin testing of adaptive management strategies</li> <li>• Industry codes of conduct, possible private sector initiatives for PTS reduction</li> </ul>

## VII. INTER-LINKAGES WITH OTHER FOCAL AREAS

50. While one priority theme will serve as a focus for an international waters operation, there will be opportunities to address interlinked transboundary concerns as part of the ecosystem approach and provide multiple global environment benefits across focal areas through the inter-linkages. Cost-effective approaches of joining forces with other GEF focal areas for multiple benefits will be pursued, and partnerships are to be catalyzed to leverage the billions of dollars necessary to secure the socioeconomic benefits that transboundary water systems provide to the communities that depend on them. The cost-effectiveness of such joint operations will be documented to inform GEF operations for future replenishment periods.

51. Eleven components of the strategic programs are proposed to address the four priority programming themes that have been identified. The individual projects in these components will be consistent with the GEF IW ecosystem-based approach to management for basins and LMEs, and partnerships will be stimulated with use of GEF International Waters Investment Funds, institutional reforms, and innovative financing to scale-up interventions into the billions of dollars needed to turn the corner on sustaining socioeconomic benefits of transboundary water systems. Additionally, a number of projects involving SIDS in the IW pipeline will be combined with activities of other GEF focal areas into larger programs for regional groupings of SIDS. Experience-sharing and learning projects for the IW portfolio will be utilized to support the four strategic programs to build capacity and encourage replication of good practices in a spirit of adaptive management. These range from institutional and science-based learning to thematic and regional experience-sharing such as initiatives for the Africa IW portfolio and building on the almost completed work in Eastern Europe.

52. The following Table 3 summarizes the components of each strategic program that provide opportunities for integration. The IW focal area proposes joining forces with some operations in other GEF focal areas in up to 9 of the 11 components to achieve

objectives more completely and perhaps more cost-effectively. This would be accomplished in a number of ways from jointly-funded projects to individual projects in separate focal areas with linkage components. Not all projects within each component would necessarily have to be jointly undertaken with another focal area and Resource Allocation Framework (RAF) limitations may end up precluding collaboration.



*Table 4: Potential Inter-linkages Between International Waters and Other Focal Areas*

<p>SP-1: Restoring and sustaining coastal and marine fish stocks and associated biological diversity</p>	<ul style="list-style-type: none"> <li>• Africa Regional LME Component (IW/BD)</li> <li>• Latin America/ Caribbean Regional LME Component (IW/BD)</li> <li>• East Asia Marine Coral Triangle Component (IW/BD)</li> </ul>
<p>SP-2: Reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in LMEs consistent with the GPA</p>	<ul style="list-style-type: none"> <li>• East Asia Regional LME Component (IW/perhaps LD)</li> <li>• Mediterranean Sea LME Component (IW/ POPs/ BD)</li> <li>• Global Component</li> </ul>
<p>SP-3: Balancing overuse and conflicting uses of water resources in surface and groundwater basins that are transboundary in nature</p>	<ul style="list-style-type: none"> <li>• South America Basin Component (IW/CC)</li> <li>• Groundwater component including Near East And North Africa (NENA)/Middle East And North Africa (MENA) Region (IW/LD)</li> <li>• Global Component</li> </ul>
<p>SP-4: Reducing PTS and testing adaptive management of waters with melting ice</p>	<ul style="list-style-type: none"> <li>• PTS reduction component (IW/POPs/CC)</li> <li>• Polar and melting ice component (IW/CC)</li> </ul>