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Targeting development assistance to meet WSSD goals for large marine ecosystems and small island developing states

Alfred M. Duda

Global Environment Facility, 1818 H St., NW, Washington, DC 20433, USA

Abstract

Global commitments agreed in the last two years at Doha, Monterrey, and Johannesburg represent the potential for a political turning point in reversing the degradation of coastal and large marine ecosystems (LMEs). International finance institutions, bilateral donor agencies, international organizations, and governments of the North and South all align their policies and programs if progress is to be made. Since 1992, the Global Environment Facility (GEF) has supported countries to address Chapter 17 of Agenda 21, and in early 2003 GEF adjusted its strategic priorities to align with World Summit targets. This paper outlines GEF support in targeting development assistance for countries in the biodiversity and international waters focal areas related to oceans, coasts, and islands since 1992 with a focus on large marine ecosystems and small island developing states. Examples of GEF projects are provided that illustrate interventions at different scales for coastal and marine systems. Since 1991, GEF has approved 47 projects in its international waters focal area for \$454 million GEF and \$1.49 billion in total cost as well as 58 projects in the biodiversity area for \$330 million from GEF and \$1.22 billion in total cost for some 118 countries supporting coastal and marine ecosystem interventions described in the World Summit's Plan of Implementation. While GEF has become the top source of financial assistance for reversing degradation of oceans, coasts, and islands, the pilot scale activities it is able to fund need to be scaled up to meet global poverty reduction, economic security, and World Summit targets through partnerships for individual LMEs.

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E-mail address: Aduda@thegef.org.

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1. Introduction

The emptying of coastal oceans is but one symptom of our mismanagement of the Earth along with abuse of land, depletion and pollution of freshwater systems as well as wasteful energy practices that load our atmosphere with climate changing carbon. Lack of attention to policy, legal, and institutional reforms as well as low priorities for public investments and for enforcing regulations in private sector compliance now place at risk not only coastal and marine ecosystems but also communities that depend on them for economic security and social stability.

The Millennium Development Goals (MDGs) and targets from the Johannesburg World Summit on Sustainable Development (WSSD) cannot be achieved without restoring biomass to depleted marine ecosystems, protecting wetland habitat with its biological diversity, and reducing pollution loading from basins draining to the coast. Each of these is critical for sustaining the economies and social stability of Small Island Developing States (SIDS).

Traditional sector-by-sector approaches to economic development have spawned this global crisis. New calls for establishment of environment programs focused solely on marine systems are doomed to failure without incorporation into those economic sectoral policies. Rather, an ecosystem-based approach to marine systems that can operate at multiple scales and harness stakeholder support for integrated management is needed in both the North and the South. The paper discusses this concept and the need to realign the development assistance community and policies in the North to target this approach to large marine ecosystems (LMEs). It argues that the Global Environment Facility (GEF) has undertaken this type of work for one dozen years and that the experiences and lessons from 118 nations we ready to be scaled up in partnerships with development assistance agencies for specific LMEs to meet WSSD targets.

2. Imperative for urgent reforms and investments

Continued over-fishing in the face of scientific warnings, fishing down food webs, destruction of habitat, and accelerated pollution loading have resulted in the dramatic collapse of coastal and marine ecosystems of both rich and poor nations as recent analyses show the oceans to be depleted of large fish with 90% of the larger fish being extirpated in some regions [1,2]. This over-fishing of marine ecosystems with modern technology, subsidized distant factory fishing fleets, and loss of habitat from the introduction of damaging aquaculture [3] have resulted in ecosystem disruption globally with 75% of ocean fisheries depleted, over-fished or fished at limits according to FAO [4]. When coupled with excessive land-based pollution, the degraded coastal environment leaves poor communities at risk in terms of livelihoods and food security and endangers the economy of coastal nations [5].

Global commitments made in Monterey to increase development assistance, in Doha to reform damaging trade policies, and in Johannesburg to follow a specific path to sustainable development provide an opportunity for realigning policies of the

North and development assistance to the South to place our planet on a sustainable pathway. Continued single sector development projects and fragmented development programs driven from capitol will impede these reforms as noted by Duda and Sherman [6].

In particular, SIDS face special needs and challenges. Island states are highly vulnerable because of their size, narrow resource base, limited freshwater resources, increasing human population, and susceptibility to natural disasters. Taking just the Pacific islands, the World Bank has noted [7] that climatic fluctuations can devastate island economies with damages to GDP varying from 4% for high islands to 38% for low islands of the Pacific. Investigations have noted that Pacific reefs are in peril from a range of threats and that this degradation has a cascading effect on communities and their economies [8]. With regard to Pacific tuna fisheries, 90% of the catch is taken by distant fishing fleets with a subsequent dependence of the island states on Japanese, American, and European markets and their political considerations [9]. As noted by Tutangata and Power [10], SIDS also face challenges from a globalizing world economy where they may have little influence on global markets and need to work together to address externalities stemming from globalized trade and investment regimes.

A more ecosystem-based approach, aimed at establishing adaptive management institutions and partnerships based on large marine ecosystems, will be necessary to adopt in order to meet the MDGs and WSSD targets; both the North and South will need to actively implement them [11]. The WSSD Plan of Implementation (POI) elements provide a roadmap, and GEF's one dozen years of pragmatic experience in assisting 118 developing countries toward these ends with policy reforms and pilot demonstrations can be scaled up to help achieve poverty reduction goals and sustainable development targets.

3. Global Environment Facility

The GEF is best known as the financial mechanism for a number of global environment conventions like climate change and biodiversity signed at the Earth Summit in 1992. Only 12 years old, GEF's mandate is to provide incremental cost finance to address global environment issues like climate change, biodiversity, and international waters—which covers both transboundary freshwater and marine systems. GEF projects are implemented through a partnership among the UNDP, UNEP, and the World Bank. Policies are set by a council representing 176 developing and developed nations that balances the interests of all.

The only new funding source to emerge from the 1992 Earth Summit, the GEF has allocated in its first dozen years US\$4.35 billion in grants supplemented by more than US\$14 billion in additional financing, for 1350 projects in 150 developing countries and those in economic transition. For the international waters focal area, 85 transboundary water projects have been funded with 141 different cooperating countries totaling \$2.1 billion in total cost and \$686 million in GEF grants. The GEF

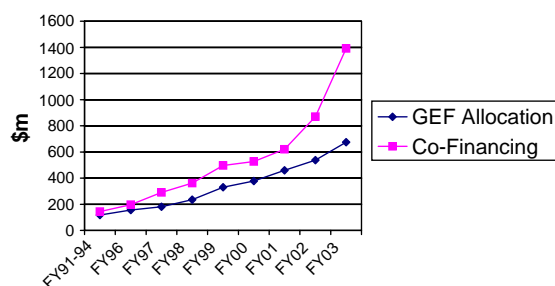


Fig. 1. Cumulative increase in GEF assistance for international waters projects the past decade.

is clearly a significant funding source for transboundary systems—especially marine ecosystems—and approved country requests are rapidly growing as shown in Fig. 1.

In 1995, the GEF Council included the concept of LMEs in its operational strategy [12] as a vehicle to foster ecosystem-based management of coastal and marine resources in the international waters focal area. Ninety five percent of global fish catch comes from 65 LMEs that parallel the continental shelves and potentially represent multi-country, ecosystem-based management units for reversing fisheries depletion [6]. This geographic approach represents a pragmatic way to operationalize an “ecosystem approach” with an area sufficiently large to include transboundary concerns, including living resources. Fig. 2 illustrates the 65 LMEs as well as the 17 LMEs in which GEF is being asked to provide support to developing countries.

GEF also utilizes interventions at other appropriate geographic scales ranging from integrated coastal management at the level of individual municipality or province [13] to project support in its biodiversity focal area at the specific reef or coastal ecosystem scale for protected areas and community-based sustainable use. Scaling up or scaling down from the LME to individual biodiversity sites determines which focal area is appropriate to provide transboundary benefits or those for biodiversity assets.

4. GEF strategic priorities align with WSSD goals

As a result of its participation with the UN Commission on Sustainable Development and WSSD, strategic priorities have been set by GEF that continue to respond to Chapter 17 of Agenda 21 while embracing priorities in WSSD targets. As a development finance institution, GEF presented its alignment right after the Johannesburg Summit [14] and further elaborated strategic priorities consistent with WSSD for each GEF focal area [15]. Emphasis is given in biodiversity to protected areas consistent with paragraph 32 of WSSD and the Jakarta Mandate of the CBD as well as to sustainable use of biodiversity, including coastal waters and fisheries. In the international waters focal area, specific targets for coverage were established that relate to reversing the decline of marine ecosystems and addressing the 2010 and

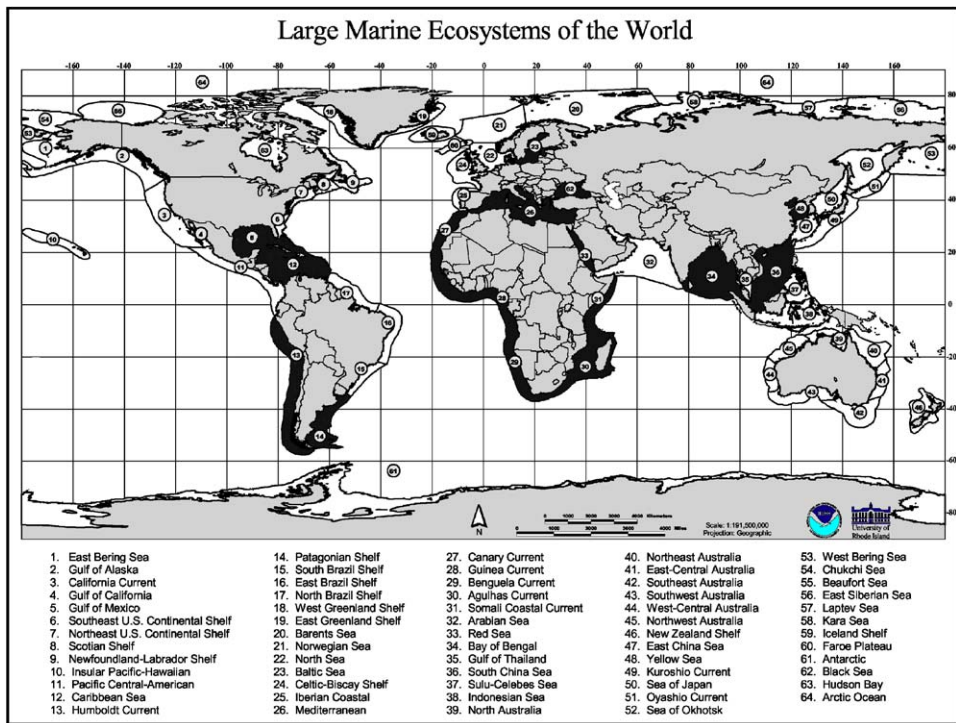


Fig. 2. Large marine ecosystems (LMEs) of the world, including those with approved GEF assistance for project preparation or implementation.

Table 1

GEF allocations for coastal, marine, and SIDS projects from 1991–2003 in the International Waters (IW) and Biodiversity (BIODI) focal areas (US\$)

Type of projects	GEF \$	Total project cost \$	WSSD paragraph
Total IW marine-related projects	\$440 mil	\$1380 mil	
Large marine ecosystems	\$140 mil	\$ 213 mil	30 and 31
GPA-related Demo Projects	\$184 mil	\$ 878 mil	33
SIDS-related ^a	\$70 mil	\$248 mil	58
Ship waste/oil	\$92 mil	\$ 214 mil	34
Total BIODI coastal/marine Projects	\$330 mil	\$1220 mil	32
Totals # projects 103	\$784 mil	\$2712 mil	

^a All SIDS projects accounted for in other categories for totals.

2015 targets in paragraphs 30 and 31. Developing partnerships among bilateral assistance programs, international finance institutions, and countries sharing LMEs constitutes also a specific strategic priority.

Table 1 presents a summary of funding provided by GEF since 1992 in its international waters and biodiversity focal areas related to oceans, coasts, and SIDS

as expressed in paragraphs 30–34 and 58 of the POI. A total of \$454 million in GEF grants and \$1.49 billion in total cost are being devoted to marine systems in the international waters area, with an additional \$330 million and \$1.22 billion in total cost for biodiversity projects addressing coastal and marine ecosystems. The total cost of \$2.71 billion for GEF projects places it as the largest funding source for sustaining coastal and marine ecosystems in developing countries. In order to better understand these interventions, GEF-funded activities at different scales are discussed for their global significance.

5. GEF and the scale of oceans

The GEF LME projects for near coastal oceans and related coastal and river basin linkages are piloting and testing how integrated management of oceans, coasts, estuaries, and freshwater basins can be implemented through an ecosystem-based approach. Ten LMEs and their adjacent freshwater basins, where appropriate, have been approved for project funding by GEF with 78 GEF recipient countries participating in these projects. Good examples are the Benguela Current LME project in southern Africa or the South China Sea LME in Asia. [Table 1](#) shows that about \$140 million in GEF grants have been devoted with a total cost of \$213 million for the basic LME projects, with much more effort if projects related to land-based pollution were added.

GEF has also contributed to improving contingency plans for ship-related spills, constructed pilot port reception facilities, improved safety of navigation, and facilitated development of the new convention on alien species in ship ballast water along with port-specific demonstrations of measures that benefit oceans consistent with paragraph 34 of the POI. Conventions under UNCLOS and the 1995 U.N. Fish Stocks Agreement are negotiated, the FAO Code of Conduct is being adopted, and alternatives to destructive trawling gear are being piloted.

The LME approach works well for the fisheries aspects of multi-country, transboundary marine systems [11]. Nationally, inter-ministerial committees have proven to be critical in GEF projects to facilitate sectoral ministry cooperation at both transboundary and local levels within countries since stress on these complex systems can only be reduced by national level actions in different economic sectors. GEF LME projects assist groups of nations sharing an LME to better understand the interconnectedness of their coasts and marine systems, learn to work together with their neighbors on priority concerns, and overcome barriers to addressing root causes of degradation, conflict, or unsustainable development. Various processes are utilized to facilitate the development of country-driven action programs of policy, legal, and institutional reforms and priority investments so that the countries may have the capacity to utilize the full range of reforms, tools, and programs both collectively and individually at different scales.

If nations agree on these joint actions based on ecosystem-based approaches, GEF may assist with implementation of the action programs addressing sustainable fisheries, pollution reduction, habitat protection/restoration, capacity building,

non-indigenous species introductions, ship-related issues, protected areas, and programs related to agriculture, municipal, and industrial concerns that impede progress toward sustainable development. Also critical is the recommended development of monitoring and evaluation indicators of various sorts to track progress in achieving objectives of the projects as noted in GEF guidance materials for its international waters focal area [16].

6. GEF and biodiversity conservation

Consistent with its mandate as the financial mechanism for the Convention on Biological Diversity and in response to guidance from its Conference of the Parties, GEF has adopted a new set of strategic priorities for biodiversity that builds on past successes, encompasses new guidance, and are consistent with WSSD goals [15]. GEF assistance on the scale of a specific coral reef or protected area is often requested by countries in this focal area and they represent the opposite end of the spectrum from the scale of the LME projects. Since 1991, 58 projects in 44 different countries have been funded by GEF for coastal and marine biodiversity protection and sustainable use for a total of \$330 million in GEF grants and \$1.22 billion in total cost (Table 1).

GEF biodiversity projects for coastal and marine resources entail several approaches, including integration of conservation and regional development, establishment of partnerships for sustainable resource management, and design and implementation of management plans that conserve habitat by financing alternative income-generating activities. A good example is Mnazi Bay Marine Park in Tanzania to conserve a representative sample of internationally significant and threatened marine biodiversity. The UNDP/GEF project is enabling local and government stakeholders to protect and sustainably use marine biodiversity and resources of the Mnazi Bay and Ruvuma estuary.

7. GEF, GPA, and ICM

Creating a bridge between land and sea, GEF often combines projects and works at different scales to link improved management of freshwater basins, coasts, and large marine ecosystems. This improved management is needed because coastal settlements often depend on upstream basins to sustain their economies by providing clean water supplies, environmental services related to riverine and delta floodplains, livelihoods for the poor, and food security. For many countries, there are difficulties in linking upstream freshwater and downstream coastal communities in order to ensure that excessive pollution loadings, flow alterations such as dams, and water diversions for irrigation do not create cumulative damage to coastal waters and the economies of coastal settlements.

GEF also works at the scale of municipalities and coastal provinces to foster integrated coastal management (ICM) as evidenced by the acclaimed UNDP/GEF

program in East Asia known as Partnerships for Environmental Management of the Seas of East Asia (PEMSEA) [13]. Process tools similar to those used in LME projects are utilized in ICM to (a) identify what needs to be integrated on a site specific basis and (b) facilitate cross-sectoral participation, priority setting, and development of commitments to action.

Local governance reforms for sectoral activities such as water supply/sewage, fisheries, or maritime transport represent important first steps as part of implementing ICM strategies to be complemented with campaigns at the local, national, and transboundary levels for integrated management. The demonstration activity in Xiamen, China as part of PEMSEA illustrates the usefulness of such strategies in community-based programs using multi-stakeholder approaches and consensus decision-making [17]. Establishment of ICM programs can have a cascading effect. They can transform deficient governance, improve awareness of important ecosystem assets, and serve as a reform for spurring additional private sector involvement.

The Global Programme of Action (GPA) for the protection of the marine environment from land-based activities is relevant to both GEF-funded interventions at the ICM scale as well as the basin scale. Countries ask GEF assistance for improving management of river basins draining to coasts in order to improve water flow regimes and reduce pollution loading as highlighted by the GPA. Consistent with paragraph 33 of the WSSD POI, Table 1 shows almost \$1 billion in total cost of projects related to the GPA and land-based activities supported by GEF. This includes investments such as GEF's Hai Basin initiative led by China and the large Danube/Black Sea Basin Strategic Partnership with the World Bank that leverages on-the-ground pollution reduction investments and realigns World Bank policy dialogue with 15 countries of the basin to incorporate needed pollution reduction reforms and investments.

The Danube/Black Sea basin represents a GEF-funded test of whether all 3 GEF agencies, bilateral assistance agencies, and 17 participating countries can work in partnership to target assistance to the dominant transboundary problem of the linked basin and downstream LME system—eutrophication and accelerated nutrient reduction within the frame of the GPA. GEF has devoted in excess of \$100 million for projects targeting regional cooperation in the two contributing river basins (Danube and Dniro) and the 6 Black Sea countries. This grant funding has been accompanied by almost \$500 million in co-finance and several billion dollars in national funding for sewage treatment and investments through EU accession processes.

The centerpiece of the partnership is the Danube/Black Sea Basin Nutrient Reduction Investment Fund operated by the World Bank for single country investments in the municipal, industrial, and agriculture sector and for removing dikes/levees for wetland restoration. Such commitments by GEF on behalf of the GPA and 15 GEF recipient countries (Austria and Germany undertake their own investments and are not eligible) show the opportunity for achieving future on-the-ground results for oceans and coasts when countries commit to necessary reforms and investments to achieve sustainability.

The impact of GEF assistance in linking watersheds with LMEs has ranged from on-the-ground pollution reduction in the Danube/Black Sea basin to adoption of policies and institutional reforms nationally and regionally in a number of LMEs. In the GEF Mediterranean LME project with UNEP and the World Bank, the 20 nations adopted commitments for pollution reduction for specific pollutants and some technologies with milestones for enforcement. This now has the equivalent force of international law through adoption of a protocol to their Barcelona convention.

In other cases, such as the Mekong Basin, the problem is flow depletion or disruption of flow regimes downstream at the coast. Harmonized national reforms are being adopted to meet regionally agreed water utilization rules for ensuring proper flow regimes remain to nurture downstream delta waters at the coast. Some 65 million people in Cambodia, Laos, Thailand, and Vietnam rely on the Mekong River and its wetlands for essential needs like food, water, livelihoods, and transport. The description of the Mekong project and others can be accessed at the GEF/UNDP IW:LEARN website [18].

8. GEF and Small Island Developing States

The marine and coastal environments of SIDS are among the richest natural resources in the world, relative to land size, yet they confront an array of challenges arising from their remote locations, poor economic diversification, vulnerability to climatic fluctuations, and great economic dependence on the outside and increasingly globalized world. SIDS face such similar issues in their economic, social, and environmental development that they have joined together regionally as well as globally to find common solutions and solicit greater attention from the international community, most notably through the Alliance of Small Island States (AOSIS).

Since 1991, GEF has been collaborating with SIDS and their networks in addressing global environmental concerns through action-oriented projects that also promote sustainable opportunities for livelihoods for island residents. The Small Island Developing States Network (SIDSNet), initiated in 1997 by UNDP, helps SIDS stakeholders communicate with each other about shared concerns and coordinate globally dispersed members of AOSIS and GEF support for SIDSnet and its associated website has fostered sharing of experiences among the island states on the use of information technology as a sustainable development tool for ecosystem management as well as virtual capacity development.

Oceans and coasts are fundamentally important to island life and culture. Among the greatest challenges for SIDS is sustaining their fragile freshwater and coastal water resources in the face of fluctuating climatic events. Droughts, floods, and storms just worsen stresses from population growth, tourism, and agriculture. Groupings of SIDS from the Caribbean, Pacific, and Western Indian Ocean have requested and received assistance under GEF's international waters focal area for improved management of coastal and oceans fisheries, integrated watershed and coastal management, water supply protection—both surface and groundwater supplies, and shipping-related environmental concerns.

SIDS have a special relationship with their coasts, where living resources are important for livelihoods, food security, and foreign exchange. Many of these stocks are transboundary in nature. Both Pacific and Caribbean SIDS have requested GEF assistance for sustainable management of their fisheries. For example, a rich tuna fishery is the life blood of Pacific island economies. Heads of States of the 13 Pacific SIDS developed their GEF Strategic Action Program (SAP) in September 1997 [19] and began implementation of their GEF project. One component included GEF support to the countries through the Forum Fisheries Agency for negotiation of a regional convention on conservation, management, and sustainable use of their highly migratory fish stocks.

GEF assistance helped level the playing field among the Pacific SIDS and developed nations as they negotiated the regional convention. Following 7 sessions, the “Convention on the Conservation and Management of Highly Migratory Fish Stocks of the Western and Central Pacific Ocean” was signed in September 2000—the first agreement to be successfully negotiated on the basis of the 1995 UN Fish Stocks Agreement under UNCLOS [9]. This follows the GEF strategy for SIDS that embraces the Barbados Program of Action. The Pacific countries have now agreed to undertake needed national reforms, and with this commitment, GEF has approved development of an implementation project to build their enforcement capacity.

In total, GEF has fostered about \$248 million in water-related SIDS projects (Table 1) with another 6 under preparation for at least \$61 million more in the GEF pipeline for grants. The GEF biodiversity and climate change focal areas have also been popular with island states. A number of SIDS have utilized GEF funding to implement their obligations as Parties to the Convention on Biological Diversity. Since its inception, GEF has allocated \$179 million for biodiversity projects requested by SIDS with a total cost of \$372 million in projects. For its climate change focal area, GEF has provided \$365 million to SIDS for a total cost of \$936 million in projects. Assistance to SIDS exceeds \$1.5 billion the last dozen years in terms of total cost of GEF projects as noted by GEF [20].

9. Reforms and partnerships take time and commitment

GEF is closely aligned with the reforms and activities included in the WSSD POI because of its support for Agenda 21 since its restructuring in 1994 and because GEF was asked to participate in the WSSD process. In the run-up to WSSD, GEF hosted a Roundtable of Finance and Environment Ministers at the Bali, Indonesia WSSD Prepcom in June 2002. In its background paper for that roundtable [21] and in its subsequent strategic priorities [15], GEF included an important recommendation for nations of the North and South to collaborate with bilateral and multilateral organizations and the United Nations system to form partnerships for specific LMEs aimed at sustainable development.

These partnerships should encompass a collective response to various international conventions and the WSSD POI to help countries learn to use ecosystem-based approaches to assessment and management at a variety of scales—LME,

ICM, river basin, and local community. In fact, GEF suggested an aggressive target for developing country-driven partnerships for one-third of the world's LMEs by 2010 with implementation underway towards their sustainable development by 2015 consistent with the 2010 and 2015 sustainable fisheries targets from the WSSD POI. It is in this manner that development assistance may be targeted to ocean, coastal, and island ecosystems for reforms and investments at a variety of scales aimed at sustainable development.

In its international waters focal area, GEF has found that operationalizing country commitments to reforms takes time, patience, capacity building, and specific change agent processes that involve forming partnerships to sustain fragile political will. These partnerships facilitate other organizations to align with WSSD mandates as well. GEF-funded processes of supporting (a) country inter-ministerial committees, (b) incorporating joint science-based analyses as part of priority setting, (c) identifying jointly agreed reforms and investments to address the priorities in a country-driven, ministerially approved SAP, and (d) assisting with reform implementation are well known and described elsewhere by Duda and Sherman [6] and Duda [16].

Whether undertaken at the transboundary level in LMEs or the equivalent as shown by the GEF PEMSEA project at the local level as part of an ICM strategy, such place-based participative processes facilitate development of politically agreed ways ahead for commitments to reverse marine degradation and depletion. This allows sound science to inform policy-making and fosters a geographic location upon which an ecosystem-based approach to management can be developed and stakeholders can be engaged. Without the place-based participative processes engaging governments and stakeholders in understanding what is needed for integrated management and building capacity to actually implement them, marine science has often remained confined to the science community or has not been embraced in policy-making.

The shared commitment and vision for action embodied in GEF-funded SAPs has proven essential in GEF projects for developing partnerships that can sustain commitment to action. Countries cooperate in establishing adaptive management structures as part of GEF monitoring and evaluation requirements [16] for establishing and reporting progress on indicators. This has led countries to adopt their own LME-specific, country-led, ecosystem targets so that they may track on-the-ground progress and enact conventions or protocols to existing treaties to express their joint commitments to action. Establishing these country-driven partnerships with different bilateral, multilateral, and UN agencies is resulting in the realignment and targeting of their priorities toward WSSD targets within the development assistance community as the organizations help countries with commitments for policy, legal, and institutional reforms in different economic sectors.

Partnerships for 10 LMEs are initially underway with preparation starting in an additional 7 LMEs involving 126 different countries in total, including 16 from the North. Designed for consistency with Chapter 17 of Agenda 21, the FAO Code of Conduct, UNCLOS, and the 2010 and 2015 WSSD targets, GEF is bringing the North and South together around their particular shared LMEs in targeting development assistance to jointly adopt reforms and undertake pilot investments.

The Danube/Black Sea basin example discussed earlier provides an illustration of the type of partnerships needed for specific LMEs and contributing basins with interventions at a number of different scales needed to reverse ecosystem degradation and align national and local policies with sustainability.

10. Summary: a new imperative for collective action

International finance institutions (IFIs) have a key role to play in partnership with nations to facilitate progress on restoring and protecting coastal and marine ecosystems. Time is running out. Fig. 3 portrays a time series of ocean fishery catches as reported by FAO [4] and adapted from Duda and Sherman [6]. Catch per person has declined for a decade and projections suggest a catastrophic situation of reduced catch developing within the projected timeframe of WSSD targets unless a new global imperative for reforms, investments, and partnerships is achieved. IFIs provide the global know-how, the instruments, the policy dialogue with key ministries, the coordination with donors for budget support of reforms, and funding resources for their instruments. If IFIs have other priorities than oceans and coasts and their importance for poverty reduction, there will be no hope for environmental sustainability and coastal degradation will become a further drag on economies and an impediment to poverty reduction.

Among the driving forces for coastal degradation are economic globalization, trade policies, and enormous government subsidies that result in mismanagement and depletion. The North and the South still have much to do to in undertaking the reforms and making the investments associated with WSSD targets. Still to be undertaken by the North are global trade reforms to eliminate distortions and subsidies as well as rich countries adopting WSSD reforms and investments for their own marine ecosystems [21]. The North spends one billion dollars each day on

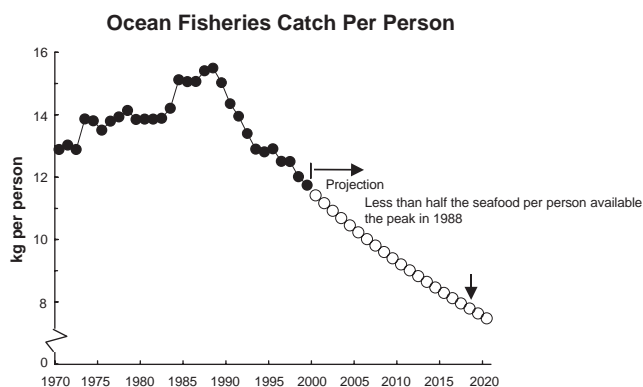


Fig. 3. Time series of ocean fisheries catch normalized by world population (adapted from Duda and Sherman [6]).

agricultural subsidies that are damaging their transboundary ecosystems, while it spends less than one seventh of that on development assistance.

Certainly there should be room for tens of billions of dollars annually to be diverted from environmentally damaging agricultural subsidies to scaling up the building of multi-country partnerships as noted by GEF [14,21]. This funding could be utilized to build capacity of developing country nations willing to undertake reforms and collaborate with neighbors and users from other nations on making the transition to sustainability in their shared LMEs and associated coastal areas and basins as part of the transition to sustainable development. The tens of billions annually could also be utilized to support the risk mitigation instruments needed to mobilize private sector capital. Coupled with global trade reforms for reducing distortions and damaging northern fleet subsidies [22], both the North and the South have urgent reforms to undertake before sustainability can be achieved in coastal and marine ecosystems.

The upcoming “White Water to Blue Water” Partnership initiative for the wider Caribbean to be held in early 2004 [23] has features of such partnerships needed for the future. Bilateral and multilateral development assistance organizations and countries may collaborate to plan sequencing and targeting of development assistance and leave the meeting with an action agenda instead of just a negotiated text or non-binding ministerial declaration. This new experiment in development assistance has been underpinned by four GEF projects in the Caribbean LME requested by participating countries.

GEF has proven to be the key global mechanism for providing grant finance to countries for sustaining oceans, coasts, and island. In a sense, GEF is serving as a global oceans fund for action under the four global environment conventions that most countries of the world have signed, and through GEF projects, development assistance has been targeted to oceans and SIDS in particular. In its first one dozen years, GEF has utilized a small grants program to help local communities at a small scale, a medium sized grants program for NGOs to assist communities and governments, and as this paper has noted, over \$3.5 billion in total cost of projects for oceans, coasts, and SIDS in its main focal areas. It is time for scaling up the pilot demonstration level activities that GEF can currently fund with these recommended LME partnerships such as for the Caribbean LME, where dozens of GEF projects in different focal areas have the opportunity to interact with partnerships developed in the WW2BW initiative. Time for achieving sustainability is running out! The cost of inaction is just too high for the world community not to scale up proven approaches for targeting development assistance to LMEs, coasts, and SIDS for making the transition to environmental sustainability.

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