

UNDP Project Document

Governments of Albania and FYR-Macedonia

United Nations Development Programme

Global Environment Facility

“Integrated Ecosystem Management in the Prespa Lakes Basin of Albania, FYR-Macedonia and Greece”

Brief Description

This project’s objective is to catalyse the adoption and implementation of ecosystem management interventions in the Prespa Lakes Basin of Albania, FYR-Macedonia, and Greece that integrate ecological, economic, and social goals with the aim of conserving globally significant biodiversity and conserving and reducing pollution of the trans-boundary lakes and their contributing waters.

The health of the Prespa Basin ecosystem can only be conserved and maintained by changing productive sector practices within the Prespa Basin. Although the Prime Ministers of Albania, Greece, and FYR-Macedonia recently declared the Prespa Basin a symbolic trans-boundary “Park,” it is in fact very much of a productive landscape, where people live and work and impact the ecosystem around them.

The project’s strategy is to mainstream ecosystem management objectives and priorities into productive sector practices and policies. The project is designed to strengthen capacity for restoring ecosystem health and conserving biodiversity first at the national level in Albania and FYR-Macedonian Prespa by piloting ecosystem-oriented approaches to spatial planning, water use management, agriculture, forest and fishery management, and conservation and protected area management.

Building on this strengthened national-level foundation in the Prespa Basin, the project is designed to strengthen ongoing trans-boundary cooperation in resource management and conservation by empowering the existing trans-boundary institution and piloting trans-boundary management and conservation activities. Finally, the project will produce and secure funding for a Strategic Action Programme endorsed at the highest levels of Government within the three littoral states.

TABLE OF CONTENTS

ACRONYMS	3
SECTION I: ELABORATION OF THE NARRATIVE.....	5
PART I: Situation Analysis.....	5
<i>Socio Econ Summary (Baseline/context)</i>	<i>5</i>
<i>Environmental Context and Global Significance.....</i>	<i>6</i>
<i>Stresses on Ecosystem Health and Underlying Causes:</i>	<i>9</i>
<i>Baseline Description and Analysis: Institutional, sectoral and policy context.....</i>	<i>17</i>
<i>Stakeholder analysis</i>	<i>37</i>
PART II: Strategy.....	41
Project Rationale and Policy Conformity	42
Project Goal, Objective, Outcomes and Outputs/activities	44
Expected global, national and local benefits	69
Country Ownership: Country Eligibility and Country Driven-ness	70
Sustainability.....	71
PART III: Management Arrangements.....	74
PART IV: Monitoring and Evaluation Plan and Budget	76
SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT	83
PART I: Incremental Cost Analysis.....	83
PART II : Logical Framework Analysis	88
SECTION III: TOTAL BUDGET & WORKPLAN.....	93
SECTION IV : ADDITIONAL INFORMATION	95
PART Ia: Endorsement Letters.....	95
PART Ib: Commitment Letters.....	96
PART II: Organigram of the Project.....	99
PART III : Terms of References for key project staff and main sub-contracts.....	100
PART IV: Stakeholder Involvement Plan	101
Part V: Map – Prespa Basin	107
Part VI: Overview of projects in southern Europe/Mediterranean region that are relevant to the project's approach.	109
SIGNATURE PAGE.....	112

Acronyms

AL	Albania
APR	Annual Project Review
BD2	GEF Biodiversity Strategic Priority #2.
CARDS	EU Program for Balkan Countries, “Community Assistance for Reconstruction, Development and Stabilisation
CBD	Convention on Biological Diversity
CBO	Community-based Organization
CBNRM	Community-based Natural Resource Management
CEPA	Communication, Education and Public Awareness (Ramsar Convention Program)
CO	Country Office (UNDP)
DEX	Direct Execution
DI	Designated Institution
DBC	Drainage Basin Councils
DoF	Department of Fisheries (AL)
ENR	Ezerani Nature Reserve
EoY	End of Year
ESA	Ecological Stress Analysis
ES	Executive Secretary
FIS	Fishery Inspection Service
GEF	Global Environment Facility
GIS	Geographic Information System
GNP	Galicica National Park (FYR-Macedonia)
GR	Greece
GR-MoFA	Greek Ministry of Foreign Affairs
IC	Incremental Cost
IEM	Integrated Ecosystem Management
IR	Inception Report
IUCN	World Conservation Union
IW	Inception Workshop
KfW	KfW Development Bank – Financial Cooperation from the German Federal Government
LPA	Law on Protected Areas
LEAP	Local Environmental Action Plan
METT	Management Effectiveness Tracking Tool (Protected Area)
MK	FYR-Macedonia
GR-MoEPP	Greek Ministry of Environment and Physical Planning
MoEPP	Ministry of Environment and Physical Planning (for FYR-Macedonia)
MoE	Ministry of Environment
MoR	Municipality of Resen
MCWG	Monitoring and Conservation Working Group
NATO	North Atlantic Treaty Organization
NTFP	Non-timber forest products
NWC	National Water Council
NGO	Non-governmental Organization
OP	Operational Program
PA	Protected Area
PEC	Project Enabling Committees
PIR	Project Implementation Review
PMU	Project Management Unit
PNP	Prespa National Park (Albania)
POC	Project Oversight Committee

PPA	Prespa Protected Area (Greece)
PPCC	Prespa Park Coordinating Committee
REC	Regional Environment Center (Albania)
RMA	Result Measurement Areas
ROAR	Results-oriented Appraisal and Review
SAP	Strategic Action Program
SDC	Swiss Development Corporation
SGP	Small Grants Program (GEF)
SIDA	Swedish International Development Agency
SPP	Society for the Protection of Prespa
SWG	Stakeholder Working Group
TDA	Trans-boundary Diagnostic Analysis
TPR	Tripartite Review
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme – Country Office
WB	World Bank
WMP	Water Management Plan

SECTION I: Elaboration of the Narrative

PART I: SITUATION ANALYSIS

Socio Econ Summary (Baseline/context)

1. The total area of the Prespa Basin is approximately 1,600 square kilometers: 62% in FYR-Macedonia (1,000 sq. k), 17% in Albania (263 sq. k), and 21% in Greece (330 sq. k). Approximately 28,900 people live in Prespa¹. Nearly 75% of the total Prespa population lives in FYR-Macedonia (17,500 persons) within the Municipality of Resen; 17% live in Albania (5,300 persons) within the Communes of Liqenas and Proger, and the remaining 8% live in Greece (1,500 persons) within the Municipality of Prespa.
2. The largest town in Prespa is Resen with 7,000 people, located in MK-Prespa. The population of MK-Prespa has decreased approximately 20% over the past thirty years, but population density is still over 28 persons/km². In AL-Prespa, the population is estimated to be steady or growing and with an already relatively high population density of 20 persons/km². In GR-Prespa, the population is steady or in slight decline with a current density of 6 persons/km².
3. Employment and Income. In AL-Prespa, average yearly income is estimated at US\$700. In MK-Prespa, the average per capita income is approximately US\$ 2,000 and in GR-Prespa, annual per capita income is estimated to be as high as US\$10,000.
4. Unemployment in Prespa is high: approximately 12% in Greece, 23% in Albania and 32% in the FYR-Macedonia. In MK-Prespa, enterprises presently only operate at or below 20% of their production capacity. As a result, income from employment in local industry has decreased considerably and unemployment is estimated to have risen eighty percent in the past five years with nearly 3,000 persons considering themselves “unemployed.”
5. In MK-Prespa, pensions, government employment and employment from occasional jobs are the major source of income. In addition, many families or family members in both MK and AL-Prespa migrate to find work and many household report that as much as 30% of their income is dependent upon remittances. As a result, persons sixty-years and older make up nearly 25% of Resen’s population.
6. Income Sources Agriculture is by far the most important sector for employment. Of the total employed labor pool in the Prespa Basin, approximately seventy-five percent are engaged in agriculture. Agriculture employs approximately 85% of GR-Prespa’s population: 50% practice primarily cultivation, livestock 33% and fishery 2%. EU subsidies for livestock production play a major stabilising role. The agricultural income in the Greek part is mainly generated through bean production, which is the major sector with revenue significantly decreasing due to market forces.
7. In AL-Prespa, agriculture engages 70% of the labour force. In the MK-Prespa, agriculture generates roughly 30% of the total income with apples being the primary crop. Recent price fluctuations and increased competition from outside the region have destabilised the local apple economy. In MK-Prespa, over two fifths of the total agricultural area is cultivated (orchards) with the remainder dedicated to livestock pasture. In Resen, about 1,150 people are employed by the industrial sector, which is represented by 11 medium size enterprises and over 100 small enterprises. There is no industrial sector in AL or GR-Prespa.

¹ The term “Prespa” from this point forward will be used as short-hand for the trans-boundary basin encompassing both lakes and the natural watershed boundary around them.

8. Non-Timber Forest Products Based upon a rapid survey done by the KfW team in MK-Prespa, it is estimated by local experts that 5% of the local population currently generate more than half of their incomes by gathering forest fruit, mushrooms and plants and an additional 21% supplement their income by non-timber forest products. It can be assumed that the importance of wild fruits and medicinal plants for income generation in the Albanian part of the study area is at least similar.

9. Fishing. Fishing has been in the decline in all three Prespa countries. In GR-Prespa, only 2% of the population lists fishing as an occupation and that figure is most likely only slightly higher in AL and MK-Prespa. Although an income survey has not been done with respect to the fishery, approximately 50-60 fishermen across the Prespa Basin are estimated to earn a significant portion of their income just from the high-value carp fishery.

10. Tourism Domestic guests dominate the Prespa tourism market in all three countries. Less than five percent of all tourists are classified as “foreign”. Local experts believe the current capacity for tourists to be lowest in Albania (75 beds), Greece (300 beds), and Macedonia (7,200 beds). However, bed capacity does not reflect the health of the market. Tourism is actually on the rise in both Greece and Albania and Macedonia has lost 50% of its clients. Nevertheless, it is estimated that MK-Prespa still receives more than 100,000 visitors each year. This is primarily a “low-end” market and brings in estimated revenue of between US\$ 1.5 – 2 million.

Environmental Context and Global Significance

Origins of Prespa Basin

11. In the Miocene, Prespa and Ohrid Lakes were connected and were part of a larger lake that connected to the Adriatic Sea via the Devolli River in Albania². The Prespa Lake basin itself was formed by a collapse of the limestone rock between the surrounding mountains. By about 12 million years ago, the two lakes had become separated and the connection with the Devolli River had been cut off due to geological uplift and sedimentation. As water accumulated in Prespa, sediments from the surrounding mountains covered the basin floor. Ancient Lake Prespa separated into lakes, Macro and Mikri Prespa, due to sediment deposition from the Aghios Germanos River. Beneath Macro Prespa, a bed of limestone is constantly eroding creating ephemeral sinkholes as channels open and close. There is no natural surface outflow of the two lakes. Investigations (Anovski et al, 1991) using radioisotopes techniques have confirmed a partial underground karstic outflow beneath Galicica Mountain to Lake Ohrid (150m lower). The water from Macro Prespa is also thought to flow into surrounding aquifers possibly in Albania and elsewhere.

Waterbodies of Prespa Basin:

12. The Prespa catchment area includes the two lakes, Mikri and Macro Prespa, and permanent or seasonal streams, which discharge into the two lakes.

Lakes:

Mikri Prespa (littoral states: Albania, Greece)

Macro Prespa (littoral states: Albania, Greece, FYR-Macedonia)

Contributing waters to Macro Prespa Lake:

13. Fifty-seven watercourses, ephemeral streams, and ravines shape the Prespa Basin. Of these only six are perennial and the four largest of these flow into Macro Prespa. Of the four largest streams, three are in FYR-Macedonia and one is in Greece.

14. *FYR-Macedonia*: 1) Golema Reka (reka = river); 2) Brajcinska Reka; 3) Kranska Reka; and the ephemeral Bolnska Reka.

² Pers comm.. Dr. Alkis Stamos, Institute of Geology and Mineral Exploration, Kozani, Greece

15. *Greece: 1) Aghios Germanos River*

16. *Albania:* Surface flow from Albania into Macro Prespa is limited to a few ephemeral streams. There is no major source of surface water input from Albania to Micro-Prespa. One scientist (citation) estimated that, due to the limestone geology of the Albanian side, only 10% of the precipitation which falls on the Albanian side of Prespa actually enters the lake, the vast majority flowing directly into the ground.

17. Unlike Macro Prespa, Mikri Prespa does have surface outflow. Water flows from Mikri to Macro Prespa through a sluice-gate controlled channel at the Koula location in Greece.

Contributing waters to Mikri Prespa Lake:

18. *Greece:* Two small perennial streams flow into Mikri Prespa from Greece.

19. *FYR-Macedonia & Albania:* No rivers or streams from FYR-Macedonia or Albania flow into Mikri Prespa. However, in 1976 Albania linked the Devolli River to Mikri Prespa by canal in order to discharge winter and spring rainfall from the Devolli into the Micro Prespa and draw off water from the Lake during summer for irrigation of the Devolli Valley. Input of Devolli water to Mikri Prespa brought massive infusions of sediment, creating a new wetland in the Albanian end of Mikri Prespa and rendering the irrigation scheme impractical. This, combined with the destruction of the pumping system in Albania has made this link between the Devolli and the Mikri Prespa essentially defunct. It remains an open question as to whether this link will be restored in the future by the Government of Albania.

The Unique Biodiversity of the Prespa Basin

20. Even without complete inventories for most groups, the Prespa watershed can be said to have a unique species assemblage by international standards. This uniqueness reflects the adaptation of the flora and fauna to the different rock types in each mountain range (mainly silicate and limestone), the different soil types present, the range in altitude (850-2641m) and the influence of both Mediterranean and Continental climates. It also reflects the isolation of the aquatic flora and fauna of the lakes over the last 12 million years, and the relative isolation of the high altitude flora and fauna on the surrounding mountain ranges, which acted as refuges during the Pleistocene ice ages. The relatively low human population is also a factor although the impact of development on biodiversity has been mainly at low altitude. These and other factors have resulted in a flora and fauna that is globally unique:

- (i) Total Species Diversity: (Prespa has an unusually high number of species per unit area). An especially high level of species diversity has been reported for two protected areas, the Prespa National Forest in Greece (over 1,500 spp.) and the Galicica National Park in the FYR-Macedonia (more than 1,300 species, or approx. 37% of the flora of Macedonia). Given the size of these protected areas (around 250 km² each) this places them among the top 10 most diverse protected areas in the world of similar size.³ The flora of the Albanian Prespa National Park has an estimated 1000 species or 30% of the whole flora of Albania⁴.
- (ii) Endemics: (Prespa has a high proportion of locally endemic species that are found nowhere else in the world). Overall, the Prespa Basin has at least 50 animal species and 19 plant species that are endemic (restricted) to the Prespa watershed. The groups with the largest number of recorded endemics are the invertebrates (28spp), diatoms (25 spp.), mollusks (11 spp.), and plants (24 spp.). Our knowledge of most of these groups is still poor, but it is already clear that aquatic environments of the Prespa basin in particular, have a unique species assemblage. For example,

³ Ricklefs R.E. (1995)

⁴ Bego, F. (2004).

25% of all the diatom species that have been recorded so far in Macro Prespa are new species⁵. Also, 9 endemic fish species (5 endemic to the Balkans & 4 endemic to Prespa) have been recorded. This is not unexpected since the Balkans as a whole are recognised to be a global hotspot for both fish and mollusk species⁶.

- (iii) Species Richness in Specific Groups: (Groups that have exceptional diversity in the Prespa Basin). The complex microclimatic conditions and the wide array of different habitats present at high altitude have resulted in rapid speciation in some groups. For example, there are over 1,600 species of butterflies which considering the size of the Park (1,605 km²) is quite exceptional (this is almost one species for every square km!). The diversity of the Noctuid moths (Order Lepidoptera) is also remarkable. MK-Prespa alone has 356 species, or 76% of all the species recorded in FYR-Macedonia⁷. Even more remarkable is that Macedonia has 8 endemic Noctuid moths, and 7 of these are found only on Galicica Mountain. The diversity of amphibians and reptiles in the park alone is similar to herpetofaunal diversity in entire countries such as Germany, Switzerland and Austria⁸. 51 species of mammals have been recorded, which represents 62% of all mammal species in the FYR-Macedonia⁹. Lastly, Prespa has 266 spp. of birds, which represents 84% of the entire avifauna of FYR-Macedonia¹⁰.
- (iv) Migratory Species: For medium to long-range migratory species, the availability of suitable habitat is a critical factor in their survival. Prespa acts as a globally important feeding, nesting and breeding location for at least 91 migratory bird species, many of which depend upon the cover provided by reed beds and forests. The Dalmatian Pelican (*Pelecanus crispus*) is perhaps the most high profile of the migratory species present in Prespa and has been the focus of successful conservation efforts on the Greek side of Mikri Prespa. The Prespa region's avifauna has both national and international importance based on the number of national level Red List species, the overall species richness of the area, the occurrence of significant populations of species at the edge of their distributional range, and the presence of significant populations of species of international importance. The global importance of the area has been recognized in the designation of two Ramsar sites or wetlands of international importance, one for Ezerani Nature Reserve and one for the Greek part of Mikri Prespa.
- (v) Globally threatened species: While species lists for the Prespa Basin are incomplete, at least 19 animal species (mostly terrestrial) have been recorded which have a formal IUCN threat status. The most significant groups are the bats and birds. Globally, there are 1100 species of bats, representing approximately twenty-five percent of all mammalian species on Earth [globally one in four mammals and one in eight birds are threatened with extinction]¹¹. Prespa has a total of 25 species of bats. A third of these (9 species) are classified as Vulnerable or threatened with extinction. Of the birds, the most visible threatened species is the Dalmatian Pelican (*Pelecanus crispus*). It is currently listed as Vulnerable. The species' largest colony worldwide is on Lake Mikri Prespa, which hosts 10% of the world's breeding population. As far as the reptiles are concerned, the turtle, *Testudo hermanni*, is the only threatened (IUCN status = Vulnerable) reptile species in the region, and is of particular concern in the Prespa area since it is collected commercially. Lastly, there is one sub-species that has an IUCN status of Critically Endangered (*Salmo trutta peristericus*), one fish species that has an IUCN status of Vulnerable (*Barbus prespensis*), and four species that are categorized as Near Threatened (i.e. likely to move into a

⁵ Melovski, L., et al (2004)

⁶ http://www.unep-wcmc.org/information_services/publications/freshwater/4.htm

⁷ Turner, (1964)

⁸ KfW (2005)

⁹ KfW (2005)

¹⁰ KfW (2005)

¹¹ IUCN Red Book, (2004)

threatened category), but none of these are protected under the law or practically by the relevant fisheries management bodies.

Stresses on Ecosystem Health and Underlying Causes:

21. When analyzing stresses on ecosystem health and main sources of stress, the team considered a stress to be the impairment or degradation of the size, condition, and/or landscape context of a conservation target, and results in reduced viability of the conservation target. We considered a source of stress to be an extraneous factor, either human (policies, land uses, pollution) or biological (non-native species)¹².

22. The following simple example illustrates the thinking behind the stress/source of stress approach. If we call a proposed road a threat to an estuarine system, we are then immediately inclined to stop construction of the road: threat: road = solution: stop road.

23. However if we separate the threat into stress and source, the potential stress to the estuarine system is not the road. The stress is, for example, the loss of tidal flow. This mode of thinking then catalyses consideration of solutions that will maintain tidal flow, which may or may not involve stopping the road.

24. This stress-oriented analysis also helps to give us a sense of priorities. Not all stresses on the Prespa ecosystem are equal in their intensity or effect and not all stresses are caused by people. As a result, the desirability, feasibility, and cost-effectiveness of reducing or eliminating stress vary as well. This ability to begin prioritising enabled the project preparatory team to better target the six key sources of stress described in Table 1 and we recommend that this approach be taken further during the trans-boundary diagnostic analysis under Outcome 4.

25. As a natural system, the Prespa Lakes are subject to natural disturbances. For project planning purposes, the project team focused upon those stresses attributable directly or in-directly to human causes that result in the destruction, degradation or impairment of the main two global benefits of concern. Incompatible human uses are the cause of many stresses; often, incompatible human uses indirectly cause stress by exacerbating natural phenomena.¹³ This could well be the case in Prespa with respect to the decline in water level of Macro Prespa Lake (a natural phenomenon), although additional study and diagnosis is needed.

¹² The Nature Conservancy. 2000. The Five-S Framework for Site Conservation: A practitioner's handbook for site conservation planning and measuring conservation success. Volume I. Second Edition.

¹³ Ibid.

Table 1: Stress, sources of stress and underlying causes analysis

Anthropogenic Sources of Stress:

Sector	Stress	Source	Underlying Cause/Barriers
1. Land-use management	1.1 Loss of priority shoreline and wetland habitat.	Conversion of reedbeds to beaches and wet meadows to agricultural land. (MK, AL)	<p>⇒ Inappropriate scale (national) for land-use planning precludes effective local action to determine and enforce priority uses of sensitive habitats.</p> <p>⇒ Experiential Barrier: Stakeholders do not have the experience or expertise to integrate ecosystem management objectives and practices into local level planning.</p>
2. Water management	2.1 Degraded aquatic habitat. Hampered movement/ spawning/ population exchange of endemic trout species.	Seasonal irrigation withdrawals render stream sections dry or warmer in streams harboring native species of trout (MK, GR). River weir blocks fish passage. (GR)	<p>⇒ Water law in MK and AL does not recognize maintaining in-stream flow for ecosystem health and/or fish and other habitat values as priority uses for water.</p> <p>⇒ Inappropriate scale (national) for land-use planning precludes effective local action to determine and enforce priority uses of sensitive habitats.</p> <p>⇒ Permitting regime for water use unsettled.</p>
	Increased seasonal water temperatures in aquatic habitats;	Felling of trees along riverbanks without regard to impact on aquatic ecosystem (MK, GR).	<p>⇒ Maintaining natural riparian ecosystems is not a priority for MoE and water management authorities;</p> <p>⇒ Riparian ecosystems are misunderstood by local authorities and MoE;</p>
3. Agriculture	3.1 Altered aquatic animal and plant community dynamics. • Altered aquatic plant community dynamics.	Pollution from herbicides/ pesticides/ industrial compounds. (MK, GR) (MK) 10 of 15 pesticides known to be in use are very toxic for aquatic	<p>⇒ Pesticides can be classified as acceptable from human health perspective but can still be toxic to aquatic organisms. Testing standards for pesticides in MK do not adequately take into account ecosystem</p>

Sector	Stress	Source	Underlying Cause/Barriers
	<ul style="list-style-type: none"> • Reduced reproductive success rates in fish larvae; altered sex ratios. • Slower growth of fish larvae and increased mortality of benthic and fish fauna. 	organisms and environment; 5 of 15 pesticides are found to be “highly dangerous” for water.	<p>health parameters.</p> <p>⇒ Inappropriate use/Excessive use of pesticides (MK); Individual farmers spray pesticides on orchards between 10-15 times per growing season. (MK)</p> <p>⇒ Barrier: No understanding of integrated pest management or economic damage threshold principle for managing pests and minimizing pesticide use and cost. (MK)</p> <p>⇒ Barrier: Farmers are risk averse to trying new pest control methods. Proof of concept is required to overcome perceived risk. (AL, MK)</p> <p>⇒ Inappropriate disposal of pesticide waste/residue due to inadequate solid waste management options. (MK)</p> <p>⇒ Weak enforcement of pesticide regulations in Resen Municipality due to inadequate decentralized capacity from MoE and MoA.</p> <p>⇒ Barrier: Weak capacity of agricultural extension services; no technical assistance; no farmer-to-farmer sharing of lessons (AL, MK).</p>
		<p>Improper solid waste disposal – empty pesticide bottles dumped in Golema Reka (MK).</p> <p>Disposal of excess apples into Macro Prespa. (approx 40,000 tons in 2003) (MK)</p>	<p>⇒ Dumping into the river/lake is cheapest and most convenient way to dispose of them. No convenient and cheap solid waste disposal alternatives.</p> <p>⇒ No awareness of the impact such practices have on water quality and environmental quality.</p> <p>⇒ True costs of such practices in terms of negative impact on tourism and fisheries are not clear to stakeholders.</p>

Sector	Stress	Source	Underlying Cause/Barriers
			⇒ Farmers not aware of productive uses for excess apples.
4. Fisheries	4.1 Reduced populations of native and endemic species.	<p>Fish harvest exceeds sustainable levels. (MK, AL, GR)</p> <p>Harvesting of fish during spawning season reduces the populations of endemic cyprinid and commercial species and salmons.</p>	<p>⇒ Fishery management policy provides little incentive to fishery concessionaire or to individual fishers to maintain long-term sustainability. (MK)</p> <p>⇒ Data on fish catch is either absent or unreliable across all three littoral states.</p> <p>⇒ Fishery management practice provides incentive to over harvest the fish and under-report the catch.</p> <p>⇒ There is an insufficient property right incentive to invest in long-term, proactive management of the fishery (AL, GR, MK).</p> <p>⇒ No effective deterrent to violating fishing regulations; weak enforcement of fishing regulations. (MK, AL,GR)</p> <p>⇒ Fish, especially carp, are easily converted to cash.</p> <p>⇒ Data on fish species populations and status does not exist (MK, AL).</p>
	4.2 Interspecific competition from exotic species and/or potential dilution of genetic diversity.	Introduction of exotic species of fish fauna. (AL, GR, MK)	<p>⇒ Management bias towards addressing the symptoms of fishery problems and not the causes;</p> <p>⇒ Maintaining uniqueness of Prespa ecosystem and health of endemic species not a fishery management priority.</p> <p>⇒ Exclusive focus of fishery practices on short-term commercial gain; species conservation, sport fishing, and ecosystem health are not management objectives in any of the littoral states.</p>

Sector	Stress	Source	Underlying Cause/Barriers
5. Forest management	5.1 Forest fragmentation/altere forest structure:	Inappropriate management of forest for commercial species and timber production values. (AL, GR, MK)	<p>⇒ Legacy of industrial approach to forest management, versus modern “ecosystem-oriented” forest management. (MK, GR)</p> <p>⇒ Allowable harvest levels determined without regard to maintaining or rehabilitating natural forest species composition and without regard to impacts on other species. (MK, AL)</p> <p>⇒ Management bias towards forest engineering and timber production, not forest ecology. (MK, AL, GR)</p> <p>⇒ Protected area management is funded solely exploitation of forest resources and some tourism, limiting management to basic organizational necessities. More developed conservation programs will require access to external sources of funding. (AL, MK)</p> <p>⇒ Forest management law in MK and AL does not recognize maintaining ecosystem health and wildlife habitat as a legitimate objective for forest management.</p>
		Destructive harvesting of medicinal plants and other non-timber forest products. (AL, MK)	<p>⇒ Root causes: inventory data not available for management of populations leading to poor understanding of impacts.</p> <p>⇒ Existing restrictions on the harvesting of key species not enforced</p> <p>⇒ Sales of medicinal plants and other NTFPs provide much needed revenue for park management</p>
		Grazing/foraging of excessive numbers of goats in forestlands and acquisition of fodder from forest lands. (AL)	<p>⇒ Forest in AL-Prespa is an open access grazing, fodder, and firewood resource.</p> <p>⇒ Village communal forests are not providing sufficient fodder for animals, increasing pressure on protected area forests.</p>

Sector	Stress	Source	Underlying Cause/Barriers
			⇒ Fodder production constraints in AL-Prespa limit use of non-browsers such as cows.
		Concentrated firewood collecting results in excessive impact on certain forest communities. (AL)	⇒ Ill-planned and controlled firewood extraction. (AL) ⇒ People need firewood for cooking and heating and there are no alternative sources within AL-Prespa. ⇒ People have no incentive to upgrade old, inefficient wood burning stoves to new more efficient models. ⇒ Homes are terribly energy in-efficient.
6. Liquid Waste Management	6.1 Eutrophication: Increased turbidity; increased algae levels in the epilimnion; decreased oxygen levels in the hypolimnion stress native freshwater ecological communities.	Pollution from organic waste from untreated wastewater and fertilizer run-off increases levels of nitrates and phosphates, leading to eutrophication. (MK, AL, GR)	⇒ Excessive use of fertilizers; fertilizers applied w/no info on existing nutrient levels in the soil, nutrient withdrawal estimates or expectation of yield. (MK) ⇒ Flood irrigation practices increase leaching of nutrients into surface and ground water. (MK) ⇒ Inadequate understanding of crop requirements for irrigation, fertilizer. (MK) ⇒ Farmers are risk averse to trying new approaches. Proof of concept needed to reduce perceived risk; (MK, AL) ⇒ Low level of compliance: Inflexible enforcement regime imposes unrealistically high cost on small industrial polluters. (MK) ⇒ Financial and knowledge barriers to adopting small scale wastewater treatment options.
		Household detergents contribute 50% of	⇒ Over 80% of the detergents on-sale in local

Sector	Stress	Source	Underlying Cause/Barriers
		phosphorous (P) load (MK)	<p>markets contain phosphates.</p> <p>⇒ People are unaware of the impact P detergents have on aquatic ecosystems and have no incentives to switch to non-P detergents.</p> <p>⇒ Ineffective implementation and enforcement of MoEPP policy banning phosphate detergents.</p>

NATURAL SOURCES OF STRESS:

7. Natural Cycles	7.1 Altered littoral zone habitats due to water level decline has unknown impact on priority species.	Mild drought/lower precipitation in the basin and increased outflow of water through cracks in the lakebed	<p>Potentially aggravating/exacerbating anthropogenic factors:</p> <p>⇒ Inability of resource managers to anticipate and respond to change (MK, AL)</p>
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Constraints to the adoption of integrated ecosystem management:

National level:

- ⇒ Weak environmental and natural resource governance capacity at the municipal government level (AL, MK, GR).
- ⇒ Sectoral decision makers are unaccustomed to applying a watershed perspective to resource management challenges. Sectors are managed and regulated independently and often have different goals and objectives within the same watershed/basin (AL, GR, MK).
- ⇒ In MK the protected areas are required to fund their own management activities and receive no financial or institutional support from Government, precluding any active conservation work from being done. In AL-Prespa, the legal status of PNP and the Protected Area Management Directorate precludes them from establishing their own bank accounts and managing their own finances.
- ⇒ Protected area managers have little experience in applying landscape ecology and conservation biology principles to the challenge of conserving biological diversity within and around the protected areas (AL, MK, GR).

- ⇒ Existing data is largely outdated and incomplete in AL and MK and country data on ecosystem parameters is held and not shared by disparate organizations and individuals. This is a clear constraint to the adoption of ecosystem management practices in the national sectors of the Prespa Basin.
- ⇒ Community and user involvement in natural resource management in all three countries is very low and there are no functioning mechanisms to give local authorities and resource users more of a stake in the benefits of conservation. This is true for virtually all sectors including agriculture, fisheries, forestry, wildlife, protected areas (AL, MK).

Trans-boundary Level

- ⇒ Transaction costs associated with moving to the next level from trans-boundary agreement upon the principles and basis for trans-boundary cooperation to developing and supporting specific mechanisms for cooperation (i.e. the PPCC or cooperative fishery management or water management). For example, the trans-boundary coordination capacity of the (Prespa Park Coordination Committee) PPCC has yet to be demonstrated and will require changes in the structure of the committee, full-time professional staff, and appropriate allocation of resources.
- ⇒ Data sharing on key issues affecting Prespa is limited to a few narrow topics and hampered by disparate sampling strategies, methods of gathering data, and ingrained reluctance to share data without payment. Data is perceived as a commodity and not a shared scientific resource.
- ⇒ While the three littoral states have agreed upon the basic need for conservation of the Prespa Basin, they have never engaged in a joint fact-finding process with respect to the Prespa Basin and have yet to agree on the key elemental facts affecting the Prespa Basin's ecosystem health.
- ⇒ Restricted access to data and poor communication among the three littoral states has led to differing interpretations of the priorities affecting the sustainable management of the Prespa and these views often reflect national, rather than trans-boundary priorities.

Baseline Description and Analysis: Institutional, sectoral and policy context

Institutional Baseline for Work in Albania (AL)

26. There are two Ministries primarily responsible for conservation and resource management in Albania: The Ministry of Environment (MoE) and the Ministry of Agriculture and Food (MoAF).

27. Three institutional structures at the regional and local level are relevant to the project as well. The Regional Council of Korca, based in the city of Korca 40 km from AL-Prespa is the regional umbrella entity for all the smaller villages and communes in the region, including the two communes within AL-Prespa – Liqenas and Proger. The Regional Council serves a coordinating and facilitating role for social and economic development.

28. Ministry of Environment: The Law on Environmental Protection (2002) gives the MoE the primary environmental oversight and enforcement role over all sectors. The MoE is the central institution specialized in environmental protection and has a wide scope of interest (e.g. trans-boundary lakes, water quality, biodiversity, protected area management planning, soil health, air quality, environmental permitting). The MoE's area of interest overlaps many other sectors and it must therefore work closely with local government, other Ministries, NGOs and civil society in order to accomplish its mission.

29. Regional Environmental Agencies: The Regional Environmental Agencies (REA) are the regional administrative bodies of the MoE in charge of enforcement, monitoring and permitting at the local and regional levels. In addition, the REA provides assistance to local government in environmental protection, developing local environmental actions plans, and strengthening local environmental management. One person staffs the Korca Region REA, which is responsible for the Prespa.

30. MoE is a relatively new Ministry with minimal capacity at the regional level and no capacity at the local village or commune level. Building partnerships with local authorities and NGOs is a growing priority for the MoE/REA, given the process of decentralization in Albania and the limited capacity of the REA itself to enforce environmental laws at the local/commune level. But just how this collaboration should best occur is evolving and developing. The refinement of specific methodologies for implementing environmental law and achieving ecosystem conservation objectives at the AL-Prespa level represents a strategic opportunity for this project.

31. Ministry of Agriculture and Food (MAF) The MAF is responsible for administration and management of four key sectors within Prespa through the Directorates of: Forests, Fisheries, Water Management and Protected Areas. The mandates of MoAF and the MoE are intertwined in every one of these sectors and thus the necessity is clear for working closely and effectively together.

32. PA management in Albania is the responsibility of the Protected Area Management Directorate (PAMD), which is currently part of the MoA's Directorate of Forests and Pastures (DoFP). The PAMD was created only in 2001 and is staffed by three people. The PAMD is responsible for the Prespa National Park (PNP), which encompasses the entire territory of AL-Prespa. PNP staff are former DoFP staff and are comprised of two forest engineers (University degree level), one of whom is based in Korca and serves as the Park Director and the other who is based in Gorica in Prespa and is the Park Manager. They are supported by five forest technicians.

33. The DoFP has primary responsibility for forest management in Albania. The Regional office in Korca is still responsible for administrating the forests of AL-Prespa in collaboration with PNP and in fact, the two are the same "on-the-ground" entity in Prespa. However, because the government-owned

forestland in AL-Prespa falls within the boundaries of PNP, this will eventually become the responsibility of PNP, as it matures as an institution.

34. The Law on Water Resources (1996) established the National Water Council (NWC), its Technical Secretariat and six Drainage Basin Councils (DBC) for Albania's six major river basins as the main water management bodies in Albania. The Council prepares, adopts and supervises the implementation of country's *National Water Strategy*. The Council reviews permits, concessions, watershed basins plans, and standards and discharge limit values and recommends approval/denial to the Council of Ministers. The DBC are responsible for issuing permits and authorizations for using and discharge of water.

35. In recent years there has been a push to decentralize water management capacity. The Law on Irrigation and Drainage (1999) empowers Water Users Associations (WUA) to formulate their own by-laws and regulations for management of irrigation structures. Currently, WUA mandate is limited to irrigation structures, rather than water bodies themselves. None of these WUAs have been established in AL-Prespa because there are no irrigation structures.

36. The MAF's Directorate of Fishing (DoF) and its regional office in Korca are responsible for managing AL-Prespa's fisheries. Fishery management requirements exceed the capacity of the understaffed DoF; the regional office in Korca is staffed by one person. Recognizing this situation, the Albanian Government applied the principles of co-management to fisheries in order to bring the sector under more sustainable management fisher-based Organization(s) for Fishery Management or OFM in specific water bodies around Albania.

Institutional Context for FYR-Macedonia (MK)

37. There are two Ministries primarily responsible for resource management in Macedonia - the Ministry of Environment and Physical Planning (MoEPP) and the Ministry of Agriculture, Forestry and Water Resources Management (MoA). Much like in Albania, the mandates of the MoEPP and the MoA exceed their organizations' capacity to implement at the local level.

38. MoEPP. The MoEPP is responsible for physical planning, nature conservation and environmental protection in FYR-Macedonia. The MoEPP is given a wide scope of interest with respect to environmental protection (environmental monitoring; protecting soil, air and water quality; protected areas; endangered species) and physical and spatial planning. The Ministry's mandate covers many sectors and it must therefore work closely with local government, other Ministries, NGOs and civil society in order to accomplish its mission. The Ministry consists of the following sections:

39. Regulation and Standardization to drafts new legislation, regulations for implementation of law and facilitates the processes of local self-government and public administration reforms; 2) Sustainable Development, which takes the lead in facilitating inter-sectoral cooperation; 3) European Integration to facilitate adoption of EU environmental *aquis*; 4) Macedonian Environmental Information Center whose primary task is to establish and maintain relevant, accurate and publicly accessible information on the state of the environment throughout FYR-Macedonia; 5) the Office of Environment oversees protected areas and environmental inspection and works with the MoEPP's Environment Inspectorate Office to enforce environmental laws and work closely with local governments; and 6) Spatial Planning oversees the effective physical and spatial planning process at the national and municipal levels. In FYR-Macedonia physical and spatial planning provides the basis for all other resource and land use, including conservation and sustainable development.

40. Established only in 1998, the MoEPP has no staff at the local level. In Resen Municipality, which encompasses all of MK-Prespa, the MoEPP relies upon staff in Skopje and the municipal authorities to

implement environmental laws. Cross-sectoral partnerships and national-regional-local partnerships are needed in order to achieve meaningful results by way of ecosystem health, biodiversity conservation, and sustainable resource management. The new law on decentralization is accelerating the process of national ministries like MoEPP building partnerships, enforcement, and monitoring mechanisms with and the capacity of local municipal authorities.

41. MoA: Under current law, the MoA is responsible for: agriculture, forestry hunting and fishing, and water resource management, including monitoring, irrigation, and permitting. The MoA has one office in Resen Municipality staffed by two people who are charged with overseeing all of MoA's responsibilities in the municipality: agriculture, the largest economic sector in Resen; forest management work done by Prespadrvo; the aging irrigation system; and the fishery management done by Ribomak in Macro Prespa Lake.

42. Forest Management. The MoA is responsible for all aspects relating to forest management outside of private lands and protected areas. The public enterprise "Makedonski Forests," which reports to the MoA, is responsible for management of MK-Prespa's 23,744 hectares of productive (unprotected) forest. The local branch "Prespadrvo" is located in Resen and employs 70 people. Nine of them are considered forest engineers and have a university degree or higher in forestry or agriculture. The remainders are rangers or are involved in forest harvesting or administration.

43. Fishery Management. In MK, concessionaires licensed by the MoA manage fisheries. In MK-Prespa, Ribomak is the concessionaire under a five-year fishery management concession. They are responsible for licensing fishermen and managing the fishery on a sustainable basis. Ribomak, based in Resen, employs six people: two managers and 4 part-time wardens.

44. The Municipality of Resen (MoR). Decentralization is an important emerging reality in both MK and AL that provides a strategic opportunity for this project in terms of building local capacity for ecosystem management and serving as a model for strengthening local capacity. The MoR, because its boundaries coincide with those of MK-Prespa, will be the local government body with which this project will work. Under the new law on decentralization the MoR will receive increased budgetary resources and additional staff from the national ministries in order to bear the twelve new decentralized competencies covering everything from tax collection to health care to waste management.

45. With respect to environmental competencies, MoEPP plans to decentralize three: Drinking water supply; Wastewater management and Solid waste management. Other MoEPP competencies will not be decentralized per se, but a new much more participatory approach will be taken with local municipalities and protected areas, with respect to environmental monitoring and enforcement, water management, and protected areas management. To help in this process, the MoEPP plans to second one Environment Inspector to MoR and to increase its level of cooperation with NGOs. This transformation will take time, additional skilled staff and significant capacity building.

46. The MoR recognizes that its current capacity is not sufficient to meet all these new responsibilities and also plans to involve local NGOs as partners in key environmental tasks.

Law and Policy Baseline:

47. The law and policy baseline in Albania and FYR-Macedonia is in a period of dynamic change. It is relatively strong and getting stronger. Implementation and enforcement of the laws is weak due to inadequate capacity and lack of incentives. Both Albania and FYR-Macedonia are the recipients of ongoing aid from the European Union to revise old laws and in the process adopt the EU's *aquis communautaire*, or body of law, as they continue down the path to possible EU accession. This ongoing

process of adopting national laws to comply with it is the main element of the project's law and policy baseline.

48. In MK, the following the following environment and natural resource laws have been adopted or are under discussion by Parliament: Law on Nature; Law on Waste; Law on Air Quality, Law on Environment Protection, Law on Water. Government plans call for the revision of most of the laws under the responsibility of the MoA (Fishery, Forestry and Agriculture) over the course of the next three years. In AL, laws are being or have been revised in key natural resource sectors, including: Protected Areas, Air and Water, Waste Management and Environmental Protection.

49. This changing legal baseline represents a challenge and a significant opportunity for this project because, while the legal baseline is receiving much attention, the capacity to implement this new body of law will take years to develop and will require much experience in the field testing and refining new decentralized, participatory and appropriately scaled capacities and policies within both national Ministerial-level institutions and local municipal or communal-level institutions.

50. This project seeks to enable these new capacities by mainstreaming ecosystem management objectives into productive sector activities, demonstrating new practices and approaches in order to inform the development of new effective regulation, build consensus, and strengthen capacity.

Albania's Law and Policy Baseline for Prespa:

51. Albania's *Law on the Protection of Trans-boundary Lakes (2003)* provides the legal basis for maintaining ecosystem health and facilitating sustainable development in the watersheds of Albania's four trans-boundary lakes, two of which are the Prespa Lakes.

52. The law requires cross-sectoral coordination in resource management, the development of a watershed management plan for each lake watershed and the formation of a "lake administration" for each trans-boundary lake to ensure sustainable management of the various productive sectors within each watershed. The law gives the MoE authority over items such as the development and implementation of management plans for trans-boundary lakes, management frameworks, monitoring programs, and restoration/rehabilitation plans, in collaboration with local government, the Regional Council, NGOs and research institutions.

53. The law leaves much implementation detail to be developed at the regulatory level. Indeed, the Prespa Lakes, with the whole watershed declared as a national park, presents some unique regulatory and policy questions and opportunities regarding how to integrate the various conservation and sustainable use objectives, regional and local entities, sectoral agencies, management bodies, and planning instruments.

54. The *Law on Water Resources (1996)* organizes water resource management by river basin. The Prespa Lakes are included in the Semani River Basin. Article 20 of the law determines the procedure for obtaining a water use permit. Article 21 of law lists in of priority: "a) water supply for the population; b) irrigation and aquaculture; c) hydropower; d) other industrial uses, including mining; e) fishing; f) water transport; g) tourism and entertainment; and, h) other uses." The law does not recognize water use for the purpose of maintaining ecosystem health or wildlife habitat.

55. The Law on Fishing and Aquatic Life (1995) was amended in 2002 under Law # 8870 to involve local fisher communities by instituting co-management of the fishery. To do this, the law calls for the establishment of Organization(s) for Fishing Management (OFM) and for the development of co-management plans and capacity by these OFM and Regional DoF Offices.

56. The Law on Forest Management in Albania is outdated and biased towards industrial forest management practices versus “New Forestry” management practices which emphasis ecosystem, diversity, and provision of a wide variety of ecosystem services.

57. *The Law on Protected Areas (2002)* provides for six IUCN categories of protected areas, and for the first time in Albania, requires Government to establish administrations for all PA. While the law provides the legal basis for modern, participatory PA management, it does not allow for the adequate development of protected areas as sustainable institutions unto themselves. For example, under current law, protected area administrations are not given sufficient legal status to enable them to even open a bank account. This is a significant constraint on PA sustainability and institutional development.

FYR-Macedonia’s law and policy baseline for Prespa:

58. Land use is managed according to the Law on Spatial and Urban Planning (1996). MK requires the MoEPP to prepare a national “Spatial Plan” through its “Public Enterprise on Spatial and Urban Planning” unit and to oversee the development of local spatial plans for each municipality.

59. Article 11 of the Law on Waters (1998) specifies types of surface and ground water use in order of priority: “ (1) *water supply of the population...* (2) *irrigation of agricultural land*; (3) *water supply of the industry*; (4) *watering parks and other public lands*; (5) *electricity production*; and, (6) *other needs*”. The law does not recognize water use for the purpose of maintaining ecosystem health or wildlife habitat.

60. A draft water law is in the final stages of consideration by Parliament. Under the law, the MoA’s responsibility likely will be limited to irrigation. The MoEPP already has authority over water quality and protection of waters, but inadequate regulatory tools hamper the MoEPP’s ability to exercise this authority. Under the draft law, the MoEPP likely will be given responsibility for water use planning, permitting and monitoring/ enforcement. If so, the MoEPP will control access to water and will be responsible for maintaining the quality of all water bodies. The MoA will be responsible for water use infrastructure (irrigation) and the organizations that manage these systems.

61. The draft Water Law envisions the creation of a national water strategy to be supported by regional integrated river basin management plans and local water resource management plans. A multi-disciplinary, ministerial level committee will develop this strategy. The river basin management plans will be developed and proposed by the MoEPP in cooperation with regional river basin management bodies. The Prespa region is included within the Tsrni Drim river basin. Local water resource management planning will be done by a local watershed management council.

62. The draft legislation will rely upon a to-be-developed regulatory framework and body of best practice to provide specific guidance and detail regarding the implementation of these critical management instruments. The MK government has agreed to use the Prespa region as a demonstration model to refine specific regulatory guidance.

63. The MoA regulates pesticide use in MK. Every pesticide that is sold by the “agricultural pharmacies” like those in MK-Prespa must have a certificate from the MoA, which tests and certifies them for use based upon human health criteria. But this testing and these criteria do not adequately consider aquatic ecosystem health. The local office of the MoA in Resen is responsible for enforcing pesticide use regulations, which it is able to do in the most minimal way, posting lists of approved and banned pesticides and checking pesticides being sold by the local agricultural supply stores. Some pesticides used by farmers in MK-Prespa are imported illegally, and thus avoid the MoA’s controls. The authorities do not monitor pesticide use on the farm.

64. The Law on Fisheries (1993) requires MoA to establish fishery management concessions for main waterbodies around FYR-Macedonia: to sub-contract fishery management to private companies. The law does not require the conservation of native and endemic species of fish or the maintenance of aquatic ecosystems upon which those species depend. The law provides little incentive to either the concessionaire or the local fishers to place much interest in the long-term sustainability of a fishery. Rather, the short-term nature of the concessions and the exclusion of local fishers from management provide a disincentive for sustainability.

65. The *Law on Environment and Nature Protection and Promotion* (revised 2000) provides for: (1) pollution control; (2) biodiversity conservation; (3) rational management of natural resources; (4) ecological restoration degraded areas; (5) preservation of ecological balance and the quality of life; and (6) improvement of the environment. The general “umbrella” legislation, *Draft Law on Environmental Protection*, follows EU guidance in the major areas of environmental concern, including water and biodiversity may soon replace much of the current Law.

66. Under the new *Nature Protection Act (2004)*, the MoA retains management authority over wildlife (flora/fauna), forestry and fishing. Management planning for these resources outside of protected areas is the responsibility of the MoA. The MoEPP determines species status (*i.e.* protected species designations) and controls the introduction of exotic species for non-agricultural purposes. However, both the MoEPP and MoA must approve all hunting, forestry, and fishing licenses. In the case of listed plant and fungi species, the MoEPP has full licensing authority.

Baseline by Sector:

Land and water use regulation, planning and management

67. Sustainable water use in Albania and FYR-Macedonia suffer from inappropriately-scaled water management institutions. Poor water use planning and management mean no balance is struck among competing uses of agriculture, household, and in-stream flow. In AL-Prespa, this is not a pressing issue, given that there are no surface streams or irrigation infrastructure, water use is still basically subsistence and negligible. In MK Prespa, however, poor water use planning and management does in fact conflicts among uses for agriculture, household, and as-yet-to-be stated in-stream flow needs.

68. AL-Prespa: The mandates of the MoE and the MoAF exceed their organization’s capacity to implement at the local level. Like in FYR-Macedonia, the decentralization process in Albania is delegating new responsibilities and authority to local government bodies. Cross-sectoral partnerships and national-regional-local partnerships are needed for land and resource management, environmental enforcement, and protected area management in order to achieve meaningful results for ecosystem health and biodiversity conservation. This need is reflected in Albania’s National Environmental Strategy, which calls for communes like Liqenas and Proger to develop local environmental action plans, to guide land and resource use at the local level. Local level pilots are needed to demonstrate how stakeholders may gain the expertise and experience needed to integrate ecosystem management objectives and priorities into local land and resource use planning.

69. The Drainage Basin Council (DBC) for the Semani River, which includes Prespa, is staffed by three people. To obtain a water use permit in AL-Prespa, a permit application is submitted to DBC, but the DBC has virtually no basis in current information upon which to issue the permit. And indeed, the Semani River DBC does not have the capacity to do any permitting of water use in AL-Prespa, many tens of kilometers away. To have meaningful permitting procedures and more positive results for aquatic ecosystem health and sustainable water use, new appropriately scaled, community-based water management pilots are needed in order to strengthen management capacity at the local level.

70. A draft law on water protection is under review by the Line Ministries. The draft law clarifies and reinforces the tasks of the NWC and gives the MoE more responsibilities for protection of surface and groundwater resources, in particular for setting up water protection areas and regulating pesticide use. The municipalities will be responsible for the planning and management of wastewater treatment. Pilot activities are needed to demonstrate how MoE can apply these new responsibilities, especially for protection of surface and groundwater resources at the local level.

71. FYR-Macedonia - Land and Water Use Management In MK, the national Spatial Plan described under the legal baseline above details basic land use assignments and provides direction for development and conservation, including infrastructure and measures for special management. A new national Spatial Plan was adopted in July 2004 and will be enforced until 2020.

72. The national plan provides a basis for other national sector plans (*e.g.* Water, Forests, Hunting and Energy) and for locally scaled spatial plans to be developed for each municipality, such as Resen. This process of developing spatial plans at the municipal level has only just begun and there is a real need for good models, as these plans will set the stage for integrated resource management across FYR-Macedonia. The MoEPP proposed to use Resen as a model for spatial planning and the cross-sectoral resource management that entails.

73. Water Permitting The prioritisation of potential uses of water in both AL and MK has direct relevance now and especially in the future for ecosystem health in the Prespa Basin. Four different essential permits from three or four different government entities are considered obligatory in order to commence a new activity in both FYR-Macedonia and Albania. The process is so complicated as to render itself irrelevant given current institutional capacity to issue permits and needs of local water users in both MK and AL-Prespa.

74. In MK-Prespa, farmers have taken matters into their own hands increasingly during the past 15 years, drilling wells and extracting water from streams for irrigation. Currently there are an estimated 8,000 operational wells in Resen municipality, nearly all un-permitted. This unmanaged and ill planned water use is thought to contribute to localized water shortages and dry streambeds during summer months. For example, in the village of Dolno Dupeni, the river dries up frequently during the three summer months due to over-extraction of irrigation water. Portions of MK's Brajcino River dry-up during summer months, negatively affecting the movement and reproduction of the endemic trout and Prespa barbell.

75. To obtain a water-use permit in MK, the MoA assesses a permit application against a "water-economy basis" plan that is supposed to ensure the rational use of the water and promote economic development. But the plan is not based upon the availability of water resources in question. It is not rooted in the reality of the local situation and therefore does not meet environmental requirements of the emerging water law.

76. Currently, water monitoring work in MK-Prespa is split between the Programme for Preventive Health Care (PPHC) and the Institute for Biology based in Ohrid. The PPHC monitors water quality in Marco Prespa ten times per year at six measuring sites, mostly in bathing areas, 5-10 meters from shore (during the autumn, winter and spring and during the bathing season: July and August, every two weeks). The Institute is supposed to monitor more ecological parameters for Macro Prespa, including: nutrient concentrations, oxygen levels, and some vertebrate and invertebrate monitoring.

77. Greece -- Land and water use management. In the Greek Prespa, a spatial and urban plan is under preparation by the SPP for the Municipality of Prespa, while a regional spatial plan is in force and provides the overall land use-planning framework. Moreover, the regulatory framework is complemented

by a Joint Ministerial Decision for the Greek Prespa protected area, which designates zoning areas and allowed activities and is pending signature. According to the new legislation on water management in Greece, pursuant to the Directive 2000/60/EC, responsibility for water management in GR-Prespa will lie with a Regional Directorate of Water Management at the Water District level. For the time being, the responsibility for managing the water level of Micro Prespa lies with the management body for the Prespa Protected Area in Greece.

78. Summary. Poor land and water use planning and management are a common theme in both AL and MK and have resulted in degraded shoreline, wetland and riverine habitats (Stresses 1.1 and 1.2)¹⁴. In the absence of clear, prioritised land-use and clear apportionment of responsibility for managing lands, many high ecosystem value wetlands have been cultivated or developed. Destruction of reed beds for access to beaches has also been a problem in the Macedonian side, albeit limited, but points to the need for better spatial planning for priority habitat conservation.

79. Despite the laws and permitting procedures described above, little active management of water resources is done in either MK or AL-Prespa. The use of surface and ground water is unmonitored and uncontrolled. Indeed, this area of law in both FYR-Macedonia and Albania is in its nascent form. New models are needed for appropriately scaled water management, strengthened capacity and improved cross-sectoral coordination at the local level.

80. The degradation of riparian zones and riverine systems has also had a significant negative effect on the four main streams of the Prespa Basin. The riparian and river bed integrity of the Prespa Basin's largest stream, MK's Golema Reka, has been severely compromised through river bank degradation, cultivating to the edge of the stream, pushing of soil and solid waste into the riparian corridor, and the felling of trees and other vegetation along the river-bank has increased seasonal water temperatures and erosion, increasing turbidity and sedimentation and affecting the reproduction of fish and other aquatic organisms. In Greece, various cemented road crossings act as barriers to the spawning migration of the endemic Prespa barbell and the movement of the endemic trout. Indeed, the four surface streams of the Prespa Basin have been treated largely as ditches for waste disposal and water movement, rather than as complex aquatic ecosystems crucial to the health of the overall lake ecosystem.

Agriculture:

81. There are approximately 15,000 ha of cropland in MK-Prespa, 2,000 ha in AL-Prespa, and 2,500 ha in GR-Prespa.

Agriculture- AL

82. Farming in AL-Prespa consists primarily of small-scale production for personal consumption. Crops are mainly rain-fed grains, cereals and vegetables. Most cultivable land is located along the lakeshore to enable better hand irrigation.

83. Before 1990 in AL-Prespa, irrigation water was extracted from Macro Prespa and farmers were able to irrigate approximately half of the cultivable land and pesticides were widely affordable. Today, this system no longer exists and most farmers are unable to afford pesticides. This has the advantage that agriculture production in AL-Prespa is largely organic. Indeed, pressure on the land and water resources from farming in AL-Prespa stems mostly from erosion and resulting sedimentation caused by inappropriate cultivation techniques on hilly terrain.

Agriculture - MK

¹⁴ Please see Table 1 for summary of main stresses on ecosystem health and their underlying causes.

84. In MK-Prespa, agriculture plays a significant role in this region in terms of employment and economic sustainability. Apples are the dominant crop under cultivation in approximately 5,000 ha and by far the most valuable agricultural crop in MK-Prespa. Approximately 60% of the population of Resen Municipality are in some way dependent on apple production.

85. Agriculture is also one of the major contributors to environmental degradation, negatively impacting water quantity and quality through pesticide runoff (Stress 3.1). Most of this production takes place within the Golema Reka sub-watershed and the agricultural run-off from the apple fields affects first the Golema Reka and then the northern end of Macro Prespa into which the river flows.

86. Agricultural run-off is one of the main contributors to pollution in the lake. Pesticides are overused by as much as 50% in MK, which not only contributes to increasing pollution of the lakes, but also increases production costs for apple growers. The situation is exacerbated by the poor monitoring of water volume applied and soil moisture levels, causing a general overuse of water in orchards, which facilitates the leaching of chemicals into ground and surface waters.

87. Solid Waste Disposal: Solid waste management (SWM) is a challenge that is being met on a large scale in both AL and MK-Prespa. Major SWM enterprises are being established to handle SWM for the larger regions in FYR-Macedonia encompassing MK-Prespa and in Albania encompassing AL-Prespa. So, the baseline is improving markedly in terms of solid waste management. However, both AL-Prespa and MK-Prespa are fairly remote in both countries and at the local level, and more work will be required to connect these local areas with the larger regional SWM structure being put in place.

88. As a result, improper solid waste disposal practices by farmers are still a major contributor to pollution in the lake. Farmers discard empty pesticide bottles directly in Golema River in MK-Prespa, where the residues wash off and further pollute the waters of the Golema and Macro Prespa Lake. Farmers have no realistic solid waste disposal alternatives. There is virtually no awareness of the impact such practices have on water quality and environmental quality. More specifically, the true economic cost of such practices in terms of negative impact on tourism and fisheries is not clear to stakeholders.

89. Summary: There is not enough data available for a detailed analysis of pollution in the Macro and Mikri Prespa Lakes. Ecotoxicology studies of runoff from fruit orchards point to significant sub-lethal impacts of insecticides on fish larvae, which show higher mortality rates, slower growth, and signs of disrupted cellular homeostasis even after a three-month recovery period in clean water. Studies such as this¹⁵ show that fish may not be able to recover quickly from the toxic effects of insecticides, and that exposure to pesticide runoff may cause increased mortality and a decrease in fish populations. Other studies show the potential for certain herbicides to have sub-lethal effect on endocrine function in wildlife and humans, affecting sex determination, growth rates, and fecundity.¹⁶

90. Stresses (Stress 3.1) resulting from the use of pesticides can be attributed to the use of inappropriate types of pesticide and the excessive inappropriate means and timing of application. These factors are exacerbated by the fact that farmers in MK and AL have virtually no understanding of integrated pest management and are particularly sensitive to the risk of adopting new approaches without proof of concept.

¹⁵ Swee J. Teh, *et. al.* 2005. Sublethal toxicity of orchard stormwater runoff in Sacramento splittail (*Pogonichthys macrolepidotus*) larvae. *Marine Environmental Research*. 50:203-216.

¹⁶ Kashian, D.R. and Dodson, S.I. 2003. Effects of common-use pesticides on developmental and reproductive processes in *Daphnia*. *Toxicology and Industrial Health*. 18: 225-235

91. Despite the heavy dependence in MK and AL on agricultural production, existing farmer's associations in the region are relatively weak and there are no operational agricultural extension support services. This represents a significant barrier to the average farmer, hampering access to information on sustainable techniques, including the appropriate choice of pesticides and fertilizers, the correct timing and optimal concentration of applications, and so on. In MK-Prespa, the main source of advice available to growers are the "agricultural pharmacies" whose advice is likely biased. The link between agrochemical use and the environment is also not well understood as there are no educational outreach programs on this topic.

92. In GR-Prespa, about 90 farmers have organized themselves into a producers group and are beginning to apply integrated pest management practices to their bean farming. They grow beans according to the principles of "integrated agriculture" and related codes of best agricultural practice under EU agricultural law. In GR-Prespa, there are also several organic bean producers.

Fisheries Management

Fisheries Management in Albania

93. In AL-Prespa, from 1992-2000, fishing was totally uncontrolled and every means of harvest were used. Not only was the fishery over-fished, but destructive fishing practices such as dynamiting and fishing during spawning season damaged habitats and fish population age structures. This period is thought to have severely impacted fish populations including the native carp *Cyprinus carpio* and five endemic species (*Chalcalburnus belvica*; *Rutilus ohridanus prespensis*, *Barbus prespensis*, *Chondrostoma prespensis*, *Leuciscus prespensis*) within Macro Prespa Lake. The impact has been greatest on the long-lived species that are slow to reproduce.

94. Currently, fishing in AL-Prespa is done on an individual/family basis and there is no collective management, monitoring of fish populations or marketing of any kind. The Directorate of Fisheries (DoF) in Korca sells 45 licenses each year (40 in Macro Prespa and 5 in Mikri) with 2-3 fishers using each license, usually from the same family. During spawning season (end of April – end of June) all fishing is prohibited in all three Prespa countries, though enforcement is sporadic in MK and AL-Prespa.

95. In response to the Law on Fishing and Aquatic Life's emphasis on co-management for fishery resources, the DoF is in the process of establishing a fisher-based Organization for Fishery Management (OFM) in AL-Prespa in order to make the fishery better managed. The Prespa OFM will be established with approximately 45 members. An office and a refrigerated storage facility will be constructed for the organization and maintenance funds for the facility provided.

96. The Directorate will issue a group fishing license to the OFM for the two Prespa lakes. OFM members will have what amounts to "sub-licenses" to fish in Prespa. In order to be a licensed fisher, one must be a member of the OFM. Fishers will support the OFM through contributions or dues in exchange for cold storage services and joint marketing, training and other organizational benefits.

Fisheries Management in FYR-Macedonia

97. The MoA granted a five-year concession for Macro Prespa Lake and three rivers (Brajcinska, Golema and Kranska) to Ribomak in Oct 2003 through a public bidding process. The concession establishes limited parameters for fishing restrictions (i.e. species and seasons) and places no priority on maintenance of native fish populations or aquatic ecosystem health.

98. The concession gives Ribomak the right to issue fishing licenses and enforce fishing regulations and fishing bans as required. In 2004, Ribomak sold 60 six-month fishing licenses. In reality this means that

approximately 240 people are fishing since licenses tend to be utilized by a family unit of up to four people. Ribomak does not control fish harvest in terms of numbers or volume of fish extracted from the Lake. Their main concern is how to re-stock the lake in order to maintain the volume of fish taken from the lake. This approach has led to the uncontrolled introduction of several exotic species. There is no water quality monitoring, fish population surveys or accurate record keeping of fish catch.

99. The branch office of the MoA in Resen is responsible for oversight of Ribomak, but the office is understaffed and under-equipped, with only two people responsible for agriculture, forestry and water management and no vehicle. They are therefore unable to monitor the fishery for purposes of improving fishery management practices and enforcing regulations.

100. Summary: In Macro Prespa, fish numbers have been declining during the past 20 years (Stress 4.1) in spite of the fact that the number of fishermen has also steadily decreased since 1945. This includes the populations of endemic species (Strategic Action Plan 2002). The decline in fish numbers is due to several factors.

- *Fishery management policy provides little incentive to maintain sustainability of fishery.* In AL and MK-Prespa during this period of transition, ownership of the fishery resource was kept in the hands of a government agency that no longer had the capacity to manage it, shutting local resource users (fishers) out of the management equation and making the fishery in effect an open access resource. This is beginning to change in AL-Prespa with the OFM, but in MK-Prespa, concession-based management effectively removes the fishers from the management equation and serves as a disincentive sustainable management of the fishery.

The same policy serves as perverse incentive to overharvest the fish and under-report the catch. In MK, fishermen pay Ribomak 10% of the market price of their catch. Ribomak in turn pays a percentage of this fee to government. So it is in the interest of the concessionaire to encourage fishers to maximize the catch and in turn under-report the catch to the government.

- *Insufficient property right provides disincentive to build capacity for long-term sustainable management.* Fishers have no recognized property right in the fishery and the concessionaire's contract provides little long-term security. With a change in Minister or political party, the current concessionaires may well find themselves being replaced. This encourages short-term profit seeking.
- *Narrowly focused management.* The minimal management of the fishery in Mikri and Macro Prespa that does take place is entirely focused on maximizing the commercial catch of the five main commercial species (*Alburnus alburnus*, *Rutilus rutilus*, *Barbus plebejus*, *Chondrostoma nasus*, *Cyprinus carpio*). Species diversity conservation, promoting sustainable sport fishing, and Prespa ecosystem health are not management objectives in any one of the three littoral states.
- *Inadequate enforcement/protection mechanisms.* The only real enforcement of any fishery law in Prespa is the ban on fishing during spawning season. There is little institutional capacity to enforce the seasonal ban. There are other options, such as developing fishing agreements with fishermen and promoting self-enforcement of regulations among fishermen, but these have not been tried. Fishing is not controlled at all on the Brajcinska River, home of the endemic trout (*Salmo trutta peristericus*).

None of the endemic fish of Prespa are protected under the national legislation of the three states. The exception to this is Greece, where the Prespa barbel is listed as an endemic species to be

protected under national law predating EU accession and again under the EU habitats directive. The Prespa barbel (*Barbus prespensis*) is included in Annex V of the EC Directive 92/43/EEC, and *Alburnoides bipunctatus prespensis* is the only species mentioned in Annex III of the Bern Convention, but no protection or management measures have been extended to them in Prespa except again in GR-Prespa, where a ban on hand-fishing for barbel is enforced.

- The absence of reliable information is a barrier preventing effective management and oversight. For example: i) there is no clear information on the number of fishermen harvesting fish. The number of fishing licenses sold represents an estimated 25% of the actual number of fishermen that are operating.; ii) In both MK and AL, MoA staff do not have the capacity to monitor the catch themselves and do not have independently verified catch figures.

101. Eleven species, almost half of the species recorded for Prespa, are introduced species (Stress 4.2). All three littoral countries have experimented with re-stocking of fish in both lakes. Five of the introduced species are of Asiatic origin and were introduced into the lakes during the 1970s and 80s (Crivelli et al., 1997). In MK, the Institute of Biology attempted to re-stock trout populations in Macro Prespa using Ohrid and California trout, but neither one proved to be viable in Macro Prespa. Also, Serbian and Siberian carp escaped from fish farms operating near the lakeshore when Macro Prespa flooded. In AL-Macro Prespa, *Carassius auratus* was mistakenly introduced instead of carp and is thought to inter-breed with the carp species native to Prespa (*Cyprinus carpio*).

102. All three Prespa countries have introduced farm-raised fish into the system in an unplanned, ad-hoc manner. There has been no coordination among the three countries on the introduction of exotic species and the problems that this causes. The reason for this is mainly that there is little sensitivity to the potential economic and/or ecological consequences of introducing exotic species.

103. In GR-Mikri Prespa, there has been no reliable data available on fish catch levels since 1991. The Biological Station of Tour du Valat and the SPP have monitored fish populations in GR-Mikri Prespa since 1984. The results have shown that in the past ten years (1984-1994) fish populations have remained stable since 1987 when minimum mesh size regulations were applied in GR-Prespa (Crivelli et al. 1997).

Forest and Grazing Management in Prespa Basin

104. Forests cover approximately 45,600 ha in the Prespa Basin (see Table 1), which corresponds to about 30% of the total area, including water surface area¹⁷. MK-Prespa includes 356 km² of forests, of which 40% are located in protected areas and 60% are productive forests managed by the Public Forestry Enterprise (Prespa Drvo) in Resen. The forests in AL-Prespa are all located in the Prespa NP and in GR-Prespa 86% of the forests are situated within the Prespa Park.

105. The change of forest surface was analysed during the PDF period by comparing two satellite images from 1988 and 2003.¹⁸ Interestingly, the forest cover increased by 1.6% in the Prespa Basin. While this percentage is within the margin of error, it is still useful in indicating a trend of increasing forest cover. Forest cover has changed in different ways across the three countries. In MK-Prespa, forest cover increased by a total of 5%: by 4% in Galicica and Pelister NPs and by 6% in the productive forestlands. By contrast, in GR-Prespa the forest area decreased by 5%, and in AL-Prespa by up to 15%.

Table 2 below shows the forestry area estimates as interpreted from a 2003 Landsat image.¹⁹

¹⁷ KfW 2005. Feasibility Study: Project Preparation and Development of the Trans-boundary Prespa Park Progress Report. Unpublished.

¹⁸ Ibid.

¹⁹ Ibid.

Table 2: Estimate of forest areas in the Prespa Basin in km².

	FYR-Macedonia	Albania	Greece	Total
Prespa Basin	1,012	263	330	1,605
Lake surface	187	47	78	311
Terrestrial surface	825	216	252	1,294
Forests	356	34	75	465
In protected areas	145	34	65	244
Outside protected areas	211		11	222

Data have been derived through interpretation of Landsat images from 2003 at medium resolution.

106. Forest Management – AL The approximately 3,400 hectares of forest in AL-Prespa is comprised of 2,900 ha state owned forest and 500 ha of community-owned forests. During the turmoil of 1990s, extensive illegal felling by commercial interests from outside the area left the once extensive oak and birch forests seriously degraded. With the designation of the Prespa National Park (PNP) the state-owned forest is no longer exploited commercially for timber and active forest management has basically ceased in AL-Prespa until PNP determines how to proceed.

107. Local communities are allowed to obtain firewood and fodder from these protected forests. This is difficult to control because firewood is the main source of heating and cooking fuel for all 5,200 people living in AL-Prespa. There are no other sources as readily available or as cheap as wood. Electricity is erratic and expensive. Solar is too expensive and impractical. Household-level biogas may be viable, but requires pilot testing in Prespa's climate. No replacement for wood fuel is envisioned to be economically feasible in the near future. A reasonable estimate is that local people in AL-Prespa will rely largely upon wood for their heating and cooking needs for another ten years.

108. Annual growth rates of forests in Prespa range from 1.6 m³/ha to 5.4 m³/ha. It can be assumed that the growth rate/ha in AL-Prespa is at the lower end of the range, or approximately 8,500 m³/year (2.5 m³/ha per year x 3,400 ha = 8,500 m³/year). A household of five persons will need approximately 10 m³ of fuel wood/year. Apply this figure to the approximately 1,000 families in AL-Prespa and one can see that about 10,000 m³ of fuel wood/year are needed.

109. This approximate figure illustrates the difficulty with which existing forest cover meets current wood demand. In addition, not only people from inside the Prespa Basin demand fuel wood and there can be high pressure at certain locations. Clearly, the challenge facing forest management in AL-Prespa is how to meet fuel wood and fodder needs and restore forest health.

110. There are encouraging signs. Local villagers have recently formed the "Prespa Forest Users Association." The World Food Program supported a community forestry project with two communities in Liqenas Commune. The project sought to reforest degraded areas and keep out goats, but apparently they have been minimally effective. To control illegal harvesting in the Mikri Prespa area, the forest department is considering installing a new check post on the road.

111. Grazing in AL, GR, and MK-Prespa: Available pastures in the study area are in the range of 15,000 ha for MK-Prespa, 1,800 ha for AL-Prespa, and 6,200 ha in GR-Prespa. The change in livestock numbers within the Prespa Basin differs considerably among the three countries. In MK-Prespa the total number of head is lower than 5,000 and is decreasing. In contrast to this, since 1996, livestock numbers in GR-Prespa have increased by 45% to a total of 8,925 head due to EU subsidies. In AL-Prespa, The total number of livestock decreased by 43% during the last 4 years. There are presently 2,567 sheep and 3,267

goats belonging to people from within the PNP and grazing of livestock from outside the PNP is common.

112. Livestock pressure on forest and pasture areas differs considerably among the three countries. For AL-Prespa, overgrazing of grasslands and erosion are clearly evident and goats are considered to be the primary threat facing forest health. Though livestock numbers decreased, stocking rates are still the highest in the AL-Prespa. In GR-Prespa signs of overgrazing are appearing, but the pressure on grasslands is lower than AL-Prespa, due to lower stocking rates. In MK-Prespa, overgrazing is not the problem; under-grazing is. For the alpine meadows in the NP Galicica, which were traditionally grazed by sheep, an under utilisation is reported and grasslands are succumbing to natural succession.

113. Forest Management – MK. MK-Prespa has an active forest management sector. The MoA Directorate of Forests is the primary management authority for forestry on state lands. The MoA exercises this authority through the development of general/national and special forest management plans, on-site inspections, and issuance of licenses. Actual forest management and commercial harvest of the trees is done by Forest Enterprises.

114. MK-Prespa harbors approximately 24,000 hectares of non-protected forest all managed by the Makedonski Forest Enterprise, with a branch in the municipality of Resen called “Prespadrvo,” which harvests, markets, and conducts reforestation activity. To collect fuelwood on state land, a license must be acquired from the MoA and forest official must accompany the collector.

115. The forest is divided into four management units, for which management plans are developed every 10 years. Currently, new management plans for these units are scheduled for development during the next two years. Forest management in MK-Prespa has, on the whole been successful in maintaining forest cover in MK-Prespa. Indeed, forest cover has actually increased significantly in MK-Prespa during the past seventy years despite the fact that nearly all the people in MK-Prespa rely upon firewood for heating and cooking during the winter months.

116. From an ecosystem management perspective, forest management in MK-Prespa is lacking in several respects. First, forest management is focused primarily upon producing a sustainable supply of timber and firewood for the region; habitat values, watershed management values, and biodiversity enhancement values are not management objectives. There is an emerging awareness of ecosystem-oriented forest management and the importance of adopting related practices, but there is no institutional capacity to develop and apply ecosystem-oriented forest management.

117. Forest Management – GR A forest management plan exists in GR-Prespa; in the context of the operation of the Prespa Management Body and the future establishment of a National Park in GR-Prespa, forest management is expected to be modified to comply with conditions of the Special Environmental Study and integrate more biodiversity conservation objectives and/or practices into forest operations in GR-Prespa, while maintaining a balance with the social and economic dimension of forestry.

118. Summary: The original natural forest ecosystems in the Prespa region consisted of multi-species, multi-age stands. In MK-Prespa, monoculture afforestation has led to the simplification of forest species composition and age structure, reduced forest ecosystem complexity and degraded forest habitats, and disrupted ecological interactions (Stress 5.1). Nesting trees have nearly disappeared for globally threatened species such as the Imperial Eagle and with them the feeding and nesting areas for various types of birds and insects. Monoculture forest stands also lead to a sharp reduction in insect populations, which means a lower density and variety of predatory vertebrates, especially birds.

119. This kind of forest management gives no priority to restoring native forest species diversity, to maximizing age structure within the forest, and to improving forest ecosystem health. Allowable harvest levels are determined without regard to maintaining or rehabilitating natural forest species composition and without regard to impacts on other species. These “production oriented” forest management practices reflect a management bias towards forest engineering and timber production and are the main source of stress on forest ecosystem function in MK-Prespa and GR-Prespa.

120. In AL-Prespa, the main source of stress on forest ecosystem function is much more practical and immediate—at least 5,000 peoples’ dependence on fuelwood and fodder from an already degraded forest. Management capacity within the new PNP is low. The resource base has not been accurately inventoried or monitored, and there are few financial and technical resources, especially for biodiversity and integrated ecosystem management. The underlying issues include: destructive firewood and fodder harvesting; poor grazing practices; low capacity of forest and park staff to work with local people to develop joint solutions to meeting fuel and fodder needs while restoring forest health.

Wastewater management.

121. A primary stress on the Prespa Lake ecosystem from wastewater is eutrophication caused by pollution from organic substances (Stress 6.1). The process of rapid plant growth followed by increased activity by decomposers and a depletion of the oxygen level is called *eutrophication*.

122. Mikri Prespa is regarded as either mesotrophic or meso-oligotrophic²⁰. By contrast, Macro Prespa Lake is a naturally oligotrophic lake (i.e. low in nutrient levels). Its native species are characteristic of oligotrophic conditions and habitats. Grupche²¹ estimated total natural inputs of phosphorus (P) in Macro Prespa are approximately 41 tons per year and an additional 43.5 tones per year from anthropogenic sources, mainly community wastewater and agriculture run-off. This doubles the lake’s P content to approximately 18 mg/m³, a level associated with mesotrophic conditions. Sufficient time sequence data is not available to show escalating P or nitrogen concentrations, but elevated inputs and increased P levels point towards the ongoing eutrophication of Macro Prespa.

123. With respect to municipal waste, the three countries are making progress in reducing this environmental stress on the Prespa Lakes ecosystem though there are still gaps in MK and AL. In MK-Prespa, 55% of municipal wastewater is now treated, up from 0% one year ago. In GR-Prespa a treatment facility has been approved that will treat approximately 95% of the wastewater. In AL-Prespa, 20% of the wastewater will soon be treated, up from 0% one year ago.

124. In Albania, a sewer system with sewage collection and septic system constructed with KfW funds has been operating for the town of Liqenas (Pustec), the commune center and largest town in AL-Prespa, since November 2004. The approximately 4,000 people living in the remaining seven villages have no sewage collection or treatment systems. Individual households sometimes have primitively constructed septic tanks, which do little to reduce impacts on water quality.

125. In MK-Prespa, KfW financial cooperation supported the rehabilitation of the large-scale Ezerani treatment plant and the collection network covering Resen town and Jankovec, Carves Dvor and Ezerani villages and eventually Podmocani and Crncari villages. The facility commenced operations in May 2005, covering approximately 9,353 people, or 55% of the MK-Prespa’s population.

²⁰ Hollis & Stevenson, 1997, Stevenson *et al.*, 1991 (Note: need citations)

²¹ Grupche 2000,

126. None of the other villages in the area have sewage collecting networks and/or treatment plants. In the past, the most appropriate way of handling this problem was the use of household septic tanks. Presently, the number of septic tanks in each village amounts to between 20 and 100. These septic tanks are rather primitive and are not built according to internationally recognized sanitary standards. Besides their simple construction, ground conditions in some villages do not support a normal function of a septic tank (high groundwater level, impermeable soils, etc.). Therefore, there is a real need to demonstrate small scale, sustainable wastewater collection and treatment systems in order to close this gap in small-scale wastewater treatment in both MK and AL Prespa.

127. In MK-Prespa, household detergents are thought to contribute up to 50% of the total phosphorous inputs to the Macro Prespa system. Over 80% of the detergents on-sale in local markets contain phosphates. While the MoEPP has recently passed a regulation banning the sale of detergents with phosphorus, people are unaware of the impact phosphorous detergents have on aquatic ecosystems.

128. In MK-Prespa, most industrial enterprises are too weak financially to take comprehensive steps to reduce their pollution discharges. In the past there was no way under MK law for the environmental authorities to deal effectively with them without shutting them down, which is politically not possible. MoEPP created “integrated pollution prevention permit” procedures to offer industry a phased approach to reducing discharges. These are new and have never been implemented in FYR-Macedonia before.

129. In GR-Prespa, most of the villages have a sewage collection network but no treatment plant. However, the Integrated Rural Development Programme of the Regional Authority of Western Macedonia, GR will fund the consolidation of all wastewater collection networks and the establishment of four units of wastewater treatment using artificial wetlands, which will cover all settlements disposing their effluents in Mikri Prespa, including Lemos and Ag. Germanos. The National Foundation of Rural Research is conducting the technical study for this work with funding from the Local Development Fund.

130. Summary: With respect to agriculture run-off, AL-Prespa currently contributes very little to this problem. There are promising trends in Greece, where bean farmers have recently begun to monitor their crops regularly in order to optimize the use of chemical inputs. MK-Prespa is the largest contributor of agricultural run-off in the Prespa Basin.

131. Standard practice among farmers in the MK-Prespa is to fertilize orchards in Prespa three times during the year – Autumn, early Spring, and late Spring -- regardless of need. Inefficient flood irrigation practices in MK and GR-Prespa also contribute to excessive agrochemical runoff. This is beginning to change in MK-Prespa as farmers see the benefits of investing in drip irrigation. But this process of change and improvement in agricultural practices is hampered because farmers have no access to extension support and so have a poor understanding of crop requirements for irrigation, fertilizer and pesticides.

132. And finally, the absence of long-term, systematic water quality measurements across the Prespa Basin hampers the establishment of ecosystem health targets. All the existing data are derived from limited duration sampling, and the methods of analysis vary according to the agency doing the analysis. The range of sampling methods, sampling strategies and analyses of the samples make it difficult to compare data and draw sound conclusions about trends in water quality parameters (Strategic Action Plan 2002).

Conservation management w/in Prespa Basin

133. AL-Prespa: Conservation Management. The Albanian Assembly established the 13,500 ha Prespa National Park (PNP) in 1999. The entire territory of AL-Prespa is encompassed by the PNP, which extends from the mountain massif of Mali i Thate (part of the same as that of Galicica Mountain in MK) and extends south and east to encompass the Albanian end of Mikri Prespa bordering with Greece.

134. Much of PNP is a former production forest managed by the Directorate of Forests and Pastures (DoFP). The Park is staffed by seven people: the director, the manager and five forest guards. PNP staff capacities reflect the area's forest management history and are not sufficient in number and technical qualification for PA management. Staff have no expertise in wildlife conservation, non-forest habitats, or community participation in PA management. Equipment and infrastructure are also inadequate to the task of modern PA management. As a result, the Park's managers are unable to carry out management activities beyond basic patrolling of the area.

135. This transformation from DoFP lands to PA lands is progressing slowly in PNP. Regulatory questions must be clarified regarding how to give the Protected Area Management Directorate (PAMD) clear management and budgetary authority over park resources. For example: PNP generates a small amount of revenue from the sale of tree harvest and medicinal plant licenses and entrance fees. The new Law on Protected Areas requires that 30% of the revenue go to the state budget, but also allows for 70% to be recycled back into the PA for spending on investments. But this is a practical impossibility because PNP is not able to open a bank account. For this, it is still reliant upon the DoFP.

136. Under the new law, each sectoral institution retains responsibility for its resources within the PA, but must work through the PA management body to administer those resources in accordance with the PA management plan. To do this, the PA will need to cooperate with other management entities (commune authorities, DoFP, DoF, NWC). This will require PNP to develop an effective cross-sectoral and participatory PA committee in order to manage resources effectively within its boundaries. PNP is the only PA in Albania with communities inside its boundaries, which presents an opportunity to develop a model management approach. A government decision issued in April 2005 determines the membership for such PA committees and paves the way for their establishment.

137. In summary, the PNP must be given the legal status to manage its own finances. PA employees must be allowed to have their own identity and status, apart from the DoFP. The PNP needs a strong and effective park management committee, a modern, integrated management plan and staff capacity building. A new, conservation-oriented management plan needs to be developed that expands conservation focus from forests to include other priority aquatic and shoreline habitats and that involves local communities in this effort.

MK-Prespa: Conservation Management:

138. There are four protected areas (PA) designated within MK-Prespa: the national parks of Galicica and Pelister, the strict natural reserve of Ezerani, and the non-gazetted national monument Lake Prespa Park. With respect to PA, the Law on Nature Protection (2004) incorporates IUCN's PA categories into MK law and calls for the application of these categories to the existing system of PA in MK as well as any new areas. Because the current status of PA is based upon old law, all existing PA must be re-authorized and new management bodies and plans developed.

139. The MoEPP has complete authority over all biodiversity and natural resource management in PA through their PA administrations. Local communities have input into PA management through a local representative on the PA management board. This Board has five members (two national government, one local government, two PA staff) and has the legal authority to regulate the activities of the PA through adoption of the management and financial plans and is empowered to develop internal by-laws

for management of the PA. None of the PA in FYR-Macedonia have implemented these provisions of the Law.

140. Galicica National Park Galicica National Park was proclaimed a national park in 1958 in order to protect its natural beauty and important and diverse flora and fauna. The park, situated on a mountain massif between Lake Macro Prespa to the east and Lake Ohrid to the west, includes 22,750 ha of Galicica Mountain. Galicica National Park shares an international border with Albania's Prespa National Park.

141. Pelister National Park The 12,500 ha Pelister National Park is situated to the east of Macro Prespa Lake on Pelister Mountain. Its designation as a national park in 1948 was the former Yugoslav Federation's first such designation. It is a mountainous area characterized by numerous peaks higher than 2,000 m that are dissected by deep valleys. The highest mountain peak is Pelister at 2,601 m. Pelister National Park is separated from Prespa National Forest in Greece by a narrow strip of unprotected forest. Pelister National Park is preparing a new management plan with the help of the Swiss Development Corporation (SDC). The process will involve all relevant stakeholders and include plans for key conservation interventions.

142. The National Parks Galicica and Pelister are the only PA in the trans-boundary Prespa basin with operational management structures. Under the present management regime, the parks function as independent entities with no institutional or financial support from government. This forces the parks to spend a significant amount of time and resources on raising revenues to pay their own way. Proactive conservation receives little to no attention; prevention of illegal activities and the maintenance of timber resources receives limited attention. Essentially, both Parks are more "productive enterprises" rather than conservation areas. Income is mainly derived from the harvest of fuel wood and medicinal plants and/or Molika pinecone in the case of Pelister, which in turn funds a skeleton staff and inadequate equipment and infrastructure. This kind of survival-based management may even be harming biodiversity within the PA, but there are no consistent conservation and monitoring activities to inform this debate.

143. Ezerani Nature Reserve (ENR) The 2,080 ha reserve along the northern shore of Macro Prespa Lake, encompasses shoreline habitats up to the 10 meter depth mark and wet meadow/wetland habitats one kilometer inland. ENR encompasses some of the most important remaining wetland meadow and forest habitat in Prespa and was designated a Ramsar site in 1995 and a strictly protected reserve in 1996.

144. The institutional status of ENR is evolving. The MoEPP is responsible management of the area but is interested in forming a management partnership with local NGOs. The Reserve operates a small information centre in a nearby village and has installed three bird watch towers. An operational budget for the reserve does not exist and community consultations have been inadequate. The only staff are two year-round part-time rangers who patrol the reserve on foot.

145. Prespa Protected Area-Greece (PPA-GR). The terrestrial part of GR-Prespa was designated "Prespa National Forest" in 1974 for the protection of the majority of the catchment area for Mikri and Macro Prespa with a focus on the terrestrial part of GR-Prespa, under the management responsibility of the Forest Directorate of Florina. According to the Special Environmental Study for the area, the limits of the Prespa Protected Area are modified to include the whole catchment and in 2002, the Greek Government declared the whole catchment area of GR-Prespa a protected area, including those parts of Mikri and Macro Prespa in Greek territory. At the same time, the government left it up to a Joint Ministerial Decision (JMD) to zone PPA-GR for different levels of protection and sustainable use. This JMD is being developed currently. This JMD specifies the allowed and/or banned activities by zone within the boundaries of the protected area and acts (even before its formal publication in the Official Journal) as a framework management plan for the PPA.

146. The Administrative Council (or, Board) of the PPA's Management Body has operated since 2003 and is composed of representatives of the Municipality and Prefecture, major Ministries involved, the local environmental NGO, economic groups and scientists representatives of all major governmental, regional and local authorities as well as economic actors and NGOs active in the area. The actual management body for PPA was also legally established in 2003, but not yet funded or made operational. Funding for this has been confirmed by the MoEPP-Greece and this will be done under this project as part of the Greek contribution to the GEF project. The Management Body is responsible, among others, for the application of the normative framework in its area of its jurisdiction. The internal regulations of the Management Body have been recently approved, thus facilitating the full use of considerable allocated funds.

147. The Greek side of the wetland system is also a Wetland of International Importance under the Ramsar Convention, is classified as a Special Protection Area (SPA) under the EU Birds Directive and as Natura 2000 site under the EU Habitats Directive.

148. The Society for the Protection of Prespa (SPP) in cooperation with the Municipality of Prespa also carries out management activities in the Greek protected area, focusing on the Mikri Prespa Lake. The latest activities include regulation of the water level of the lake, bird monitoring and restoration of wet meadows along the Mikri Prespa under an EU-LIFE project. SPP has also worked closely with the Greek Government to establish two additional Information Centres in GR-Prespa, for a total of three centres.

149. *Biodiversity Monitoring and Research.* The MoE/MoEPP in AL/MK respectively are responsible for research and monitoring of biodiversity. However, both Ministries generally lack capacity to do this and may delegate these responsibilities to other organizations, such as PA, or Universities or other Government institutes. Indeed in MK-Prespa, the Institute of Biology in Ohrid and the Institute for Public Health in Bitola have been responsible for monitoring biotic and abiotic parameters in Prespa.

150. Summary: Management Plans for the Prespa region's protected areas are at various stages of preparation and show different approaches and standards. None of the protected areas described above has an approved integrated Management Plan. The existing drafts are merely a description of zones and do not provide benchmarks and indicators for operational management. There is no monitoring program in place or even developed for any of the PA.

151. Moreover, in order to provide efficient conservation for key habitats and species within the Prespa Region, a harmonization among the three countries' management objectives, targeted habitat and species as well as monitoring indicators is also needed. Overall the existing PA management capacity is insufficient in all five of the Prespa's protected areas. These deficiencies are apparent not only in terms of infrastructure, but also information, staff numbers, skills, and equipment.

152. Two primary constraints prevent the five PA from playing a proactive positive role for maintaining ecosystem health. In MK-Prespa, the constraint is the requirement for the PA to self-finance their management activities. This policy virtually guarantees that little conservation work will be done. In AL-Prespa, the constraint is the fact that the PAMD and its PA do not have sufficient legal status to have their own bank accounts and manage their own affairs, still being very much "under the wing" of the DoFP.

Trans-boundary Cooperation in Prespa Basin.

153. In February of 2000, the Prime Ministers of Albania, FYR-Macedonia, and Greece gathered in the village of Aghios Germanos and issued a joint declaration declaring that “ the Prespa Lakes and their surrounding catchment are unique for their geomorphology, their ecological wealth and their biodiversity, which gives the area significant international importance.... The conservation and protection of an ecosystem of such importance not only renders a service to Nature, but it also creates opportunities for the economic development of the adjacent areas that belong to the three countries.” The Declaration declares the Prespa Lakes and their surround catchment as “Prespa Park’ ... the first trans-boundary protected area in South Eastern Europe...”

154. The Declaration also promises “enhanced cooperation among competent authorities in our countries with regard to environmental matters. In this context, joint actions would be considered in order to a) maintain and protect the unique ecological values of the “Prespa Park”, b) prevent and or reverse the causes of its habitat degradation, c) explore appropriate management methods for the sustainable use of the Prespa Lakes water, and d) to spare no efforts so that the “Prespa Park” becomes a model of its kind as well as an additional reference to the peaceful collaboration among our countries”

155. The initiative which led to the Prime Ministers’ Declaration was very top-down and the participation of local stakeholders around the lakes basin in this decision was initially very little. And yet, the declaration successfully laid the foundation for the significant trans-boundary work that has followed.

156. First, the three Ministers of the Environment established the *Prespa Park Coordination Committee* (PPCC) as a non-legal entity whose members are appointed by the three Ministers of Environment. Membership of the PPCC is comprised of the following from each of the three countries: 1 MoE representative, one NGO, and one local government representative and a permanent MedWet observer. Subsequently, the PPCC has met semi-annually since 2001. The PPCC has no budget from the three countries and indeed, the three governments have no legal commitment to support the PPCC, financial or otherwise. PPCC operations so far have been supported by ad hoc funding provided by the Greek Government, as well as occasionally by KfW and GTZ, while the operation of the PPCC Secretariat has been largely supported by WWF-Greece, which has funded the SPP’s hosting of the Secretariat.

157. Second, despite funding problems, the PPCC and its members have moved forward in developing trans-boundary cooperation in the Prespa Basin. The biggest accomplishment of this collaboration was the production in 2002 of a “Strategic Action Plan for the Sustainable Development of the Prespa Park” as a first step in the development of a common vision for the conservation and sustainable development of the Prespa Basin. The Strategic Action Plan was prepared with Greek Government funding. More specifically, the aim of the present Strategic Action Plan is:

- to facilitate, provide and share information with stakeholders;
- to outline the Prespa Park objectives in order to facilitate future discussions, and;
- to describe in the clearest possible way the institutional, economic, management initiatives and procedures that should be taken in order to enable the accomplishment of these objectives.

158. The process of developing the Action Plan involved working groups from each of the three littoral states. The Action Plan was adopted by the PPCC in 2004. Although no formal commitments have been made to the Plan by the three governments or by any funding agencies, PPCC members have been actively pursuing funding for implementation of individual activities called for under the Plan. And, indeed, this GEF project is also a manifestation of the PPCC members’ desire to seek greater international support for trans-boundary conservation in Prespa.

159. Third, there continues to be momentum in improving and strengthening trans-boundary coordination and management of shared resources. A draft Tripartite Agreement on the Protection and

Sustainable Development of the Prespa Park Area is under serious consideration by the three littoral states. This agreement calls for some additional specific steps to strengthen trans-boundary cooperation in the Prespa Lakes Basin. These include establishing the PPCC as a formal legal entity under international law and establishing a water working group to develop a workplan for achieving effective trans-boundary collaboration on water resource management.

160. In January 2005, a project funded by Greek Ministry of Foreign Affairs began to study the interaction between the River Devolli in AL and Lake Mikri Prespa. The project aims to provide a scientific basis to understanding the impacts (hydrological and ecological) of the diversion of the River to the Lake and will identify the measures to address the situation and manage water more effectively in order to meet the irrigation needs of the wider region.

Stakeholder analysis

161. Project Partners and Respective Roles in the Project:

FYR-Macedonia

Partner	Role in Project
1. Ministry of Environment and Physical Planning (MoEPP)	<ul style="list-style-type: none"> • Chair of national oversight committee for project management unit. • Will make Prespa a model for local spatial planning and water use management. • Will make Prespa a model for strengthening national-municipal partnerships for environmental management. • Preparation, drafting and implementation of laws and by-laws on water resources management in close cooperation with, MoAFWE. • Increasing role in environmental and natural resource management, economic development, at the local level. • Will be key play in making municipality a model for local management of environmental resources. • Responsible for management of Ezerani Nature Reserve • Representative of FYR-Macedonia on PPCC.
2. Municipality of Resen	<ul style="list-style-type: none"> • Member of PPCC • Territory of MoR encompasses entire MK-Prespa. • Process of decentralization gives it an increasing role in environmental management and economic development. • Main partner for MoEPP to implement environmental laws at the local level. • Tourism is priority for development in municipality.
3. Farmer Association of Resen	<ul style="list-style-type: none"> • Main stakeholder organization for project's co-funded work with reducing impacts of agriculture on water quality.
4. Ministry of Agriculture, Forestry and Water Economy	<ul style="list-style-type: none"> • Responsible for oversight of forest and fishery management in Prespa.

(MoAFWE)	<ul style="list-style-type: none"> • National policy and development of agricultural production and water resources. • Preparation, drafting and implementation of laws and by-laws on water resources management. • Control, supervision and enforcement of laws and regulations on water resources management.
a) Makedonska Forest Enterprise Prespadrvo (Office in Resen)	<ul style="list-style-type: none"> • Responsible for forest management in MK-Prespa. • Will be the main stakeholder organization for project's work to mainstream diversity conservation objectives into productive forestry practice.
b) Ribomak Fishery Management Enterprise & Fishers Association	<ul style="list-style-type: none"> • Will be the two stakeholder organizations for project's work to mainstream diversity conservation objectives into productive fisheries practice.
5. Ministry of Health – Public Health in Bitola	<ul style="list-style-type: none"> • Responsible for monitoring water quality (abiotic) in Prespa • One of two stakeholder institutions currently responsible for monitoring environmental parameters in MK-Prespa.
6. Institute of Biology - Ohrid	<ul style="list-style-type: none"> • Responsible for monitoring health of aquatic ecosystem (biotic) in Prespa • One of two stakeholder institutions currently responsible for monitoring environmental parameters in MK-Prespa.
7. NGO – Fokus, NGO- Resen	<ul style="list-style-type: none"> • Members of PPCC. • Partner in conservation and awareness work in MK-Prespa.
8. Hotels Europa and Prespa – largest hotels in Prespa Basin; Home-based bed and breakfast development in Brajcino, Dolno Dupen, Ljupojno and Stenje.	<ul style="list-style-type: none"> • The existing tourism facilities in MK-Prespa – will be involved in tourism planning activities under Outcome 4.

Albania

Partner	Role in the Project
1. Ministry of Environment (MoE)	<ul style="list-style-type: none"> • Chair of national oversight committee for project management unit. • Will oversee local environmental action plan in AL-Prespa; • Will make Prespa a model for strengthening national-municipal partnerships for environmental management. • Responsible for approving management plan and management committee for Prespa National Park. • Responsible for protecting trans-boundary lakes environmental quality. • Representative of Albania on PPCC.

a. Regional Environmental Agencies - Korca (REA)	<ul style="list-style-type: none"> • Local implementation – control and enforcement – of laws and by-laws on environmental protection. • Will play key role in strengthening AL-Prespa Commune's environmental management capacity.
2. Ministry of Agriculture and Food (MoAF)	
a) Protected Area Management Directorate.	<ul style="list-style-type: none"> • Administrative home for Prespa National Park. Will play key role in strengthening of Park's management capacity. • Is willing to make PNP a model in terms of involving local communities in PA management and in establishing strong, cross sectoral PA management committee.
b) Directorate of Forestry and Pastures (DoFP)	<ul style="list-style-type: none"> • PNP is reliant upon DoFP for administrative support and most of PNP's staff are still formally affiliated with DoFP. • Will play a key role in reforestation of AL-Prespa areas.
c) Directorate of Fisheries	<ul style="list-style-type: none"> • Responsible for fishery management in AL-Prespa. • Are establishing the OFM in Prespa and will be an important partner in strengthening the OFM's management capacity.
o Organization for Fisheries Management (OFM)	<ul style="list-style-type: none"> • Will be main stakeholder group for project's efforts to improve fishery management and mainstream ecosystem management objectives into productive fishery sector.
3. National Water Council (NWC), River Basin Agency for Semani River Basin.	<ul style="list-style-type: none"> • RBA responsible for Prespa water management. • Will be one of the main agencies involved in preparing policies to conserve Prespa Water quality in the future.
4. Regional Council of Local Government – Korca.	<ul style="list-style-type: none"> • Regional body responsible for coordinating development within AL-Prespa's two Communes: Ligenas and Proger. • Will play an important role in applying Millenium Development Goals to Prespa Region in AL; to promoting and facilitating sustainable development in Prespa region (ecotourism, improved transportation infrastructure, etc..)
5. Commune of Ligenas (CoL) Commune of Proger (CoP)	<ul style="list-style-type: none"> • The two communes whose territory comprises AL-Prespa. • CoL is the main local authority in AL-Prespa and home to 90% of AL-Prespa's residents. • CoL is member of PPCC. • Increasing role in environmental and natural resource management, economic development. • Main partner for MoE to implement environmental laws at the local level. • Responsibilities not clear – evolving. Will be key play in making commune a model for local management of environmental resources.

	<ul style="list-style-type: none"> • Tourism is priority for development in municipality.
NGO – PPNEA.	<ul style="list-style-type: none"> • Member of PPCC. • Conservation partner for work in AL-Prespa.
Tourism - Private homes in Gorica e Vogel and Gollumbuc villages with home-stay facilities. Small hotel in Ligenas.	<ul style="list-style-type: none"> • The existing tourism facilities in AL-Prespa – will be involved in tourism planning activities under Outcome 4.

Greece

Partner	Role in the Project
1. Ministry of Environment Physical Planning and Public Works (MoEPP)	<ul style="list-style-type: none"> • Responsible for approving management plan and management committee for Prespa Protected Area. • Member of and represents Greece on PPCC.
2. NGO - Society for Protection of Prespa (SPP). Note: WWF-Greece is a member group of SPP.	<ul style="list-style-type: none"> • Member of PPCC; Hosting of and participation in PPCC Secretariat. • Main project partner from Greek side for: monitoring, targeted research, public awareness and education, and wetland management. • Important mentoring NGO for underdeveloped NGO community in MK and AL.
3. Municipality of Prespa	<ul style="list-style-type: none"> • Member of PPCC. • Territory of MoP encompasses entire GR-Prespa. • Increasing role in environmental and natural resource management and economic development: Member of the Protected area Management Board, implementing body of infrastructure and other works. • Tourism is priority for development in municipality.
4. Bean farmer production group	<ul style="list-style-type: none"> • Application of integrated pest management kinds of tools are helping this group reduce pesticide use. Will be useful experience for sharing lessons learned across borders.
5. Ministry of Foreign Affairs.	<ul style="list-style-type: none"> • An important role to play in helping to support issues that are important to Greek foreign policy, including building cooperation with AL and MK, water management, and joint monitoring.
Prefecture of Florina	<ul style="list-style-type: none"> • Regional authority responsible for Greek Prespa area. Important stakeholder in strengthening baseline activities in GR-Prespa related to wastewater treatment, economic development, tourism, etc...

Trans-boundary/International

Partner	Role in the Project
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1. Prespa Park Coordination Committee	<ul style="list-style-type: none"> • Will serve as the Project Oversight Committee for this project. • Will be instrumental in furthering the development of trans-boundary cooperation and enabling the project's trans-boundary activities under Outcome 4.
2. MedWet	<ul style="list-style-type: none"> • Partner in sharing lessons learned. • MedWet will provide technical and institutional advice based on its experience in the Mediterranean. • It will transfer the know-how of the Convention on Wetlands (Ramsar, 1971), derived from the lessons learned from many other trans-boundary sites in other parts of the world, and on the related work of its Scientific and Technical Review Panel. • It will make use as required of the specialised knowledge of the research and conservation centres that are members of the MedWet Team²² to cover specific requirements.
KfW Development Bank	<ul style="list-style-type: none"> • Investing in large-scale infrastructure improvements in AL and MK-Prespa areas. Their funding forms an important part of the baseline for improved wastewater treatment and solid waste management. KfW is also an important co-funding partner for this project, supporting the strengthening of PNP and GNP, two of the Prespa Basin's largest protected areas.
SDC	<ul style="list-style-type: none"> • SDC funds are supporting the strengthening of Pelister National Park, one of the PA within the Prespa Basin. SDC funds are also being routed through UNDP-MK to establish effective solid waste management for local-level villages in MK-Prespa that will link-up with the larger regional program being funded by KfW. SDC has also expressed interest and intent to co-fund additional ecosystem restoration and sustainable development activities in the MK-Prespa region.
SIDA	<ul style="list-style-type: none"> • Investing in large-scale infrastructure improvements in both AL-Prespa region. Their funding forms an important part of the baseline for improved solid waste management in the Korce region of Albania.
NATO	<ul style="list-style-type: none"> • Investing in transboundary water balance model study that will contribute directly to the projects trans-boundary diagnostic analysis and strategic action programming process.

PART II: STRATEGY

²² ARPAT in Italy, CEZH/ICN in Portugal, EKBY in Greece, SEHUMED in Spain, and Tour du Valat in France.

Project Rationale and Policy Conformity

Strategic Rationale:

162. Current resource management practice, from water and land-use planning to agriculture, forestry and fisheries are failing to maintain and restore ecosystem health of the trans-boundary Lakes Prespa Basin. Productive sectors fail to incorporate ecosystem health objectives into their daily management practices; protected areas are not able to serve as the refuges of ecosystem health that they should be. Knowledge, experiential, and incentive barriers hamper people's ability to know of, understand, and adopt new practices. Out-dated, inappropriately-scaled land and water use practices hamper the finding among stakeholders of effective, practical solutions. Up to date information on key species and habitats does not exist and modest monitoring of key ecosystem health parameters is not done. As a result, key habitats are being lost or degraded, globally significant species are threatened, and stakeholders are ill-prepared to manage a dynamic, ever-changing aquatic ecosystem like the Prespa lakes.

163. The GEF alternative seeks to catalyse the adoption of ecosystem management practices by stakeholders in the Prespa Basin by mainstreaming ecosystem conservation objectives and considerations into relevant productive sector practices and demonstrating proof of concept by piloting new approaches to mitigate productive sector impacts on the Prespa ecosystem. The GEF Alternative will also strengthen the conservation of significant biological diversity and water quality through improved monitoring, targeted research and enabling protected areas to serve as effective refuges for ecosystem health within the Prespa landscape. Co-funding will operationalize two large protected areas within the Prespa Basin, afforest deforested slopes in Albania, and restore degraded riverine habitats. Co-funding will also contribute to developing appropriately scaled land and water use planning and management, contribute to monitoring and targeted research and replicate small-scale wastewater treatment techniques successfully piloted by GEF.

164. The health of the Prespa Basin ecosystem can only be maintained in the long run through trans-boundary consensus and effective trans-boundary action. At the same time, effective trans-boundary action is only as good as the ability of each littoral country to effect change within their respective national sectors of the Prespa Lakes basin: to change how forests, water, fisheries, and small scale wastewater treatment are managed. This project therefore first seeks to strengthen the capacity of Albania and FYR-Macedonia to manage their key sectors on a more sustainable basis. Second, it seeks to strengthen the trans-boundary baseline to enable real commitments and real resources to be invested in conserving the ecosystem health of the Prespa Lakes Basin.

165. There are three main "stories" to be told with respect to this project's baseline and the resulting strategic rationale.

166. First, with respect to the project's legal baseline, both Albania and FYR-Macedonia are the recipients of ongoing aid from the European Union to revise old laws and in the process adopt the EU's *aquis communautaire*, as they continue down the path to possible EU accession. This ongoing process represents a significant opportunity for this project because, while the laws themselves are receiving much attention, the capacity to implement this new body of law will take years to develop and will require much experience in the field testing and refining new decentralized, participatory and appropriately scaled capacities and policies within both national Ministerial-level institutions and local municipal or communal-level institutions.

167. Second, the decentralization process underway in both Albania and FYR-Macedonia represents a strategic opportunity for this project. In MK and AL, new competencies in the area of environment and natural resource management are being decentralized to the municipal and communal levels, creating a

strategic opportunity for this project to pilot model approaches to decentralized management of biodiversity and natural resources, including new partnerships among local and national stakeholders.

168. Third, the three littoral countries within the Prespa Lakes Basin, Albania, FYR-Macedonia, and Greece – have compiled an impressive record of accomplishment in the past three years in pursuing and developing trans-boundary cooperation within the Prespa Basin. This record is described in the Trans-boundary Baseline Section. The project is designed to build upon that progress by strengthening the existing trans-boundary institution, by supporting pilot trans-boundary targeted research and monitoring, and by applying some of GEF’s best practices for trans-boundary conservation of shared waterbodies, namely, the development of and commitment to a detailed Strategic Action Program.

169. *GEF Operational Program and Strategic Priority Conformity.* The project’s synergistic nature achieves global benefits in two GEF Focal Areas: Biodiversity and International Waters. The project meets GEF eligibility criteria of Operational Program #12 (OP-12): Integrated Ecosystems Management. In line with the OP-12 requirements, the project promotes synergies between focal areas through its Outcomes 1, 2, 4 and 5 and provides global benefits in more than one focal area. The project is also consistent with the GEF’s Biodiversity Priority #2 (BD-2): “Mainstreaming Biodiversity in Productive Sectors” and International Waters Priority #2 (IW-2): “Expand global coverage of foundational capacity building addressing the two key program gaps and support for targeted learning.” Furthermore, there will also be indirect global benefits under the Land Degradation Focal Area, due to the ecosystem restoration/afforestation work included in the project (Outcome 2). Benefits under the Climate Change Focal Area are also expected from the afforestation activities under Outcome 2, but their measurement will depend on the successful establishment of the Clean Development Mechanism process.

170. Because the project is an OP-12 project, its main objective is to catalyse the adoption of ecosystem management practices in the Prespa Lakes Basin that integrate ecological, economic, and social goals in order to achieve two types of benefits: 1) conservation and sustainable use of the globally significant biological diversity of the Prespa Lakes Basin and 2) the conservation and sustainable use of the Prespa Basin watershed and its two Lakes.

171. Because most of the impacts on ecosystem health in the Prespa Basin originate from productive sector activities and productive landscapes, GEF’s SP-2 offers the most efficacious way to achieve this objective by integrating biodiversity conservation into agriculture, forestry, fisheries, and tourism in order to secure national trans-boundary and global environmental benefits.

172. The project focuses its mainstreaming efforts in the particular geographical area delineated by the watershed boundary around the two trans-boundary Prespa Lakes. The project focuses on integrating the consideration of ecosystem health (biological diversity and water quality) into productive activities across this landscape.

CBD Conformity

173. This project is designed to support the primary objectives of the Convention on Biological Diversity (CBD): the conservation of biological diversity, the sustainable-use of its components, and the equitable sharing of the benefits arising out of the utilization of these components. The project has been designed in line with the Guidance and decisions provided to the financial mechanism by the Conference of the Parties to the Convention on Biological Diversity.

CBD Articles	How the Articles of the CBD are supported by project.
Article 6: General Measures for Conservation and Sustainable Use	Supported by integrating conservation and sustainable use of biodiversity into relevant coastal plans and policies.
Article 7: Identification and	Supported through the strengthening of park management and the

Monitoring and Article 8: <i>In-situ</i> Conservation	targeted species and habitat management, research and monitoring program.
Article 10: Sustainable Use of Components of Biological Diversity and Article 11: Incentive Measures.	Supported through the development and demonstration of alternative, sustainable livelihood options that avoid or minimize adverse impacts on biological diversity, providing incentives for sustainable use.
Article 12: Research and Training and Article 17: Exchange of Information.	by promoting targeted research on priority biodiversity in wetlands, providing training in technical and managerial areas, and developing linkages for exchange of information
Article 13	Education and awareness raising is also a project priority.

174. The project fits well with the GEF and UNDP portfolio in the region and will build upon the lessons from on-going initiatives on integrated ecosystem management, international waters and biodiversity. The project particularly benefits from the lessons of the UNDP-GEF MedWetCoast project (Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region). The project will draw lessons from the GEF-financed activities in the Danube river basin, as well as from other GEF-supported IW programmes. The project will cooperate closely with the World Bank-GEF Lake Ohrid Project and the emerging River Drin project. Indeed, the project will be working closely with institutions involved in both projects and this will strengthen collaboration between the two.

175. The project will be part of the IEM-OP12 network for the GEF and will participate in relevant global workshops to facilitate consultation, coordination and collaboration among Implementing Agencies and Executing Agencies. The project will also contribute to and benefit from exchange of lessons and best practices generated by GEF projects addressing wetland biodiversity in Lithuania, Latvia, Slovakia, Poland and other countries in the region through the Wetland Implementers Network initiated by UNDP. In addition, the project will seek to build upon the experiences of other similar initiatives worldwide through the IW:LEARN mechanism. The project will benefit from MedWet's ability to transfer the know-how of the Convention on Wetlands (Ramsar, 1971), derived from the lessons learned from many other trans-boundary sites in other parts of the world, and on the related work of its Technical and Scientific Review Panel (STRP). See the Overview of Relevant Projects, included under Section IV, Part VI.

Project Goal, Objective, Outcomes and Outputs/activities

176. **OVERALL GOAL OF PROJECT:** The conservation and sustainable use of globally significant biological diversity and trans-boundary water resources of the Prespa lakes Basin.

177. **PROJECT OBJECTIVE:** To catalyse the adoption of integrated ecosystem management (IEM) in the trans-boundary Prespa Lakes Basin of FYR-Macedonia, Albania, and Greece to conserve globally significant biodiversity, mitigate pollution of the trans-boundary lakes, and provide a sustainable basis for the Basin's further social and economic development.

OUTCOMES/OUTPUTS/ACTIVITIES:

OUTCOME 1: STAKEHOLDERS STRENGTHEN LEGAL AND REGULATORY ENABLING ENVIRONMENT AND ESTABLISH LAND AND WATER USE MANAGEMENT BASIS FOR MAINTAINING AND RESTORING ECOSYSTEM HEALTH IN THE PRESPA LAKES BASIN.

This outcome is designed to lay the ground work at the national level in the Prespa Basin for ecosystem management – for achieving meaningful sustainable development and conservation results on the ground in each national sector of Prespa. In so doing, this outcome is designed to strengthen the national foundations upon which the ongoing trans-boundary effort is developing.

Output 1.1. Integrated land-use “spatial” plan for MK-Prespa and Local Environmental Action Plan for AL-Prespa. (MoEPP-MK, REC-AL, SPP-GR, GEF)

1.1.1 Developing and applying spatial plan for MK-Prespa and GR-Prespa. In MK, the spatial plan establishes objectives and priorities for land and resource use in a particular geographic and/or administrative entity. Any other strategy, development or plan must be in compliance with it. It will serve as a catalyst for cross-sectoral collaboration in MK-Prespa.

MoEPP co-funding will cover approximately 50% of the cost of the spatial planning process. GEF co-funding will support three things in this spatial planning process: a) integration of ecosystem health maintenance objectives and practices into the spatial planning process²³; b) the strengthening of the participatory process within the Municipality of Resen (MoR) to establish such a plan; and c) the sharing of lessons learned through development of a “How to” handbook and facilitating its adoption by the MoEPP and the national association of municipalities. This ecosystem oriented spatial plan will be a first in MK in what is a new, emerging spatial planning process for the whole country. GEF funding will enable this experience to serve as a national model (see Output 1.2).

In GR-Prespa, SPP and WWF-Greece will be conducting a study for spatial and urban planning for the Municipality of Prespa. This will establish objectives and priorities for land and resource use in within the municipality and will integrate these with the emerging management zones of the protected area in GR-Prespa. GEF funding will also integrate landscape-scale conservation planning done under Outcome 3 for the Prespa Basin into the spatial plan in MK and the LEAP in AL (see below).

1.1.2 Establishing an environmental management framework in AL-Prespa. In AL, the Local Environment Action Plan (LEAP) will serve a similar purpose in that the local government authority develops an LEAP in consultation with the MoE. Once it is approved, the LEAP serves as the umbrella plan with which any other development project or strategy must be in compliance. It too, will serve as a catalyst for cross-sectoral partnership building and as a pilot for how the MoE can apply new responsibilities for protecting surface and ground water resources at the local level. This pilot will feed into activity 1.2, which will refine regulatory guidance in this respect.

Under this activity, REC-AL co-funding will finance the development of a LEAP for AL-Prespa. The LEAP will identify environmental quality targets for key parameters in AL-Prespa. GEF funding will enable Proger and Liqenas Communes to integrate the LEAP with the PNP management plan co-funded by KfW under Outcome 3 by enable park management and community management to discuss shared issues of concern and reach consensus on how to most effectively address them given the Park and the Communes’ overlapping jurisdictions.

Output 1.2 Ecosystem health priorities mainstreamed into productive sector law and regulatory instruments. [GEF]

²³ For example, how can the shoreline/littoral zone of Macro Prespa lake be protected from unsustainable exploitation? GEF funds will facilitate the raising and discussion of these questions during the process.

1.2.1 Mainstream ecosystem health priorities into Water, Agriculture, Forest, and Fishery law in MK and AL. This will entail organizing training workshops for staff from relevant ministries in “best practice” experiences from around the world, where water laws have been amended to incorporate the in-stream flow needs for ecosystem health and fish conservation as legitimate, priority uses under the law. Examples will also be discussed of how forest law has incorporated the maintenance and conservation of multiple ecosystem benefits from forest ecosystems. With respect to agriculture, the project’s input will focus on strengthening the ecosystem health criteria by which pesticides are considered for certification. Staff will then be assisted by legal experts in drafting appropriate provisions for consideration by the respective Ministries.

1.2.2. Strengthen fishery management policy in MK to provide more incentive for local sustainable management of the fishery in MK-Prespa. An assessment of MK’s existing fishery concession policy will be undertaken and recommendations issued for how to reform the law in order to provide incentive for long-term sustainable management of MK-Prespa fishery (as an example), eliminate perverse incentives to overharvest fisheries, enable conservation of native and endemic species of fish, and maximize and encourage local fisher participation in fishery management.

1.2.3. Strengthening appropriately scaled regulatory tools for implementing spatial and land-use, water, and environmental protection laws at the local level. Under this activity stakeholders will develop a best practice/how-to manual for ecosystem-oriented spatial planning and water use planning and management in MK and in AL, a best practice/how-to manual for ecosystem-oriented local environmental action planning. The manuals will be adopted as official planning manual by MoEPP/MoE respectively and applied nation-wide. In addition, workshops will be held by the Regional Council-Korca to facilitate replication of the Prespa LEAP process in other communes of the Korca region. Also under this activity, MoE and MoEPP staff, with the help of project experts will derive from this experience the practical regulations needed for effectively implementing local spatial and water use plans, or in Albania, local environmental action plans.

Output 1.3 Pilot ecosystem-oriented water management at local scale. [MoEPP, SDC, GEF]

1.3.1. MoEPP and its River Basin Authority develop water management plan for MK-Prespa. Three of the Prespa Basin’s four perennial streams are located in MK-Prespa. Three quarters of the Prespa Basin’s population lives in MK-Prespa and more than 75% of the Prespa Basin’s agricultural land is located in MK-Prespa. Clearly, effective, ecosystem-friendly water management in FYR-Macedonia is central to maintaining the ecosystem health of the entire Prespa Basin. Work under this output will produce a model water management plan for MK-Prespa and establish water quality and in-stream flow targets. Work will focus mostly on surface waters and will be coordinated with the NATO-supported trans-boundary hydrological study, which will be monitoring and quantifying water resources in the Prespa Basin (see Outcome 4).

The process will be comprised of the following basic steps: (a) Monitoring/quantification of water resources; (b) Assessment of current water use and discharge and its affect on water quantity and quality; (c) Agreement with stakeholders on water quality, quantity and in-stream flow objectives; and (d) Agreement with stakeholders on program of measures to achieve these objectives.

The primary water management issue facing stakeholders in AL-Prespa is related to Albania’s possible use of Mikri Prespa Lake water to irrigate part of the Devolli River valley. Albanian and Greek experts are currently undertaking an assessment of the Devolli River situation. This work will contribute to the project’s trans-boundary diagnostic work to be done under Outcome 4.

Output 1.4. Capacity for water and watershed management built at municipal and commune level in FYR-Macedonia, Albania and Greece respectively. (GEF and UNDP)

1.4.1. MoEPP and Municipality of Resen establish MK-Prespa Watershed Management Council and MoEPP-GR operationalizes Management Body for Prespa Protected Area. Work under this activity will seek to establish watershed management capacity at the MK-Prespa level by building upon the Water User Association model being applied in other parts of FYR-Macedonia and operationalizing the cross-sectoral management body for GR-Prespa.

The MoR is responsible for the entire territory of MK-Prespa and will serve as the institutional home for collaboration and participatory planning across sectors in MK-Prespa. The Council will be funded and chaired by MoEPP and will be comprised of eleven members: MoEPP/River Basin Management Authority; Mayor of Resen; Forest-Prespa Drvo; MoA – Resen office; Farmers Association for Resen; NGO; Protected Area Manager; Fisherman’s Association for MK-Prespa, Public Water Management Authority-Resen, Ministry of Culture, Transport and Communications, and Ministry of Foreign Affairs. Council members represent the main sectors influencing water quality and ecosystem health. The Council will be an experimental and innovative mechanism designed to integrate ecosystem management practices into emerging water-use management practice. A watershed management expert will work with the Council to develop best practices for implementation of spatial plans at the local level and water management at the appropriate local scale.

The MK-Prespa Watershed Management Council will serve as the National Support and Coordination Group for implementation of the GEF Prespa Project in FYR-Macedonia. GEF financing will support the first three years of the Council’s operations in order to demonstrate the value of this kind of coordination, with an important milestone for project implementation coming in year four, when the MoEPP assumes responsibility for supporting the Council’s semi-annual meetings.

The responsibility for cross-sectoral resource management in Greek Micro Prespa lies with the Prespa Park Management Body. In this sense, the Prespa Management Body will serve as the cross-sectoral coordinating body for the GEF project in GR-Prespa. See Activity 3.6 for more detail on MoEPP’s plans to operationalize the Prespa Park in Greece.

1.4.2. Operationalize PNP-Management Committee’s cross-sectoral coordination capacity. In AL-Prespa the PNP Management Committee (PNP-MC) is mandated to represent relevant sectors in its composition and approach and indeed this mandate is strengthened by the Law on Trans-boundary Lakes, which also calls for a cross-sectoral lake administration. Work under this activity will seek to operationalize the PNP-MC’s capacity.

In Albania, the PNP-MC will play this role. The committee’s membership will be comprised of at least seven members: PNP Director, Protected Area Management Directorate, MoE, Commune of Liqenas, Commune of Proger, Regional Council of Korca, and a local NGO. GEF funds will support the meeting and capacity building costs of enabling the management committee to implement the LEAP and the WMP and tie its objectives with those of the PNP management priorities to be elaborated by KfW-funded activities (see Output 3.4). This will include one full-time position at the local municipal level to serve as the committee’s executive secretary.

The PNP-MC will serve as the National Support and Coordination Group for implementation of the GEF Prespa Project in Albania. GEF financing will support the first three years of the PNP-MC operations in order to demonstrate the value of this kind of coordination, with an important milestone for project implementation coming in year four, when the GoA assumes responsibility for supporting

the PNP-MC's semi-annual meetings. This support will be coordinated closely with KfW supported work in PNP.

1.4.3. Train key staff in underlying principles and best practices watershed management through workshops, study tours, and other educational activities. The restoration of aquatic ecosystem health depends on ability of the responsible management entities and stakeholder groups to comprehend the roles and significance of landscape elements in maintaining water quality and biodiversity.

Under this activity key staff from the two committees above, local stakeholder groups and local media will be trained in crucial role watersheds play in maintaining water quality and biodiversity, particularly riparian and littoral zones. The workshop(s) will concentrate on an overview of the key functions of stream corridors and shoreline/littoral zones in terms of habitat, conduit, filter or barrier, source and sink and their alluvium – biotopes (riparian vegetation, reedbeds, and wet meadows) whose value often unrecognized by responsible authorities.

Training for committee members will also include assisting local government in understanding and effectively addressing their newly decentralized environmental management obligations.

Output 1.5 Piloting flexible, phased pollution reduction techniques and the use of incentives strengthens enforcement of and compliance with environmental laws protecting ecosystem health. (UNDP-MK, MoEPP, GEF)

1.5.1. Pilot enforcement of integrated pollution prevention permitting. The MoEPP has agreed to make the MoR a pilot area for the flexible integrated pollution prevention permits “B”, a new more flexible program to support industry in their ability to comply with new pollution prevention requirements. MoEPP will assign an environmental enforcement officer to this task in MoR. GEF co-funding will enable MoEPP staff to develop standards for ecosystem health and utilize basic measurement devices to prove a problem exists. GEF co-funding will also facilitate the development of new regulations for implementing these permits based upon this experience in MoR, enabling wide-scale replication of this innovative enforcement technique.

In AL-Prespa, though there is no industry, there is a need for stronger environmental enforcement is there. To do this, the link among the Regional Environmental Agency based in Korca and the Communes of Liqenas and Proger will be strengthened. The project will help bring the REA and the Commune authorities together whereby the Commune will provide one staff member for training and the REA will train that person in basic environmental enforcement practices for pollution and erosion control. UNDP and REA funding will support this activity. GEF co-funding will enable project staff to support this training and incorporate ecosystem health standards into local enforcement guidelines.

1.5.2. Utilize incentives to strengthen enforcement of phosphorous-free detergent and pesticide use regulations. Work will organize public contests within the MK-Prespa to encourage the use of phosphate-free detergents by individual households. Eco-awareness contests will be announced on the radio with large boxes of phosphate-free detergent offered as the prizes. Similar to this, a green label will be developed by the Municipality of Resen and Commune of Liqenas. Contests will be organized among farmers for the most eco-friendly farm in terms of lowest use of approved pesticides, reduced water usage, and maintaining the integrity of riparian corridors. Winners will receive the green certification from the Municipality or Commune and prizes such as an integrated pest management how-to book, ecosystem-friendly pesticides and/or drip irrigation assessment.

OUTCOME 2: STAKEHOLDERS MODIFY PRODUCTIVE SECTOR RESOURCE MANAGEMENT PRACTICES TO REDUCE PESTICIDE INPUTS, INCREASE HABITAT HETEROGENEITY, AND IMPROVE THE STATUS OF TARGET SPECIES AND COMMUNITIES WITHIN THE NATIONAL SECTORS OF THE PRESPA BASIN.

Output 2.1. Reduced environmental impacts of agriculture in the AL and MK Prespa (UNDP, UNDP/SDC, GEF)

Activity 2.1.1. Strengthen farmers' ability to minimize pesticide and fertilizer use and agricultural runoff. Preparatory analyses revealed certain barriers preventing farmers from applying new more economical and more environmentally friendly techniques. Work under this output is designed to reduce environmental impacts of agriculture in the MK and AL-Prespa by improving farmers' abilities to apply pesticides sparingly or not at all and irrigate to maximize plant and crop health and minimize agricultural run off.

- ⇒ Strengthening the capacity of growers associations and agricultural extension services to better assess and provide for local growers needs, including improving local growers' capacity to apply integrated pest management practices.
- ⇒ Strengthening the capacity of farmers to monitor agrochemical and water usage by demonstrating the use of simple techniques and equipment to do so.
- ⇒ Introducing improved cultivation techniques to minimize erosion and introducing drought resistant strains of grapes and other crops to AL-Prespa.
- ⇒ Introducing mechanisms for improved trans-boundary cooperation and transfer of best practices, including selected cross border best practice pilot projects implemented.
- ⇒ Providing support for a regional farmers group network.

GEF co-funding will help share experiences across borders in reducing agricultural impacts on water quality, drawing upon emerging experiences within the Basin itself, including the experience of bean farmers in GR-Prespa in applying integrated pest management practices to bean farming and related EU requirements and the experience of apple farmers in MK-Prespa in shifting from flood irrigation to drip irrigation. Using this experience, make agricultural targets for the Prespa basin as a whole.

Activity 2.1.2. Reduce solid waste inputs from agriculture to streams in MK-Prespa. Under this activity, work will focus on two things: a) changing the way farmers dispose of solid waste, especially used pesticide containers and b) changing the way farmers dispose of excess and/or rotten apples. With respect to point (a), UNDP-SDC co-funded solid waste management in MK-Prespa will work village associations and Resen Municipality to establish a sustainable solid waste solid waste collection and transfer system. GEF financing will help to support this focus on re-directing the pesticide container waste stream to the solid waste management system being established by SDC and away from the most convenient dumping ground currently: the Golema Reka (river). This will include working with farmers associations in MK-Prespa to identify convenient solid waste transfer sites for farm waste with an emphasis on pesticide and fertilizer containers. Caretakers will be hired for these sites to maintain them and keep them operational in cooperation with the solid waste management authorities. With respect to point (b), GEF funds will support the composting of excess apples will be demonstrated in up

to three locations, with participating farmers given access to the resulting fertilizer for the next growing season. An economic feasibility analysis will be conducted in cooperation with the farmers association regarding the possible business opportunity associated with composting apples and selling fertilizer.

Output 2.2 Forest managed for native species composition and forest stand heterogeneity in AL and MK Prespa. (GEF, KfW)

2.2.1. Model forest management plans developed in MK and AL with increased transparency and level of public participation. New forest management plans are scheduled to be developed for nearly all of the productive and protected forests of MK by PrespaDrvo and AL-Prespa with KfW support during the next five years. This activity capitalizes on this strategic opportunity by demonstrating ecosystem-oriented forest management planning in one forest unit in MK. In Albania's Prespa National Park, KfW supported forest management planning will develop recommendations as part of the Prespa National Park management plan (Output 3.4).

GR-Prespa: with the operationalization of the protected area in GR-Prespa and its management body, forest management will be modified to comply with conditions of the new protected area and integrate more biodiversity conservation objectives and/or practices into forest operations, while maintaining a balance with the social and economic dimension of forestry. GEF funds will be utilized to help stakeholders in all three countries share lessons in ecosystem-oriented forest management across boundaries.

2.2.2. Pilot areas demonstrate improved management of forest to maximize species composition, age structure of forest stands, and diversity of species present in the forest. Under this activity, GEF funds would help Prespa Drvo in MK pilot ecosystem-oriented forest management practices in two areas of approximately 100-200 ha. In AL, the project will coordinate closely with KfW supported forestry activities to ensure incremental GEF support in demonstrating ecosystem-oriented forest management. The pilot sites will be managed to maximize tree species composition, age structure, and a diversity of habitats. If required to initiate regeneration of this basic structure, the project will plant, maintain and protect vulnerable or rare species in pilot sites. With a greater diversity of understory species, there will be more positive impacts for ecosystem function, with positive consequences for biodiversity, and water flow and quality.

New silvicultural techniques will be introduced to forest managers in MK and AL-Prespa in coordination with KfW supported training. Training will focus on the understanding of the development of natural forest structure, the role of disturbance, both natural and man-made in forest change, and use of this knowledge in forest management. The training will focus on helping foresters understand simple silvicultural techniques and develop an understanding of how to support natural forest structure development.

Forest managers will be trained in how to apply the principles of forest stand dynamics to develop forests of natural age structures and in how to determine the age structure of a forest stand. Training will also provide forest managers with methods to evaluate economic and ecological trade-offs between alternate management approaches. The project will be designed, implemented and presented so that will be replicated in other forest units.

Output 2.3. Restoration/reforestation of degraded forest in Albanian Prespa National Park. (KfW)
Work under this output will be co-funded by KfW and will be organized under the following major activities:

2.3.1. Enable co-financing under the Clean Development Mechanism for afforestation activities.

- Identify selling opportunities for carbon credits.
- Elaborate and implement mechanisms for the management of a fund structure to compensate local users for non-utilization and participation in afforestation” on community level.

2.3.2. Establish wood energy plantation in the buffer zone of NP Prespa (Mali i Thate Mountain)

- Identify suitable sites for wood energy plantations and elaborate a treatment scheme and management plans for such plantations.
- Improve infrastructure, equipment and capacities for afforestation

2.3.3. Support sustainable supply of household energy.

- Analyse national and regional strategy for energy supply.
- Assess present and future demand for fuel wood and feasibility for alternative energy (biomass and more efficient utilisation of fuel wood.
- Elaborate concept for production and marketing of fuel wood.

2.3.4. Improvement of community forest and pasture management.

- Identify “set aside” areas for the support of community forestry and elaborate and implement mechanisms for management of set aside areas.

2.3.5. Reduction of firewood consumption in Albanian Prespa. (GEF/SGP-Albania)

GEF Small Grants Program will pilot more efficient wood burning stoves for residents of AL-Prespa. An important part of this pilot will be to assess the feasibility of subsidizing an appropriate efficient stove design to enable local people to adopt them more readily. The activity will subsidize the stove’s purchase price for 100 households so the cost is no more than the average cost of an inefficient stove today (approximately 100 €). If the pilot is successful, discussions will be held with other partners, including KfW, regarding the scaling up of the subsidy up to cover all of the approximately 1,000 households in Prespa.

Output 2.4 Appropriate small-scale wastewater treatment facilities measurably reduce eutrophying inputs to Lakes Prespa – (MoResen, UNDP-AL, GEF)

2.4.1 Conduct presentations and study tours to improve the understanding of decentralized wastewater treatment options among municipalities. This activity would overcome a significant barrier to the adoption of small-scale wastewater management approaches in MK and AL-Prespa – the lack of knowledge and experience with such approaches. Under this activity, the project team will work with a targeted group of officials from the Municipality of Resen in MK and the two Communes and the Regional Council of Korca in AL.

An introductory workshop will provide the group with a foundation of information and insights regarding decentralized wastewater treatment options, upon which further information will be added by way of a study tour within the region. The study tour will include examples of both traditional and innovative small scale decentralized wastewater treatment practices including wetland-based treatment. Trainers will be both experts and practitioners.

2.4.2. Improve compliance with existing wastewater laws by creating contests and giving awards for best practices. In both MK and AL, officials will conduct a contest to draw attention to environmentally friendly waste management practices. The contest will be advertised through local media and schools and large boxes of environment-friendly laundry detergent offered as prizes. These

kinds of contests have been successful in other parts of Eastern Europe in providing the right incentive to change population behavior and attitudes towards the environment.

2.4.3. Building upon the improved understanding of environment-friendly wastewater treatment options, GEF funds will pilot small scale wastewater treatment in MK and AL Prespa to demonstrate their feasibility. The following are the demonstrations envisioned:

AL-Prespa: ADF funded wastewater treatment system was just completed for the village of Ligenas, the commune center for AL-Prespa. Remaining without treatment are seven villages (total population 4,000 people) in AL-Prespa. GEF will fund the demonstration of small-scale wastewater treatment system in the village of Gorica, with approximately 500 people. The village is located just on the shore of Macro Prespa lake near some important fish spawning habitat.

MK-Prespa: The recently completed large-scale Ezerani wastewater treatment plant treats water from 55% of the MK-Prespa's population. However, still within MK-Prespa are eight thousand people in over thirty villages ranging in size from 12 people to 500 people that have no wastewater treatment systems. GEF funding will demonstrate one small bio lagoon wastewater treatment system with wetland-based tertiary treatment in the village of Nakolec near the mouth of the Brajcinska River, a priority aquatic system in MK-Prespa and home to an endemic species of trout. Local people in the community are committed to improving wastewater management. As a part of both demonstration activities, a measurable indicator related to nutrient loads in both rivers will be specified and monitored for impact.

2.4.4. Replicate decentralized wastewater treatment in remaining villages. In MK, the Municipality of Resen is committed to replicating this small-scale wastewater treatment experience in at least two other villages around MK-Prespa using funding through the European Agency for Reconstruction, CARDS, and co-funding contributions from local communities.

These demonstrations will identify best practices and lessons learned, synthesize them and disseminate them. These will be shared with organizations that have the mandate and capacity to replicate them in watersheds throughout the MK and AL Prespa. Ninety percent of all villages in MK and AL-Prespa are under 1,000 people, providing a significant potential for replication.

In GR-Prespa, Government has provided funding for the preparation of the final technical study to construct a wastewater treatment facility for 95% of the population in GR-Prespa. Funding for constructing the facilities is likely to come from the Integrated Rural Development Plan of the Regional Authority of Western Macedonia (EU Rural Development Fund and national funds).

Output 2.5 Strengthened civil society partners for ecosystem-oriented fishery management in AL and MK Prespa. (AL-DoF, UNDP-MK, GEF)

2.5.1. Operationalizing the Organization for Fishery Management in AL-Prespa and the MK-Prespa Fishers Association. In AL-Prespa, activities will be focused upon operationalizing the capacity of the newly formed Organization for Fishery Management to apply basic fishery management and conservation practices. In MK-Prespa, the capacity of the fishermen themselves will be strengthened to contribute to the management and conservation of the fishery by establishing and operationalizing the MK-Prespa Fishermen's Association (PFA).

OFM and PFA members will formulate their own fishery management plan for AL and MK-Prespa respectively. They will identify priority habitats for native fish in AL and MK-Prespa waters. They will, together with the input of a fisheries expert, establish harvest limits and habitat set-asides and

other management tools for priority species that emphasize not only sustainable fish production, but also the maintenance of the diversity of fish species and the conservation of their priority habitats. Development of management regulations in collaboration with fisher folk to conserve priority species and their habitats. Basic equipment and training will be provided to the OFM and PFA for conducting fish management, enforcement and monitoring activities. The capacity of the Directorate of Fisheries in Korca and the MoA in Resen to support and facilitate community-based management will also be strengthened through workshops and guest lectures.

Working with leaders in the fishing community, the project will provide training in association development and management. Training will be designed to build capacity at a measured pace. Fishers will be trained in the importance of collecting basic data over long time periods to support management aquatic ecosystem health and the conservation of the natural diversity of fish and other species. Work will focus on helping the association help their members through the introduction of sustainable fishing practices, joint marketing efforts so that the association becomes a valuable asset to fishermen, who are in turn willing to fund its basic operating costs. The association will also become a key partner in monitoring the health of the fishery and conserving priority fish habitats.

Output 2.6. A marketplace to foster the knowledge, goods and services of a conservation economy. (UNDP, GEF)

2.6.1 Natural capital resource center helps stakeholders overcome knowledge and information barriers. Unsustainable agricultural, fisheries, water, and forestry management practices underly some of the primary stresses on the ecosystem health of the Prespa Basin. Activities below are designed to enable stakeholders to recognize and begin to realize real value in natural capital, strengthening the link between sustainable use and conservation. Under this activity, a modest “natural capital center” will be established in Liqenas village and in Resen town in AL and MK-Prespa. The center will serve as a hub for information and education activities, seminars and workshops. The center will have two primary purposes: 1) to serve as a marketplace of knowledge regarding the economic value and the goods and services of a conservation economy; and 2) to serve as a visitor information center (See Output 4.3).

It will raise the profile of these issues among local economic actors and decision makers, development planning and financing, and enable stakeholders to overcome the knowledge barriers that hamper the development of a conservation economy in Prespa. The center will enable local entrepreneurs to access information on how to participate in various international fora, organic agriculture, international ecotourism trade networks, and sustainable forestry and fishery product buyers groups. It would also provide “how to” reference materials with respect to developing ecotourism enterprises, receiving organic certification, and forest products certification, and organize workshops topics like:

- a) Analysis of market demand and barriers/opportunities for entry;
- b) Growing and marketing organic food and animal products for the local and European market; expert advice on organic certification, value adding and marketing.
- c) Eco-tourism’s potential value and how to develop it (See Output 4.5 for detail).

2.6.2: Conduct economic analyses of the full value of protected areas, and of all ecosystem services in Prespa. These easy to understand economic assessments would be then presented in public workshops held at the natural capital center, and in other fora and through the press to help a broad range of stakeholders to begin recognizing the full value of these resources.

OUTCOME 3: Stakeholders conserve priority biological diversity across the Prespa Basin and make key protected areas in Prespa Basin (PNP, GNP, ENR, and PPA-GR)²⁴ fully operational.

Output 3.1: Monitoring of ecosystem health (biotic and abiotic) parameters strengthens information baseline for adaptive management in all three littoral states. (GEF)

3.1.1. Achieve consensus on the design of a trans-boundary basin-wide ecosystem monitoring system.

The responsibility for the long-term operation of the monitoring system lies with the Ministries of Environment in all three littoral states. However, their capacity for monitoring on the ground is limited. Work under this activity will establish the Prespa monitoring and conservation working group (MCWG) to develop the most appropriate, practical and financially sustainable monitoring structure for GR, MK and AL-Prespa. An independent scientific organization will play an important role in catalyzing this process and helping to ensure that the work builds upon best practices world-wide; the Greek NGO SPP will play an important role in ensure work complements that which is already underway in GR-Prespa.

The MCWG will be comprised of representatives of the primary stakeholders institutions in FYR-Macedonia, Albania and Greece. In MK-Prespa, this will include: the MoEPP, the Hydro-biological Institute-Ohrid, the Public Health Institute-Bitola, the Department of Microbiology in Ohrid, the University of Skopje and the NGO sector of MK-Prespa. In AL-Prespa, this will include: MoE, PNP, the Academy of Sciences in Tirana, and the NGO sector of AL-Prespa. In GR-Prespa, this will include MoEPP, the Prespa Management Body, and SPP. Trans-boundary members will include MedWet. Main steps to be taken:

- a) Establish law and policy context for monitoring, including relevant EU, national law, international agreements and standards on trans-boundary waters and protected areas;
- b) Recommend how to strengthen the existing monitoring capacity in AL and MK while enabling effective on-the-ground monitoring in the Prespa region.
- c) Specify the abiotic and biotic values in need of monitoring, including the detailed parameters;
- d) Reach consensus on the methods and techniques to be used and the equipment needed;
- e) Estimate the related costs for a pilot application for selected parameters, and for a future full-size implementation of the system.

Consensus will be marked by a cooperative agreement negotiated and agreed on a consensus basis by the working group and endorsed by the PPCC.

3.1.2. Design and establish participatory field survey protocols and standardized field survey data sheets to facilitate cross-boundary comparison of data analysis.

Under this activity, project resources will enable a working group of no more than nine qualified experts from the three countries to devise a survey, data recording, and record keeping methodology that is standardized, low cost, participatory and that strengthens local capacity. This will be important if data are to be comparable across boundaries. As a long-term capacity building measure, project resources will also serve to strengthen research and information exchange partnerships among FYR-Macedonian, Albanian and Greek institutions and foreign academic and non-profit research institutions.

3.1.3. A pilot application of the monitoring system is essential to demonstrate, test and fine-tune the methods and the equipment prescribed by the study; assessment of the training and capacity needs; and a preliminary assessment of the means of analyzing and interpreting the monitoring data. The

(PNP) Prespa National Park; (GNP) Galicica National Park; (ENR) Ezerani Nature Reserve; Prespa Protected Area –Greece (PPA-GR)

selected parameters and/ or ecosystems to be monitored, as well as the duration of the pilot application will depend on the findings of the study and the priorities established, the derived monitoring protocols. The pilot application will include manual samplings by trained staff in all three countries, provision of other monitoring equipment and application of related monitoring protocols. With clear agreement on institutional responsibility, the pilot application will include installation of automatic monitoring equipment.

Trilateral meetings will be organized during the phase of pilot application, with well-prepared background papers and carefully focused agendas in order to reach specific decisions regarding appropriate coordination, division of responsibilities and future forms of collaboration among the three littoral states.

Under this pilot, stakeholders will conduct biodiversity surveys and modest targeted research. To supplement the existing information baseline, ground-truthing surveys and assessments will be planned and conducted in priority areas based upon an analysis of best available information and imagery in order to establish the basis for ongoing survey, research and monitoring.

Field surveys of priority species, habitats, and environmental parameters will be conducted over the lifetime of the project to build on the information baseline. Types of surveys will include:

- a) Distribution/location, number and condition of priority species;
- b) Water quality in designated sampling sites;
- c) Priority terrestrial & aquatic habitat condition and extent.

Data will be compiled in standardized map and report formats and the survey methodology will follow recommended best practices and accepted European standards. Surveys will be designed to be as participatory and educational as possible. For example, resource-use assessments could involve youth organizations and/or NGOs to help map the boundaries of forest use in priority habitat areas.

3.1.4. Upgrade information management and geographic information system (GIS). Good, basic data management is crucial to an institution's ability to access and use the information to inform decision-making processes. Under this activity, GEF resources will support stakeholders in standardizing data management in MoEPP and MoE, incrementally upgrading existing databases and GIS software, and ensuring that they are adequate to manage data gathered by survey and monitoring efforts and are compatible with the international European database. The upgrade will establish the GIS capability and make data accessible remotely via the internet. This will promote the use of the data by decision makers and planners across sectors, including the private sector.

3.1.5. Training and capacity-building for environmental monitoring in Albania and the FYR of Macedonia. There is a distinct lack of capacity for monitoring of biotic parameters - in the local or regional public bodies responsible for protected area, water, and environmental management in AL and MK Prespa. This makes this element crucial for the success of the project and its future sustainability. To minimize recurrent costs and maximize the potential for local stakeholders to contribute, the training will focus to the extent possible upon local organizations or university students, wherever feasible, in the monitoring of key indicators of ecosystem health, species condition, number, and location. Training will be carried out by staff from Society for the Protection of Prespa (Greece), the Tour du Valat (France) and other experts in relevant disciplines.

3.1.6. Targeted research of priority species of birds and fish also will be conducted to improve understanding of ecosystem structure and function and species ecology (e.g. habitat needs, movement and feeding patterns,). This kind of targeted research will more clearly define the conservation landscape in the Prespa Basin. The surveys will be designed and conducted in a way that is

sustainable in the FYR-Macedonian and Albanian contexts and in particular that involves and supports promising young university and graduate level students in conducting field research. Research priorities will be determined by the working group established under activity 3.1.1, but will include the impact of one or more exotic fish species on native species and aquatic ecosystem health.

Output 3.2 Landscape-scale conservation planning and action across tri-national Prespa Basin.

3.2.1. Define Conservation Landscape of Prespa Basin. Under this activity the MCWG will develop a trans-boundary biodiversity conservation plan for Prespa Basin. Work under this activity will collaborate closely with and be informed by the work under Output 3.1. The results of this activity will feed into the planning work in Outcome 1.

Relevant information on specific habitats and areas of conservation importance (e.g. priority habitats, species assemblages, locations of important ecological processes, and so on) will be mapped in a participatory process with resource stakeholders. Applying the landscape species approach²⁵, this conservation plan will define the “conservation landscape” in the Prespa Basin. The biological requirements of priority species and plant or animal communities (feeding, nesting, home range) will be overlaid on landscape maps in order to identify key habitats (feeding areas, nesting sites) supporting these species and particularly their placements within the landscape. For example, the priority habitats of nesting bird populations will be identified and mapped – as will habitats providing services such as erosion control. Landscape-scale biodiversity conservation priorities will then be compared to the corresponding human landscape (land-use type and intensity, etc.) using GIS. In addition, experts will consider the importance of ephemeral streams in relation to water quality, flow and biodiversity.

An important part of this activity will to train students, NGOs, and Government staff in biodiversity conservation planning. Based on this process of documenting and mapping information, stakeholders will learn to apply landscape ecology principles to define the ecological needs and specify aquatic and terrestrial habitats and species for conservation. Work under this output will coordinate closely with conservation planning to be undertaken with KfW support in AL-Prespa National Park.

Output 3.3: Restoration of the Golema Reka (SDC, GEF)

3.3.1. Formulate management and restoration plan for the Golema Reka sub-watershed and disseminate among key decision makers within the MoR, MoEPP. This activity will focus on how to shift the status of the Golema Reka from “impacted” to “sensitive” in terms of their biological communities and to improve the watersheds’ natural ability to clean water. Planning objectives will include: removal of solid waste from the riparian corridor; restoration of stream habitat and channel morphology; augmentation of riparian cover; protection of stream substrate and enabling of recolonization by native aquatic community.

With an eye directly on the global benefit of improved trans-boundary water quality, the planning process will consider how to enhance the mechanisms in the landscape to filter water with emphasis on meanders, wetlands, riparian corridors and ponds, and develop the most effective solutions for implementation in a model area. The project team will assess the condition of stream corridors and wetland areas within the project area, analyze landscape capacity to retain and filter water focusing on stream corridors, wetlands and ponds, and develop most effective solutions for implementation in a model area.

The analysis will involve mapping and evaluating the state of landscape elements important for water

²⁵ Sanderson, E.W. et. al. 2002. Landscape and Urban Planning. 58 (2002)41-56.

retention (i.e. meanders, wetlands, riparian corridors and ponds) and will serve as the basis for choosing demonstration “proof-of-concept” sites. The analysis will be completed by year one. The MoR and MoEPP will approve the final plans by middle of year 2.

3.3.2 Design and implement restoration of 10 km of stream corridor and wetland elements in the Golema Reka watershed For organizations to change long-standing assumptions, beliefs and practices, a catalyst beyond simply training and awareness raising is needed to overcome inertia. Under this activity a pilot restoration initiative on the Golema Reka will demonstrate proof-of-concept in regard to stream corridor and wetland restoration.

Output 3.4 PNP and GNP management capacity are strengthened and the parks fully operational. (KfW)

3.4.1. Formulate complementary and compatible management plans and monitoring systems for Prespa National Park and Galicica National Park. Identify important habitat and develop conservation objectives and indicators, zone the PA for land use and develop indicators for management.

3.4.2. Strengthen management and operational capacity of PNP and GNP. Stakeholders will improve infrastructure of parks by delimiting borders with GPS, providing equipment for monitoring and communication as well as vehicles and staff equipment. Park management institutional capacity will be strengthened by clarifying responsibilities between Ministry of Environment and other governmental institutions; Elaborating operational plans and budget; and Creation of income sources to cover conservation costs.

3.4.3. Pilot priority management activities and economic incentives for sustainable use. This will include:

- Rehabilitation of forests (esp. update of inventory and management plan); Management of alpine meadows pastures; and protection of habitat for significant species.
- Community forestry; Pasture and fodder management; Harvesting of non-timber products; Fishery management; and Tourism.

GEF will fund the sharing of lessons learned from KfW funded work on conservation and management of medicinal plants in the national parks with productive forest areas.

Output 3.5. Ezerani Nature Reserve (ENR) is strengthened and fully operational. (GEF)

3.5.1. Prepare and submit the documents required for reauthorization of ENR. The MoEPP will prepare and submit the documents required by the new Law on Nature Protection for the designation of ENR as a national level protected area and legal gazetting of the area. Once ENR is authorized under the new Law, the MoEPP will be able to provide a budget to support management and conservation activities in the Reserve and thus sustain PA management beyond the project’s closure.

3.5.2. Establish ENR Management Committee and prepare and adopt an integrated management plan for the ENR. Under this activity, the MoEPP will form a management committee comprised of stakeholders from neighboring villages, the MoR, the MoEPP, and NGOs. GEF funds will support the development of a modern, participatory management plan for the ENR. To facilitate the planning process, stakeholders will apply questions adapted from the World Commission on Protected Areas’

Assessment Framework to the development of a management plan for ENR²⁶. The development of ENR's management plan will be a participatory, open process that will mobilize community involvement and improve relations with neighboring villagers and fishermen.

3.5.3 Strengthen field conservation capacity of Ezerani Nature Reserve. The MoEPP will establish, staff, and finance the management body for ENR beginning in year two of the project. This will be an important early milestone in the project's implementation. ENR management will be responsible for the development and implementation of the conservation management plan for the area. GEF funds will cover the costs of short-term expert input during the life of the project.

Local peoples' knowledge of the PA and their attitudes towards it will affect the reserve's ability to fulfill its purpose. This activity will focus education and awareness raising efforts on school children. The project will build a youth constituency for ENR by enabling local school children to come to the Reserve to learn about their lake environment.

Short-term, in-country training programs in conservation biology, law & policy enforcement, PA management, and data management for new ENR staff will be conducted. Effective cooperation between the Park and resource users is crucial to the success of the project. This activity will also seek to improve ENR management capacity to utilize community-based resource management as a tool. Training will focus on developing the ability of Park staff to interact and build relationships with local stakeholders and community leaders. It will require new ways of thinking broadly and cross-sectorally, including harmonizing local benefits with biodiversity conservation schemes.

3.5.4. Establish adequate equipment and facilities and the ability to maintain them. Under this activity, the basic infrastructure for the management of the ENR will be established, including park premises, equipment, vehicles, and signage. GEF co-funding will support the renovation of an old building, the purchase of office equipment, establishment of the park's modest infrastructure, transport capacity, field monitoring and survey program and equipment for park personnel.

3.5.5. Elaborate supplementary funding mechanisms to support additional activities under park management over the long term. The potential for future growth of tourism in Prespa, make tourism a realistic part of a long-term funding solution for ENR. The project will work with ENR to evaluate tourism in the area (numbers, tourist demographics, areas of interest, reasons for visiting) and assess the potential level of tourist visitation to ENR. A team of University students will survey tourists (domestic and international) on their willingness to pay for admission to the park and/or other use and visitation fees. The results of the study will feed into the development of a park revenue-generating program to be implemented by ENR beginning in year three. Project resources will also help ENR in establishing this program, and to facilitate its application by the second year of operation. This will include training ENR staff in these issues and producing informational materials for visitors.

Output 3.6: Prespa Protected Area - GR fully operationalized. (MoEPP-GR)

3.6.1. Operationalize Prespa Protected Area's management body. Under this activity, MoEPP-GR and partners will staff the management body of the protected area to enable active management of the area to begin. The basic infrastructure for the management of the PPA will be established, including premises, equipment, vehicles, and signage. The PPA will be properly equipped and the zoning plan outlined under the JMD enforced. Stakeholders will complete the Joint Ministerial Decision (JMD), with its zoning program for the area and this will be approved by Government. The JMD will serve as a framework management plan for the PPA until a full-scale management plan can be elaborated.

²⁶ WWF and the World Bank. Reporting Progress at Protected Area Sites: A simple site-level tracking tool.

Under this activity, the PPA will also participate fully in trans-boundary collaboration and sharing of lessons learned among the protected areas around the Prespa Basin.

OUTCOME 4: Stakeholders build upon ongoing trans-boundary cooperation in the Prespa Basin by strengthening the trans-boundary coordination mechanism and piloting trans-boundary conservation and water management.

Output 4.1. The Prespa Park Coordination Committee (PPCC) becomes a formal, international trilateral institution under international law.

Activities under this output will focus on overcoming capacity barriers preventing PPCC from evolving into a professionally run trans-boundary body.

4.1.1 Produce a detailed plan for the PPCC's institutional maturation. Work under this activity will assess of the first five years of “informal” operation of the PPCC and analyze the strengths and weaknesses of the PPCC vis-à-vis international lessons learned on trans-boundary water management. Additional specific steps will be recommended to strengthen the trans-boundary institutional arrangement, taking into account also the emerging water management policies and institutions in the littoral states.

4.1.2. Strengthen collaboration among PPCC members at Commune, Regional Council, and Municipal levels. This activity will bolster the PPCC's capacity by strengthening the collaboration among sub-groups of PPCC members. For example, the mayors of the Prespa region will be brought together in trans-boundary forums to discuss questions such as “How can municipalities and communes best collaborate across boundaries given the strong decentralization trend in both MK and AL?” In addition, one person in each participating municipality will be made computer literate to facilitate web-based communication. The NGOs represented on the PPCC will also be brought together in a working group to strengthen collaboration and sharing of experiences especially by older more established NGOs (e.g. GR-Prespa's SPP) with younger, fledgling NGOs in MK and AL-Prespa.

4.1.3. Strengthen the PPCC members' capacity to organize discussions, guide deliberations, and come to informed decisions. Activities under this output will strengthen the PPCC's capacity to process, discuss and come to informed decisions. The existing Secretariat of the PPCC, comprised of three part-time positions from the collaborating NGOs funded by Greek Government funds, WWF-Greece and SPP or covered by voluntary contributions from the NGOs involved, will be strengthened by recruiting a full-time Executive Secretary. GEF resources will fund this incremental strengthening with the objective that the member countries of the PPCC take over funding by the end of year 4.

The ES would prepare decision papers for PPCC members that explain issues for discussion in clear language. The ES would be responsible for working with the Trans-boundary Advisor to organize training for PPCC members in planning and operating and contributing effectively to meetings and to ensure the Prespa website is designed to facilitate easy access to PPCC documents by PPCC members.

4.1.4 Secure agreement among the three states to formalize the legal and institutional status of the PPCC. This activity will facilitate the adoption of the existing draft tripartite agreement by the three littoral states, establishing the PPCC (or PPMC as it is called in the draft Tripartite Agreement, with “M” being “Management”) as a formal trilateral institution under international law. This would come with certain obligations, both financial and political. An important milestone for this output will be the commitment by the respective governments to fund a full-time Secretariat for the PPCC by year 4.

Output 4.2. Prespa Working Group on Water Management (PWGWM) established by the PPCC. (GEF)

This activity will establish the first working group created under the PPCC and appropriately enough, it will be concerned with water. The working group will be comprised of one staff member from the central or regional water management authority from each country and one expert consultant from each country. The agenda of the PWGWM would be based upon the principles of integrated river basin management contained in the EU Water Framework Directive.

- a) Discuss the necessary measures and activities for the implementation of the EU Water Framework Directive (2000/60) and adjust to the specific local needs, conditions, and environmental objectives of the Prespa Basin;
- b) Promote the active participation of the public and carry out consultations with the interested stakeholders at the catchment basin level;
- c) Prepare a work plan towards joint water management in the Prespa Park Area;
- d) Identify and propose the appropriate operational arrangements and necessary supportive structures and processes for each country to implement an agreed work plan;
- e) Propose a programme of measures in each country for integrated lake basin management;
- f) Propose and prepare joint projects and identify suitable European and national funding sources.

Note: Most of these activities will further the development of a Strategic Action Program for the Prespa Lakes Basin to be developed under Output 4.8. GEF funding will catalyse the operation of this group for the first three years, whereupon the PPCC will have secured another source of funding for the working group.

Output 4.3. Communication activities catalyse stakeholder involvement and create new standard for transparency and openness for project implementation.

4.3.1. Help people communicate across tri-national boundaries at the Prespa level. Local peoples' knowledge of the Prespa ecosystem and their attitudes towards it will either support or undermine ecosystem health in the Prespa Basin. Under this activity, the project will support the PPCC and its member constituents in developing and implementing a simple and practical communication and participation plan. This activity will focus on how to develop effective cross boundary communication among municipalities and communes, NGOs, resource users and managers and tourism operators to enhance visitor experiences and prevent and/or resolve conflicts. The project will help stakeholders develop a set of sustainability indicators that reflect the community vision for ecosystem health and economic development within the Basin and provide regular feedback on progress toward achieving the vision.

4.3.2 Teach school children about their Prespa environment. This activity will build a youth constituency for Prespa by helping local schools to teach children about their own Prespa environment. Teaching materials on the biodiversity, aquatic, and terrestrial ecosystems of Prespa will be developed for elementary school and middle school. Teachers will be trained in using these new materials. The project will support pilot efforts to introduce practical and fieldwork in Environmental Science by supporting programs to enable teachers and school children to make field visits. The project will develop and place information boards in various parts of the Basin. Information leaflets will be produced for tourists and sportspeople.

4.3.3. Mobilize community awareness and participation. This activity seeks to create opportunities for community involvement and mobilize the skills and interest of the local communities. Under this activity, the project will make available small grants of up to \$10,000 to local NGOs for community mobilization initiatives for improving ecosystem health in MK and AL-Prespa. For example, an effort could be organized to clean up beaches using volunteers and school kids. Simple criteria for selection would be developed by the project teams and approved by the PPCC. The process would be open and transparent and will compliment the East-West Institute's NGO capacity building program in the Prespa region.

4.3.4 Develop two modest Prespa Basin visitor interpretation centers, one in Liqenas Commune and one in Resen Municipality in a place that is accessible to the most people, locals and visitors alike. SPP of GR-Prespa is already developed two visitor centers in GR-Prespa and the project will facilitate the sharing of this experience and expertise with the AL and MK sides. Co-funding from SPP will develop an information center in Proger Commune in AL-Prespa on Mikri Prespa Lake. In developing these centers, and conducting all these activities under Output 4, the project will consult and seek cooperation with the Ramsar Convention's CEPA group.

4.3.5. Produce and cultivate a dynamic interactive Prespa website. Activity under this output will produce a website, which will be continuously updated with information on the collaborative activities underway in Prespa, the challenges facing trans-boundary cooperation, and the progress being made to address these challenges. The site will provide opportunities for the local and global communities to express their ideas and opinions and get involved in conservation and sustainable development work. This will enhance the overall transparency of the project and will increase its value for demonstration. The site will of course also contain the best information on the values, interesting sites, recreation opportunities, protection activities, species of flora and fauna of the Prespa Basin. Moreover, the website would allow for the electronic networking of local stakeholders of the Prespa Park. The trans-boundary website will be fully dynamic in its set up and will be developed in English, Albanian, Macedonian, and Greek languages

Output 4.4. Pilot species and habitat conservation initiatives under implementation (GEF, SPP).

Under this output, stakeholders will pilot conservation action for priority species and habitats in the Prespa Basin. Specific conservation goals will be established and recovery management activities proscribed. Work under this output will build upon the landscape scale conservation plan developed under Outcome 3.

4.4.1. Sub-working group on Prespa birdlife formulates trans-boundary management actions to conserve 2-3 priority trans-boundary avifauna species (e.g. pelicans, imperial eagles) in Prespa Basin. Activities will:

- Document the ecological needs and current status of the priority trans-boundary bird species;
- Formulate management actions to conserve these species and protect and enhance their habitat;
- Reach consensus among wildlife managers regarding cooperative trans-boundary bird management, monitoring and enforcement actions agreed and implemented.

4.4.2. National park and forest managers formulate trans-boundary management actions to conserve 3-4 priority trans-boundary forest biotopes (e.g. the mountain meadows of Galicica/Mali i thate, and the old growth juniper forest on the Kallamas peninsula). Activities under this output will:

- Study and document the significance of Prespa's forests for the protection of ecosystem health and biological diversity linked to them in each country;
- Formulate management actions to conserve the priority biotopes;

- Reach consensus among forest managers regarding cooperative trans-boundary biotope management and monitoring actions agreed and implemented.

4.4.3. Ecological assessment supports fishers and fishery managers in formulating trans-boundary management actions to conserve priority native and endemic ichthyofauna.

The Prespa lakes' ichthyofauna are a globally significant element of the basin's biological diversity. Most of the indigenous species found in the Prespa lakes are endemic. Fish populations are of course trans-boundary in nature and any management interventions must be trans-boundary as well. Activities under this output will:

- Research and document the ecological needs of the endemic fish species, utilizing existing studies and information on closely related species whenever possible;
- Research existing literature, interview fishers, and document the ecology of three exotic fish species *Carassius auratus gibelio*, *Silururs glanis*, and *Pseudorasbora parva* and their known impacts on native and endemic species of fish in Prespa Lakes.
- Formulate additional research and management actions needed to control exotic species and conserve the endemic and or rare species of fish and increase their populations;
- Reach consensus among fishers and fishery managers regarding cooperative trans-boundary fishery management, monitoring and enforcement actions and targets for habitat conservation and species management agreed and implemented.

4.4.4. Develop and implement pilot conservation plans for the following priority species and habitats:

⇒ Native fish riverine ecosystem habitat in Brajchino (MK) and Aghios Germanos (GR) Rivers. Different species of fish are adapted to specific flow regimes appropriate for a natural riverine ecosystem and the relationship between stream flow and available physical habitat (defined by depth, velocity, substrate and cover).

This pilot activity will secure basic information on the native trout of the Brajcino and Aghios Germanos Rivers (e.g. presence, number, condition of population, level of use by local people, population trend). Work will estimate minimum in-stream flows for native species of fish during dry season months and demonstrate water management/water use agreements w/key water users in order to maintain this minimum flow during dry months. Work under this pilot will build upon the water management work done under Outcome 1.

⇒ Shoreline and wet meadow management and conservation. This pilot activity will focus on two main objectives: 1) establishing management responsibility and priorities for Prespa shoreline in each of the three national sectors; and 2) piloting management practices to enhance the habitat values of wet meadows and shoreline areas in Al-Mikri Prespa and MK's ENR. This work will build upon the spatial planning done under Outcome 1 and pilot specific practices with MoE/MoEPP, local Commune/Municipal authorities and NGO partners.

Stakeholders will demonstrate model wetland/shoreline management in AL-Mikri Prespa and ENR's wet meadow habitat, drawing upon the lessons and experience SPP has garnered conducting similar work in GR-Prespa. Such work will include networking internationally for help on how to manage such areas given the changing water levels. The pilot will seek to apply the best limnological ecosystem knowledge to the challenge of managing dynamic systems.

Output 4.5. Tri-national ecotourism and visitation strategy and management plan designed and approved by stakeholders. (GEF and UNDP-AL)

4.5.1. Enable targeted group of leaders within the tourism sector to become more knowledgeable of the benefits of well-managed, environmentally friendly tourism and related key concepts and best practices. To achieve this output, local stakeholders must be more involved in and exert more ownership over planning and managing tourism in the Prespa Basin. The project's strategy is to select a representative group of local leaders in the tourism sector, and enable them to learn, develop, and apply new skills towards this end.

A targeted group of leaders within the tourism community, municipalities and communes from all three countries will participate in a series of five workshops led by experts in ecotourism development and tourism management. Discussions will focus on understanding and applying key concepts and best practices associated with achieving an ecotourism approach in the trans-boundary Prespa Basin.

4.5.2. Develop a tourism/visitation management plan. Building upon activity 4.6.1, this activity will bring representatives of the Municipalities and Communes, National Parks, tourism service providers, and local entrepreneurs to discuss and agree on a tourism/visitation management plan and strategy. The plan will focus on the assets of the Prespa Basin and minimizing impacts on ecosystem values. Stakeholders will agree on a detailed vision for how tourism should develop over the next ten years, a strategy on how to achieve this vision, and rules for best practice tourism organization, planning and management. The plan will prioritize tourism activities and destinations and formulate a trans-boundary cooperation program. Work would be done as part of this process to formulate carrying capacity recommendations for sensitive habitats. The plan will describe how to manage access to tourist destinations based on carrying capacity, and include permitting procedures where appropriate.

4.5.3. Communicate the ecological/cultural values and sustainable ecosystem services of Prespa and consolidate the area's image. Under this activity, stakeholders will forge an ecosystem-oriented identity for the Prespa Basin. Stakeholders will create a communication program stressing ecosystem concepts and values of the region. Uniform formats will be developed for brochures and advertisements and offered for use free of charge. A system of explanatory signage will be developed, including welcome material and signage with the logo and information located in at least three key access points to the Prespa Basin. The unified logo of the Prespa area will be promoted for the area, as well as guidelines for the private sector on how to communicate the Prespa identity. Key ecosystem management concepts will be stressed in this brochure.

In promoting the identity of the region, incentives are also a useful tool. The project will create an "IEM certificate of excellence" to be awarded to selected service providers each year recognizing best practice and given on the basis of defined criteria (environment-friendliness of the facility, aesthetic values, use of the common identity).

Output 4.6. Supplementary trans-boundary diagnostic analysis fills gaps in existing analysis of environmental stress, related socio-economic consequences and trans-boundary coordination requirements. (NATO, GEF, GR-MoFA, SPP)

Activities under this output will not replicate the diagnostic analysis already conducted by the Prespa Strategic Action Plan, the UNDP-GEF Block B work, and KfW's preparatory work. Instead work under this activity will simply strengthen and fill in weak areas of this analysis in order to better support a long-term investment plan for Prespa Basin. This would be done during years 3 and 4 of the project.

4.6.1 Develop a preliminary water balance model for Prespa (NATO). The main goal of this co-

funded activity is to develop a preliminary water balance model for Prespa to inform stakeholder discussions regarding the influence of anthropogenic factors on natural cyclical changes in lake level. The following four main activities will be undertaken:

- 1) Hydro-meteorological (inflow) measurements.
- 2) Outflow measurements (tracer experiment).
- 3) Measuring and assessing the influence of anthropogenic factors on inflow and outflow.
- 4) Modeling based on the inflow and outflow data.

Work under this activity will build upon the PDF-B analysis done by KfW on the historical and current data on lake water levels, water extraction and the impact on surface and ground water in the Prespa Basin, as well as the joint study to be conducted by Greek and Albanian experts of the Devolli River/Mikri Prespa issue. Combined, these three initiatives should help stakeholders to establish the basis for more comprehensive understanding of the dynamics affecting water balance in the Prespa Lakes Basin.

4.6.2. Strengthen the analysis of impacts of environmental stress and the assessment of their socio-economic consequences. Work under this activity will:

- Measure concentrations of nutrients and pesticides in Golema Reka. Assess sublethal effects of this runoff during stormwater runoff events on the larvae of priority species of fish.
- Assess the socio-economic consequences of environmental degradation, including total economic valuation of such consequences (lost recreation, water quality/public health, reduced fish populations and costs thereof to the fishery and livelihoods, etc..).
- Enhance capacity for cost-benefit analysis of ecosystem-based management, habitat restoration, and so on. This will further clarify the added value and provide important information that would help to consolidate and sustain the project's approach and planned interventions also post project.
- Analyze new insights and information being generated by the project's monitoring and targeted research activities.

Output 4.7. Strategic Action Program for Prespa Lakes Basin developed and negotiated and committed to by highest levels of Government in Albania, Greece and Macedonia. (GEF)

Under this output, GEF's TDA/SAP model will be adapted to an IEM approach where land, water and biodiversity are treated equally. Drawing upon conclusions from the TDA process and recommendations from the existing Strategic Action Plan, activities under this output will produce a Strategic Action Program that identifies investments, as well as policy, legal, and institutional reforms needed to address priority trans-boundary problems in the Prespa Basin.

A GEF SAP must be endorsed at the highest levels of all three governments. It requires countries to make specific commitments to solving trans-boundary environmental problems and strengthening trans-boundary management with respect to the particular trans-boundary water body.

Kinds of activities conducted under this output:

- ⇒ Technical Task Team proposes long term Ecosystem Quality Objectives (EQO) and identifies and develops options for achieving these EQO.
- ⇒ Appoint trans-boundary and national SAP formulation teams.
- ⇒ Conduct feasibility study of programmatic options, Governments reach political decisions on intent to implement options.
- ⇒ Establish 5-10 year operational objectives.
- ⇒ Final agreement upon new or strengthened national/trans-boundary institutional framework.

- ⇒ Prepare M&E indicators for process, stress reduction, and environmental status.
- ⇒ Stakeholder consultations and national endorsement of draft SAP and trans-boundary institutional recommendation for Ministerial level endorsement.
- ⇒ Develop additional GEF interventions and conduct donor partnership conference to secure funding for Strategic Action Program.
- ⇒ Ministerial conference formalizes national government commitment to the trans-boundary SAP.

Outcome 5: Lessons learned and adaptive management of project. (GEF, MoEPP-GR)

Output 5.1 Monitoring and evaluation enables lessons to be elaborated, learned and shared worldwide and project management to be adaptive.

This project is designed to integrate M&E into project implementation and management. M&E is central to adaptive management, as well as the project's emphasis on elaborating and applying lessons learned and sharing lessons with others.

5.1.1 Prepare a detailed Monitoring & Evaluation work plan at project inception. The workplan will provide an “at-a-glance” view of project performance by showing the schedule of related activities, their cost and the expected outputs and achievements according to the established benchmarks and milestones. The plan will be an important tool for monitoring and evaluating the progress of the project and will ensure that local stakeholders are involved in M&E activities to enhance the ownership of project activities. For details on M&E, see Part IV, Monitoring and Evaluation.

5.1.2 Consolidate baseline data on the project's result measurement areas (RMA). An information baseline on the level and extent of proactive ecosystem management in each RMA will be consolidated to provide a basis for ongoing monitoring and evaluation. Project success indicators will be honed more thoroughly during the first six months after the information baseline is consolidated for at least five national-level RMAs: 1) the health and size of key habitats; 2) reduction in level of stress on biodiversity and water quality; 3) capacity at the individual and institutional levels; 4) policy framework; 5) stakeholder support and awareness level surveys. The baseline for individual capacity will be measured before and after each training and the change recorded.

At least three trans-boundary result measurement areas will be utilized to facilitate adaptive management: 1) the capacity of the PPCC as it matures and grows; 2) country commitment and support for trans-boundary management of water and the effectiveness of trans-boundary conservation initiatives; and 3) effectiveness of trans-boundary monitoring pilot program.

Output 5.2. Lessons learned are shared and replicated nationally and internationally.

Activities will seek to facilitate and increase the likelihood that lessons will be shared and replicated during and after the project both within the Prespa countries themselves and internationally.

5.2.1 Adoption of best practices across key productive sectors in MK and AL. This activity will focus on generating and sharing lessons learned systematically within relevant sectors (forestry, agriculture, fisheries) at the national level. This is a particularly important activity in both MK and AL-Prespa. For, as pointed out in the law and policy baseline, the legal framework for environment and natural resource management is improving with every passing year. What is lacking is the ability to implement these laws in practical yet innovative ways. The project is designed to demonstrate new practices in

key productive sectors and then facilitate the replication of these practices by enabling these new practices to inform the development of practical and effective regulations to implement new laws.

For example, stakeholders will develop a best practice/how-to manual for ecosystem-oriented spatial planning and water use planning and management in MK and in AL, a best practice/how-to manual for ecosystem-oriented local environmental action planning. These will be adopted as official planning manual by MoEPP/MoE respectively and applied nation-wide. In addition, MoE and MoEPP staff, with the help of experts will derive from this experience the practical regulations needed for effectively implementing local spatial and water use plans, or in Albania, local environmental action plans.

5.2.2 Contribute to and participate in existing knowledge networks. The project will work with MedWet to facilitate sharing of lessons learned around the Mediterranean region and the IW:LEARN network to share lessons learned world-wide. MedWet will provide technical and institutional advice based on its experience in the Mediterranean. Project experiences will be shared at IW:LEARN fora. The project will share its lessons learned and best practices through Ramsar events and networks and will be part of GEF's IEM-OP12 network and will participate in relevant global workshops.

The project will also cooperate on information exchange with the UNEP-GEF Africa-Eurasia Migratory Waterbirds Flyway Project and its supporting networks which promotes capacity building, international cooperation and exchange of information and expertise and the establishment of international reserve networks, specifically also for endangered migratory waterbird species.

Output 5.3 Adaptive management at national levels.

5.3.1. Monitor activities and related changes, evaluate project progress, and adjust project implementation accordingly. National-level project management will be carried out by the project management units or PMU, one to be located in MK and one in AL-Prespa. For details please see the Part III: Management Arrangements. Project management in the two national-level PMU will monitor activities on a continuous basis, focusing on gathering data related to the national RMAs. Tracking tools will be developed in the first 6 months of the project.

Project results will be analyzed and judged explicitly against baseline conditions and benchmarks using performance indicators. Semi-annual internal evaluations will be conducted of project's progress and achievements towards the milestones as will annual UNDP project implementation reviews. These evaluations will also focus on generating lessons learned and best practices for replication and scaling up. Indicators of success in the project's Logical Framework will be utilized on a continuous basis as the project monitors and evaluates its progress.

A mid-term evaluation will be conducted to assess project progress to date towards milestones and success indicators, assess project management, financing, and to recommend improvements to be implemented during the second half of the project.

Output 5.4 Adaptive management at trans-boundary level.

5.4.1 Adaptively manage trans-boundary activities. Management of the project's trans-boundary activities will be carried out by a small trans-boundary unit that will work with all three countries equally. For details please see the Implementation Arrangements section. The trans-boundary management unit will also monitor activities on a continuous basis, focusing on gathering data related to the national RMAs. Tracking tools will also be developed in the first 6 months of the project. The same approach to evaluations and reviews utilized under output 5.3 apply here as well.

Project Indicators, Risks & Assumptions

178. Indicators: Impact and performance indicators can be found in the Logical Framework of the project. These indicators focus on measuring impact with respect to: Process, Stress and Environmental Status.

Outcome 1

- Spatial plan (MK)/LEAP (AL) incorporate ecosystem management objectives in detail by end of year 2.
- In-stream flows for fish become priority use of water; Ag/pesticide certification criteria strengthened for aquatic ecosystem health; Forest law incorporates maximizing ecosystem services as priority objective; Regulations for local level water use management, spatial plan enforcement and environmental management adopted by year 3.
- Strengthened local management of 40 kilometers of shoreline habitat by year 3.
- Replication: Watershed planning manual adopted as official manual by MoEPP and MoE by year 4.

Outcome 2

- 50% reduction in frequency and quantity of pesticides applied each season by year 3.
- 50% reduction in the number of harmful pesticides (from 10 to 5) utilized in MK-Prespa by year 3; Remaining 50% by year 4.
- 20 farms applying integrated pest management practices in MK and AL by year 2; 50 by year 4.
- Community forest (CF) contribute 50% of two communities' needs for fodder and fuel wood (AL) by year 4.
- 2,000 ha in MK by yr 3. 3,000 ha in AL by yr 3. 1,000 ha in GR by yr 3; 6,000 hectares of forest under improved biodiversity-oriented management in MK, GR, AL Prespa.
- Two pilot small scale treatment facilities reduce eutrophying inputs (N, organic material) to Macro Prespa by 1,000 m³ by year 3.
- Replication of those pilots reduces eutrophying input in two other places w/in Prespa.
- 50% decline in use of detergents containing phosphorous in Resen municipality by year 3; 75% by year 4.
- Allowable fish catch linked to population size estimates for five priority species by year 3 in AL and MK.
- 20% improvement in awareness among students regarding Prespa ecosystem by year 2; 50% by year 4;

Outcome 3

- Trans-boundary monitoring functioning by year 2.
- Up-to-date information on extent/condition of priority species and habitat distribution, abundance, and condition by year 2.
- Protected Area Management Effectiveness Tracking Tool (METT) score for PNP, GNP, ENR and PPA-GR improved by 20% year 2; 40% year 4.
- 15 km of Golema Reka riverine habitat restored; solid waste input reduced by 75% by year 3.
- Ezerani Nature Reserve is gazetted and boundary clearly marked by year 3.
- PPA-GR is fully operational by end of year 3.
- At least 1,000 hectares of priority habitat for birds, fish, rare plants, and mammals under improved conservation management by year 2.

Outcome 4.

- PPCC given legal status under each of country's laws and under International Law by year 4.
- Governments commit funding for full time executive secretary position for Prespa Park Coordination Committee by year 4.
- At least two different potential Imperial Eagle nesting areas under special management by year 3.
- Priority bat colonies protected and monitored by year 3.
- In-stream flows for endemic species of trout maintained in Brajcino and Aghios Germanos Rivers by end of year 3.
- Priority threats to endemic fish from exotics understood and measures underway to reduce them by end of year 4.
- Three states agree on trans-boundary ecological management objectives for sustainable use and conservation of native species and aquatic ecosystem health and agree upon specific program of measures for cooperative fish management by year 3.
- Robust shared database on priority ecosystem and species health parameters operational and utilized by all three countries by year 3.
- Tri-national ecotourism management plan is endorsed and promotion underway by year 3.

Outcome 5.

- Positive annual, mid-term, and final evaluations.
- Effective annual delivery rate.

179. Assumptions:

- (i) Governments of MK and AL will proceed with their program of assessing and revising legal framework to meet EU-*Aquis Communautaire*.
- (ii) Government of MK will finalize water law by end of '05 and clearly apportion responsibilities for water management to MoEPP.
- (iii) Addressing ecosystem management challenges by sectors will be easier for stakeholders to understand and act upon.
- (iv) Governments of MK and AL will actively support the decentralization of key environmental management tasks.
- (v) Governments will support stronger trans-boundary institution with basis in law.
- (vi) Farmers will overcome ingrained aversion to risk and adopt new IPM practices.
- (vii) There will be sufficient funding and human resources committed post-project to maintain key coordination and monitoring processes and tools.
- (viii) Political disagreement between FYR-Macedonia and Greece will not hamper progress on trans-boundary work.

180. Risks associated with the assumptions above:

- (i) Low Risk: Both MK and AL appear to be committed to meeting EU requirements for accession.
- (ii) Low Risk: The law is under consideration in Parliament and will be completed in August 2005.
- (iii) Low Risk: the project will avoid jargon with respect to ecosystem management and seek to keep this approach as simple and practical as possible.
- (iv) Medium risk. National government entities are reluctant to let go of perceived power, even if in reality, they have no capacity to implement this "power."

- (v) Medium risk. National governments must consider carefully how much sovereignty they are willing to give up when it comes to trans-boundary cooperation in Prespa. The risk is mitigated by the impressive track record of the governments in this regard.
- (vi) Low risk. Once demonstrations prove the validity of the concept of integrated pest management, farmers will adopt this practice quickly. This risk is low, given the experience already seen in Prespa, whereby farmers who were initially very skeptical of drip irrigation, have enthusiastically adopted it once they see the proof of concept.
- (vii) Medium-high risk: The risk is that there will be insufficient funding and human resources committed post-project to maintain, for example, improved monitoring and coordination processes and tools unless this is already build in national or local budgets during project duration. The project mitigates this risk by a) minimizing the number of new processes created and nesting all project activities within existing programs, institutions and priorities; b) requiring countries to fund PPCC activities as one milestone by year 4 of the project, and; c) requiring stakeholders to look beyond the project's own five year lifespan and plan and secure funding for the longer term (Outputs 4.6 and 4.7).
- (viii) Medium - High risk: Political disagreement between FYR-Macedonia and Greece could hamper progress on trans-boundary work. This is mitigated by the design of the project, which focuses on strengthening national sector capacities. Trans-boundary work is prudently and realistically planned under this project.

Expected global, national and local benefits

181. Global benefits:

- Globally significant biological diversity in terms of significant populations of migratory birdlife, endemic species, and rare habitats is conserved by applying new partnerships, resources and re-oriented resource management.
- Trans-boundary water resources are conserved and sustainably managed.
- Global indirect use values, future use values and existence values are secured.
- Lessons learned at the local level contribute to global body of knowledge and experience.

182. National benefits:

- Watershed management principles applied to project area, maintaining environmental quality while development proceeds.
- Best practice for watershed management and appropriately scaled water management improves level of practice around the countries.
- Fishing sector becomes more viable and sustainable, benefiting local economies and improving fishery management.
- People are empowered with new knowledge and access to resources to develop more sustainable resource use practices.

Local benefits:

- Improved social and economic benefits produced by healthy lake ecosystem.
- Agricultural practices not only reduce impact on the environment, but also reduce operating/production costs due to controlled pesticide, water, and fertilizer use, improving the bottom line for farmers.

- Clean-up and improvement management of solid waste removes the primary constraint to revitalizing tourism in Prespa, generating direct economic benefits as well as improving the overall health of the environment for local communities.
- Wastewater treatment in smaller villages will improve overall quality of life (human health, civic cleanliness, property values) in local communities, facilitating sustainable development.
- High quality fertilizer will be produced out of waste apples formerly dumped into Prespa, substituting organic for chemical fertilizers and saving input costs for local farmers.

Country Ownership: Country Eligibility and Country Driven-ness

183. Albania ratified the Convention on Biological Diversity in May of 1994. FYR-Macedonia ratified the Convention on Biological Diversity in February of 1997. Both countries are eligible to borrow from the World Bank and receive technical and financial assistance from the United Nations Development Programme.

How the project supports national development and conservation priorities.

184. The Global Environmental Facility (GEF) Operational Focal Points for Albania and FYR-Macedonia, have endorsed the project. See Section IV for the endorsement.

185. The Prespa Lakes Basin is clearly a priority for conservation and sustainable development in each of the three littoral states. On 2nd February 2000, the Prime Ministers of Albania, FYR-Macedonia and Greece issued a Declaration, recognizing the ecological and historical/cultural significance of the trans-boundary Prespa Lakes region, and proposed to enhance collaboration among the three countries and outlines that the following joint actions should be undertaken:

- maintain and protect the unique ecological values of the region;
- prevent or reverse the causes of habitat degradation ;
- explore appropriate management methods for the sustainable use of the Lakes' waters;
- make "Prespa Park" a model of its kind and a catalyst for peaceful collaboration among the countries.

186. As a follow-up to the Declaration of Prespa Park, the three states again drove this process forward when they established an interim "Prespa Park Co-ordination Committee" (PPCC). In addition, each state has shown its commitment to the conservation and sustainable use of aquatic ecosystems like the Prespa Lakes over time.

187. Albania (AL): The Council of Ministers ratified the Ramsar Convention in March 1996 and in 1999, established the Prespa National Park to conserve the critical terrestrial and aquatic ecosystems of the Macro and Mikri Prespa Lake area. In 2003, reflecting the importance of the Prespa Lakes, Albania passed the *Law on the Protection of Trans-boundary Lakes (2003)* to provide the legal basis for maintaining ecosystem health and facilitating sustainable development around Albania's four trans-boundary lakes, two of which are the Prespa Lakes.

188. Greece (GR): The Ramsar Convention was ratified in 1974 and Micro Prespa declared a Ramsar site in 1974. Prespa National Forest was designated in 1974 for the protection of Mikri and Macro Prespa Lakes and their catchment area, and, in 1975, the same area was declared a "landscape of exceptional beauty". The Greek side of the wetland system is a Special Protection Area (SPA) under the EEC Birds Directive. The entire Prespa catchment area and the lakes have been included in the Greek National List of the NATURA 2000 protected sites network, according to the EEC Directive on Protection of Fauna, Flora and their Habitats, and the EEC Birds Directive. Greece has also promised to proceed with the extension of the designated Ramsar site to cover the Macro Prespa.

189. FYR-Macedonia (MK): The Prespa Basin has been a conservation priority for the Government of FYR-Macedonia for many decades. Pelister National Park was established in 1948 for the protection of a globally unique mountain ecosystem forming the eastern boundary of the Prespa Lake Basin. Galicica National Park was established in 1958 due to the unique terrestrial ecosystems straddling the Galicica Mountain on the western boundary of Prespa Lakes Basin. Ezerani Nature Reserve was established in 1996 as Ramsar site on the northern shoreline of Macro Prespa Lake for migratory waterfowl and other water bird species.

190. Trans-boundary collaboration is also a priority for the MK Government. In 2000, MoEPP-MK signed a Memorandum of Understanding and Cooperation with MoE-AL and one with MoEPP-GR. Together with Greece, MK appointed coordinators for bilateral cooperation in environmental protection in 2002.

Sustainability

191. *Overall perspective*: Achieving sustainability at the environmental, social, institutional and financial levels will be a long-term process in the Prespa Lakes Basin. Environmental sustainability is an elusive concept that is difficult to measure. But one thing is certain – that Prespa’s ecosystem is dynamic and ever changing. Sustainability in this respect will come when stakeholders are able to apply practical ecological models to anticipate change and manage anthropogenic impacts accordingly.

192. Regarding social, institutional and financial sustainability, this project considers the conservation of national and global benefits in the Prespa Lakes Region to be a long-term, multi-phase process. Stakeholders are currently at the end of Phase I, marked by political agreement to cooperate in this trans-boundary region, establishment and operating a trans-boundary coordination committee. Phase II, marked by this GEF project, will strengthen the foundation for national and trans-boundary ecosystem management in the Prespa region, remove barriers to adopting ecosystem management, and pilot new practices and partnerships. Phase II will enable Prespa stakeholders to develop, politically commit to, and secure funding for a Strategic Action Program. Phase III will then implement the SAP and secure long-term investment and program sustainability.

193. The Prespa region is a relatively remote, poor region. Ultimately, it is envisioned that financial sustainability will come to Prespa not in terms of self-financing or self-sufficiency, but in reaching a point where there is sufficient stakeholder commitment and institutional capacity to attract financing for ecosystem management and to apply existing financing in new and innovative ways.

194. *Project-specific*: The project’s design reflects several overriding assumptions related to the question of sustainability and how this will be achieved:

a) the project’s outputs and activities are largely achievable with existing stakeholders, institutions, financial resources and personnel through strengthened capacity and partnerships among them (i.e. resource users, municipalities/communes, Ministries of Environment and Agriculture, and protected areas);

b) the process of decentralization in MK and AL represents a strategic opportunity to consolidate a sustainable partnership between national and local authorities in resource and ecosystem management.

c) integrating ecosystem management objectives into larger productive sector programs will build individual and institutional momentum and significantly contribute to sustainability. For example,

locally-scaled, ecosystem-friendly spatial and water use plans will have a sustained mainstreaming affect on development for years to come.

d) Mainstreaming into productive sectors harnesses the significant resources of those sectors in ways that achieve global and national benefits in a sustainable, cost-effective approach to achieving lasting ecosystem benefits in the project area; and

e) the Governments have proven their interest in special management for Prespa resources, and this interest will only grow in the future as cooperation among the three countries improves and matures.

f) An ecosystem is healthier when the productive landscape in which it exists is more ecosystem friendly.

195. The project is designed to enable the continuation of project-inspired changes in practice upon completion of the project in – ways. The project: 1) recognizes the existing absorptive capacity of the institutional and stakeholder context and will strengthen and increase that capacity over the life of the project; 2) builds upon the strengths of existing, institutions such as the MoEPP and Municipality of Resen in MK or the MoE and the Commune of Liqenas in AL as well as new cross-sectoral partnerships to facilitate the adoption of ecosystem management practices; 3) ensures that ecosystem management approaches are integrated into relevant sectoral programs; 4) strengthens the trans-boundary capacity of key stakeholders through consensus building, development of and commitment to a strategic action program for long-term capacity building and investments.

196. With respect to point (1), project training will strengthen the capacity of existing institutions to sustain ecosystem management. For example, MoE, Municipality and Commune staff will be trained in watershed management and strategic environmental assessment as a means of identifying the cross-sectoral impacts of production activities on biodiversity in target landscapes.

197. With respect to point (2), the project is designed to work with and strengthen local institutional and stakeholder capacities to access follow-on funding through training and partnership building. The ability to implement these activities sustainably will be ensured by building the capacity of local municipalities both directly through their participation in training workshops and, perhaps more importantly and significantly, indirectly by strengthening the capacity of the MoE/MoEPP to provide ongoing support for many years. Over the life of the project the growing partnership among the Ministries, municipalities and NGOs will be an important element in ensuring sustainability.

198. With respect to point (3), EU-influenced water programmes are progressively placing more emphasis on environmental protection measures and less on artificial control. As described under Outcome 1 the project places a high priority on mainstreaming ecosystem health maintenance objectives into productive sector practices and policies in MK and AL-Prespa in a way that furthers their environmental commitments to the CBD and the Convention on the Law of the Non-navigational Uses of International Watercourses, among the many international agreements on trans-boundary water resources.

199. With respect to point (4), the project is designed to look beyond the confines of the project's 5-year life-span and achieve consensus on and commitment to what should be done in the long term and how it should be funded.

Replicability

200. The replicability potential of the best practices generated by this project's main outcomes is significant for at least two reasons: 1) the practices to be developed and demonstrated are directly relevant to existing or emerging challenges faced by project partners as part of their baseline work; and 2) project partners have the resources or, with proper capacity building, will be able to access resources that are

sufficient to support replication of ecosystem-based forest and fisheries management, water systems management, small-scale wastewater management.

201. The potential for replicability has been considered throughout project design in terms of which partners the project proponent should work with and how specific capacity building and demonstration activities were designed.

202. Replication can have two aspects: 1) direct replication and 2) scaling up. Direct replication occurs when lessons and experiences are replicated by different entities as a result of direct contact with project training, capacity building or publications. Scaling up occurs when lessons and experiences are integrated into laws, policies and programmatic priorities. The project will facilitate direct replication by applying the following approach:

- ⇒ The MoEPP, MoE, and the Municipality of Resen and the Commune of Ligenas will be important partners in the scaling up of project-inspired small-scale wastewater treatment options. In preparatory discussions with the project team, these stakeholders have committed to replicating successful project best practices for small communities within the Prespa Basin.
- ⇒ Introduce stakeholders (farmers, forest managers, water managers, municipal wastewater officials, and tourism stakeholders) to new ecosystem-oriented management practices or approaches through workshops and study tours.
- ⇒ Demonstrate new ideas, practices and technologies on the ground in each one of the project's four components.
- ⇒ Identify and disseminate lessons learned and best practices to project partner institutions, and through relevant associations (e.g. Water User Association).
- ⇒ Train individuals from other forest management units to expand the project's main approaches to other areas.
- ⇒ Share lessons learned with the Ramsar Convention on Wetlands, which actively promotes trans-boundary cooperation for shared wetlands and for which this project provides a valuable pilot.

203. Scaling-up: Best practices and lessons learned will be shared in a way that contributes to the evolution of supportive policies, programs and fiscal incentives. For example:

- The process of decentralization in MK and AL represents a strategic opportunity to scale-up sustainable partnerships between national and local authorities in resource and ecosystem management. These partnerships are only now beginning to take shape. Prespa will provide a model that will be useful in informing the development of similar “decentralized partnerships” in other parts of MK and AL.
- The evolution of AL and MK's legal frameworks represents a strategic opportunity to scale-up lessons learned in key sectors. The timing of the project will mean that results will be able to contribute the inclusion of ecosystem management objectives into revised agriculture, forest, fisheries, and water laws in MK and AL over the course of the project
- The MoEPP is responsible for spatial planning across MK. The development of a training manual and adoption of that manual nationwide will scale-up the project's best practices in Prespa to all spatial planning exercises across MK. The same is true with respect to MoE and Local Environmental Action Plans in AL.
- MoA in both AL and MK are responsible for fisheries and forest management. The development of a how-to/best practices manual for ecosystem-based forest management and providing incentives for

fishers to support sustainable management and the adoption of this nationwide will scale up the project's best practices to every forest and fishery zone in each country.

- The MoEPP and MoE are important partners in the scaling up of project lessons and experiences with respect to ecosystem-oriented PA management. Materials will be prepared to facilitate scaling-up of the project's best practices across the PA network in both countries. Among several different kinds of materials, a booklet will be prepared for PA authorities describing the participatory, ecosystem-based approach to PA management.

PART III: MANAGEMENT ARRANGEMENTS

204. The project will be implemented over a period of five years. Project execution will adhere to UNDP National Execution (NEX) project requirements. Please see Section IV, Part __ for project implementation diagram.

205. Designated Institution. The Ministry of Foreign Affairs is the focal point for coordinating UNDP's technical cooperation in Albania and in Macedonia. The Ministry of Environment –Albania and the Ministry of Environment and Physical Planning–FYR-Macedonia will serve as the Designated Institutions (DI) responsible for coordinating project implementation. The DI is accountable to the focal point and UNDP for the government's participation in the project. The DI will ensure that internal monitoring and review systems are in place. The two DI, along with their Greek counterpart MoEPP-GR, will alternate in preparing the trans-boundary Project Oversight Committee (POC) meetings and, with input from POC members, will provide overall guidance and support for the implementation of all project activities. Each DI (as well as the MoEPP-GR) will also organize annual national project enabling committee meetings for purposes of providing support to each country's respective project management unit. The DI staff or appropriate experts will be utilized when needed in accordance with UNDP guidelines, and will facilitate interaction among relevant public organizations, research institutions and private organizations.

206. UNDP. Working closely with the two DI, the UNDP Country Offices (COs) will be responsible for: a) overseeing project budgets and expenditures, including reviewing and approving annual workplans, with the input and advice of the POC; b) recruiting and contracting project personnel and consultant services; c) procuring equipment; d) project evaluation and reporting, result-based project monitoring, and organizing independent audits to ensure the proper use of UNDP/GEF funds; and e) overseeing project staff within the PMUs and the Trans-boundary Unit in cooperation with the two DIs, the PEC and the PPCC. Financial transactions, auditing and reporting will be carried out in compliance with national regulations and UNDP procedures for national execution.

207. Project Management. Two project management units (PMU) will be organized located in their respective Prespa regions: one in Albania (AL) called the Korce-PMU and one in FYR-Macedonia (MK) called the Resen-PMU. Note: In GR-Prespa, there will be no PMU *per se*, but MoEPP-GR has designated the new management body for the Prespa Protected Area to serve as the project enabling committee to coordinate project-related activities in GR-Prespa. Each PMU will be headed up by a national project manager and staffed by one finance and administrative officer and one technical officer with extensive experience in one or more of the primary sectors under the project. Note, this technical experience should ideally differ from but complement the technical expertise of the project manager, who will also be knowledgeable in one or more of the primary sectors under the project. The PMUs' focus will be on enabling the implementation of all nationally-based activities under the project (Outcomes 1, 2, and 3). One of their main priorities will be to build the capacity of existing organizations and institutions to carry out project activities. Therefore their work will be most effective when they are making strategic

use of working groups, NGOs, technical teams, expertise from international organizations and networks, selected short-term national and international consultants in order to organize training for staff in key institutions.

208. One small trans-boundary unit will also be organized, based in MK-Prespa, but located in a separate office from the Resen PMU and working at a trans-boundary level with all three Prespa countries equally. The trans-boundary unit will be staffed by one international advisor and one administrative/reporting officer. Oversight of the PEC will be the responsibility of the UNDP-MK office, in consultation with UNDP-AL, the two DI and the MoEPP-GR. One of the most important roles of the trans-boundary unit will be to keep the two PMU operating at more or less the same level and in coordination with each other and the Greek PEC. The trans-boundary advisor's job will be to work him or herself out of a job; he/she will work full-time for the first three years of the project, upon which time the three Governments will finance a full-time executive secretary position for the PPCC, as specified under Output 4.1.

209. The Trans-boundary Unit will be responsible for: a) the successful implementation of all trans-boundary activities (Outcomes 3 and 4); b) overall monitoring and coordination among the two PMU and the Greek PEC (see below); c) facilitating the adaptive management process with each PMU and the work of the PEC in AL, MK, and GR (see below); d) serving as the executive secretary for the PPCC and working closely with the PPCC staff based in Greece; and e) be responsible for unified reporting for the annual project implementation review (PIR); and f) taking the lead on producing experience briefs for sharing with and giving presentations to international fora for wetlands, trans-boundary water management, and lake conservation.

210. Project Oversight Committee (POC). The Prespa Park Coordination Committee, with representatives from all three littoral states, will serve as this project's Project Oversight Committee. The POC's role is comprised of three main responsibilities. First, when required, the POC will serve as a forum for stakeholder input and discussion. Second, the POC will oversee project implementation and meet on a semi-annual basis to review project progress, and provide input to the finalization of annual project work plans. Third, POC members will facilitate the implementation of project activities in their respective organizations, ensure that cooperative activities are implemented in a timely manner, and facilitate the integration of project-inspired activities into existing programs and practices. Representatives of partner and co-funding organizations not represented on the POC will be invited to attend POC meetings on an as-needed basis.

211. Project Enabling Committees (PEC). There will be three PEC, one in MK, one in AL and one in GR, to enable more input to and active support for national-level project activities. These will not be new and additional committees to the other stakeholder input mechanisms established by the project. In MK, the Watershed Management Council (WMC) described under Output 1.4 will play this role. In AL, the Prespa National Park Management Committee (PNPMC) also discussed under Output 1.4 will serve this function. In GR-Prespa, the management body created for the protected area (see baseline description page 33) will serve as the PEC for project-related activities in GR-Prespa.

212. These PEC will have three roles: 1) to serve as a national forum for stakeholder input and discussion and 2) to play an active oversight role comprised of two main elements: a) approving of the PMU's annual workplan; and b) reviewing the performance of their respective PMU and provide input to UNDP-CO and DI; and 3) to facilitate the work of the PMU by meeting with the PMU every six months to review progress with the PMU and agree upon specific actions needed to facilitate implementation of activities.

213. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The UNDP logo should be more prominent -- and separated a bit from the GEF logo if possible as, with non-UN logos, there can be security issues for staff.

PART IV: MONITORING AND EVALUATION PLAN AND BUDGET

1. MONITORING AND REPORTING

1.1. Project Inception Phase

A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit (RCU), as well as UNDP-GEF (HQs) as appropriate.

A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project.

Additionally, the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings.

The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

1.2. Monitoring responsibilities and events

A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to day monitoring of implementation progress will be the responsibility of the national project managers based on the project's Annual Work Plan and its indicators. Project managers will be required to involve local stakeholders in this monitoring and evaluation to maximize local ownership of the

respective activities. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

The national project managers will fine-tune the progress and performance/impact indicators of the project in consultation with the full project team at the Inception Workshop with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

Measurement of impact indicators related to global and local benefits will occur according to the schedules defined in the Inception Workshop and tentatively outlined in the indicative Impact Measurement Template. The measurement of these will be undertaken through subcontracts or retainers with relevant institutions (e.g. vegetation cover via analysis of satellite imagery or populations of key species through inventories) or through surveys for capacity building efforts) or periodic sampling.

Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project team and local stakeholders, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

UNDP Country Offices and UNDP-GEF RCUs as appropriate, will conduct yearly visits to projects that have field sites, or more often based on an agreed upon scheduled to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. Any other member of the Steering Committee can also accompany, as decided by the SC. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all SC members, and UNDP-GEF.

Annual Monitoring will occur through the ***Tripartite Review (TPR)***. This is the highest policy-level meeting of the parties directly involved in the implementation of a project. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report (APR) and submit it to UNDP-CO and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

The APR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

Terminal Tripartite Review (TTR)

The terminal tripartite review is held in the last month of project operations. The project team is responsible for preparing the Terminal Report and submitting it to UNDP-CO and RBEC-GEF's Regional Coordinating Unit. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review

considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

The TPR has the authority to suspend disbursement if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on delivery rates, and qualitative assessments of achievements of outputs.

1.3. Project Monitoring Reporting

The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function and the frequency and nature is project specific to be defined throughout implementation.

(a) *Inception Report*

A Project Inception Report (IR) will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, and time-frames for meetings of the project's decision making structures. The IR will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

The IR will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

(b) *A harmonized Annual Project Report and Project Implementation Review (APR/PIR)*

The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review.

The APR should include the following information:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects.

Once the project has been under implementation for a year, the CO together with the project must complete a harmonized Annual Project Report/Project Implementation Review. The APR/PIR can be prepared any time during the year (July-June) prior to the TPR. The APR/PIR should then be discussed in the TPR so that the result would be an APR/PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.

The individual APR/PIRs are collected, reviewed and analysed by the RCs prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters supported by the UNDP/GEF M&E Unit analyse the APR/PIRs by focal area, theme and region for common issues/results and lessons. The TAs and PTAs play a key role in this consolidating analysis.

The focal area APR/PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings. The GEF M&E Unit provides the scope and content of the APR/PIR.

(c) *Quarterly Progress Reports*

Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team. See format attached.

(d) *Periodic Thematic Reports*

As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

(e) *Project Terminal Report*

During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.

(f) *Technical Reports*

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

(g) **Project Publications**

Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. These publications may be scientific or informational texts on the activities and achievements of the Project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

2. INDEPENDENT EVALUATION

The project will be subjected to at least two independent external evaluations as follows:-

(i) **Mid-term Evaluation**

An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

(ii) **Final Evaluation**

An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Audit Clause

The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop (IW)	<ul style="list-style-type: none">▪ UNDP COs▪ UNDP GEF▪ PPCC (POC)▪ Experts as required.	20,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none">▪ Project Team	None	Immediately

	<ul style="list-style-type: none"> ▪ UNDP COs 		following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ National Project Managers ▪ Trans-boundary Manager ▪ UNDP-COs ▪ PPCC oversight 	To be finalized in Inception Phase and Workshop. Cost to be covered by targeted survey funds.	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ PMU in Korce and Resen ▪ Trans-boundary Unit ▪ UNDP-CO oversight 	To be determined as part of the Annual Work Plan's preparation. Cost to be covered by field survey budget.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Trans-boundary Unit responsible for unified reporting. ▪ UNDP-COs ▪ UNDP-GEF 	None	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ Government Counterparts ▪ UNDP COs ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (RCU) 	None	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP COs 	None	Following Project IW and subsequently at least once a year
Periodic status reports	<ul style="list-style-type: none"> ▪ Project team 	None	To be determined by Project team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	To be determined as part of the Annual Work Plan's preparation.	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- COs ▪ UNDP-GEF RCU ▪ External Consultants (evaluation team) 	45,000	At the mid-point of project implementation.
Final External Evaluation	<ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-COs ▪ UNDP-GEF RCU ▪ External Consultants (evaluation team) 	45,000	At the end of project implementation
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-COs ▪ External Consultant 	None	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF RCU (formats for documenting best practices) 	None additional to staff time (average 6,000 per year)	Yearly

Audit	<ul style="list-style-type: none"> ▪ UNDP-COs ▪ Project team 	15,000 (average \$3,000 per year)	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF RCU ▪ Government representatives 	25,000 (average one visit per year)	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 150,000	

SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT

PART I: INCREMENTAL COST ANALYSIS

1. Baseline

The health of the Prespa Basin ecosystem is being diminished by unsustainable practices in key productive sectors across the Basin. In the absence of this project's proposed alternative, ecosystem health will continue to deteriorate due to inappropriately scaled water and land management; and forestry, fisheries and agricultural practices that have little or no concern for maintaining biological diversity and ecosystem health. Forests, shorelines, wet meadows and riverine systems will continue to be degraded; endemic species of fish will continue to be ignored and imperiled by the potential introduction of even more exotic species; and parks will be unable to fulfill their role as ecological refuges within the Basin.

Land and water use planning: Poor land and water use planning and management in both AL and MK has resulted in degraded riverine, wetland, and shoreline habitats. There are no locally scaled land or water-use plans to establish collaborative management practices and priority uses.

Agriculture: Despite the dependence in MK and AL on agricultural production, farmers currently have no access to agricultural extension support services or to information on sustainable agricultural techniques, including the appropriate choice of pesticides and fertilizers, the correct timing of applications, and the optimal concentration that should be used. The link between agrochemicals and the environment is not well understood as there are no educational outreach programs on this topic.

Fisheries: The minimal management of the fishery in Mikri and Macro Prespa is entirely focused on maximizing the catch of the five main commercial species. Species diversity conservation, and aquatic ecosystem health are not management objectives in any one of the three littoral states. Indeed, past fishery management's narrow focus on production rather than sustainable harvest has caused managers to focus exclusively on trying artificially to increase the population of fish through hatcheries. This led to the introduction of eleven species of fish, with uncertain consequences for ecosystem health.

Forestry: From an ecosystem management perspective, forest management in MK-Prespa is lacking in several respects. First, forest management is focused primarily upon producing a sustainable supply of timber and firewood for the region; habitat values, watershed management values, and biodiversity enhancement values are not management objectives. There is an emerging awareness of ecosystem-oriented forest management and the importance of adopting related practices, but there is no institutional capacity to develop and apply ecosystem-oriented forest management.

Wastewater management: There are positive trends in how the three countries are reducing this environmental stress on the Prespa Lakes ecosystem. In MK-Prespa, 55% of municipal wastewater is now treated, up from 0% one year ago, due to one new large facility for the regions four largest villages. In GR-Prespa a treatment facility has been approved that will treat approximately 95% of the wastewater. In AL-Prespa, 20% of the wastewater will soon be treated, up from 0% one year ago. However, small-scale treatment remains unaddressed and in need of appropriate pilots to catalyse the filling of this gap. In MK-Prespa, over 40 villages still remain without wastewater treatment. In AL-Prespa, five of the six villages have no wastewater treatment.

Protected area management: Overall the existing PA management capacity is insufficient in all five of the Prespa's protected areas (PA). These deficiencies are apparent not only in terms of infrastructure, but also information, staff numbers, skills, and equipment. Management plans for the PAs are at various stages of preparation and show different approaches and standards. None of the PA in Prespa has an approved integrated management plan. Moreover, in order to provide efficient conservation for key habitats and

species within the Prespa Region, a harmonization among the three countries' PA management objectives, targeted habitat and species as well as monitoring indicators is also needed.

2. Global Environmental Objective

This project will conserve two different types of global benefits: 1) the two Prespa Lakes and their contributing waters and the aquatic ecosystem they comprise in the trans-boundary Prespa Basin; and 2) the globally significant biological diversity of the Prespa Basin, which includes endemic aquatic and terrestrial vertebrate and invertebrate fauna, and; globally significant rare mammal and migratory birdlife. In the process of doing this, other significant indirect use values will be generated as well, especially what economists call "passive use" or "existence values." The global existence values arise from the nontrivial per capita existence values multiplied by the hundreds of millions of citizens who hold these values and live outside of the Prespa region.

3. Alternative

The objective of the project is the conservation of globally significant biological diversity and trans-boundary water resources of the Prespa lakes Basin. The costs of the project are shared by the GEF and other financiers, with GEF financing the agreed incremental costs of generating the global environmental benefits described above. Upon completion of the project, stakeholders will be applying new tools and processes to better manage key national sectors and trans-boundary resources in a way that generates national, trans-boundary and global benefits.

Outcome 1: Stakeholders establish land and water use management basis for maintaining and restoring ecosystem health in the Prespa Lakes Basin.

Outcome 2: Stakeholders modify productive sector resource management practices to reduce pesticide inputs, increase habitat heterogeneity, and improve the status of target species and communities within the national sectors of the Prespa Basin.

Outcome 3: Stakeholders conserve priority biological diversity across the Prespa Basin and make key protected areas in Prespa Basin (PNP, GNP, and ENR) fully operational.

Outcome 4: Stakeholders build upon ongoing trans-boundary cooperation in the Prespa by strengthening the coordination mechanism and piloting trans-boundary conservation and water management.

Outcome 5: Lessons learnt and adaptive management of project.

4. Systems Boundary

Baseline and incremental costs have been assessed temporally, over the planned five-year life-span of the project and geographically by the natural watershed boundary of the Prespa Lakes Basin, of which 62% in FYR-Macedonia (1,000 sq. k), 17% in Albania (263 sq. k), and 21% in Greece (330 sq. k). Administratively, in MK-Prespa the municipality boundaries in both MK-Prespa and GR-Prespa reflect that of the Prespa Basin boundaries. In AL-Prespa two commune boundaries overlap with the AL-Prespa territory. And finally, baseline and incremental costs have been assessed thematically, as demarcated by the main sectors affecting ecosystem health within the Prespa Basin, namely: land and water management, agriculture, fisheries, forests, wastewater, solid waste and protected areas.

5. Summary of Costs The total GEF Alternative is US\$55.9 million, baseline is US\$43.1 million. The total incremental cost of the project, including Co-funding and GEF funds is US\$12,771,000. Of this total, co-funding constitutes 67% or US\$8,636,000. GEF financing constitutes the remaining 33% of the total, or US\$4,135,000. The incremental cost matrix provides a summary breakdown of baseline values and Co-funded and GEF-funded Alternative costs.

Incremental cost matrix

Benefits and Costs	Baseline	Alternative	Increment
Domestic Benefits	<p>Substantial benefits from Prespa ecosystem but not nearly what they could be and declining as ecosystem health declines.</p> <p>Major investments are being undertaken to strengthen basic solid and liquid waste management in all three Prespa countries, but still at least 50% of people in basin will have no wastewater management.</p>	<p>Resource use becomes more sustainable, benefiting local economies.</p> <p>Surface waters are cleaner, healthier.</p> <p>Agriculture is more efficient and competitive.</p> <p>New management regime establishes sustainable harvest practices, mitigating and distributing uncertainty of open access resource.</p>	<p>Enhanced ability of stakeholders in government institutions, local communities and NGOs to maintain ecosystem health through sustainable use.</p> <p>Land-use and water-use planning incorporates ecosystem management objectives in a first-time model for the region.</p> <p>New practices in wastewater management and agriculture are piloted, and replicated, leading to cleaner water for local communities.</p>
Global Benefits	Limited, ineffective management and conservation of global values.	<p>Conservation efforts are improved in productive forest habitat through capacity building, stakeholder participation, and applying new partnerships and resources.</p> <p>New practices in wastewater management and agriculture are piloted, and replicated, leading to reduced eutrophication stress on aquatic ecosystem.</p> <p>Biodiversity conservation objectives mainstreamed into productive forest sector.</p>	<p>Improvement in conservation of species rich habitats, globally threatened species, and endemic species.</p> <p>Sustainable forest and fishery management practices include maximizing diversity of species.</p> <p>Priority riverine ecosystems and aquatic habitat for globally significant species are restored.</p> <p>Global indirect use values, future use values and existence values secured.</p> <p>Lessons learned contribute to the development of mainstreaming biodiversity practice in Prespa Region.</p>
	Baseline (US\$ over 5 yr period) €figures converted at 1.25 \$/€	Alternative	Increment (US\$) €figures converted at 1.25 \$/€; Swiss francs @ 1.27/\$
OUTCOME 1: Stakeholders establish			AL

land and water use management basis for maintaining and restoring ecosystem health in the Prespa Lakes Basin.	MoEPP spatial planning: 800,000 Total: 800,000	Total: 1,877,500	REC 160,000 UNDP 10,000 MK MoEPP (spatial planning) 130,000 GR: SPP (spatial planning) 202,500 ----- Cash Co-financing: 502,500 GEF: 575,000 Total: 1,077,500
OUTCOME 2: Stakeholders modify productive sector resource management practices to reduce pesticide inputs, increase habitat heterogeneity, and improve the status of target species and communities within the national sectors of the Prespa Basin.	AL ADF (Wastewater/rainwater) 528,000 KfW/ADF (veterinary/goat) 93,000 PPNEA (ranger support PNP) 32,000 SIDA Regional SWM 2,500,000 MoA/Dept. of Agriculture 30,000 Dept of Fisheries 50,000 REA 3,500 MK KfW (Regional SWM) 26,250,000 KfW (Ezerani w/w treatment) 3,375,000 Fisheries 45,000 Forestry 910,000 GR: Regional Operational Prog. 1,560,000 Total: 35,376,500	Total: 39,179,500	AL KfW (Afforestation PNP) 1,875,000 Fisheries (OFM) 135,000 SGP 35,000 UNDP 230,000 MK UNDP \$604,000 MoR \$70,000 GR: Local Dev Fund/ Prefecture of Florina 149,000 Cash Co-financing: 3098000 GEF: 705,000 Total: 3,803,000
OUTCOME 3: Stakeholders conserve priority biological diversity across the Prespa Basin and make key protected areas in Prespa Basin (PNP, GNP, and ENR) fully operational.	AL PPNEA 28,000 PNP 50,000 MK: Pelister 660,000 Galicica 400,000 GR: Special Env Plan 188,000 EC/SPP/WWF-Greece LIFE 2,330,000 Total: 3,656,000	Total: 8,441,000	AL KfW 1,250,000 MK KfW 1,875,000 SDC (Golema Reka) (TBC) 450,000 GR: MoEPP 435,000 Cash Co-financing: 4,010,000 GEF: 775,000 Total: 4,785,000

OUTCOME 4: Stakeholders build upon ongoing trans-boundary cooperation in the Prespa Basin by strengthening the trans-boundary coordination mechanism and piloting trans-boundary conservation and water management.	AL MoE (PPCC participation) 25,000 MK MoEPP (PPC Participation) 25,000 Monitoring 710,000 GR: IRP - Cultural preservation 675,000 IRP (awareness facilities) 625,000 Italians (GNP-PNP) 1,250,000 Total: 3,310,000	Total: 5,530,500	AL UNDP 20,000 GR SPP 375,000 SPP/WWF-GR 78,500 MFA/SPP 200,000 NATO 252,000 Cash Co-financing: 925,500 GEF: 1,295,000 Total: 2,220,500
Outcome 5: Lessons learnt and adaptive management of project.	Total: 0	Total: 885,000	Cash Co-financing: 100,000 GEF: 785,000 Total: 885,000
<u>Total:</u>	Baseline cost 43,142,500	Total Alternative 55,913,500	Cash Co-financing: 8,636,000 GEF 4,135,000 Total: 12,771,000

PART II : LOGICAL FRAMEWORK ANALYSIS

Objective/Outcomes	Impact and Process Indicators	Baseline	Target goal	Sources of Verification	Assumptions and Risks
Goal: The conservation of globally significant biological diversity and trans-boundary water resources of the Prespa lakes Basin.					
Objective to catalyse the adoption by AL and MK of integrated ecosystem management (IEM) practices in key sectors in the Prespa Lakes Basin to conserve globally significant biodiversity and conserve trans-boundary waters.	a) Financial resources for IEM approach made available b) Human resources for IEM approach c) Management tools for IEM approach d) Demonstration of IEM approach	a) Not available from public funds b) Not trained c) Not defined d) None	a) US\$2 million for IEM by end of project b) Key local stakeholders trained c) Incentives, information, communication provided d) At least 5 visible demonstrations in respective sectors	a) Evaluation of cofinancing b) Certificate c) Final report d) Final report	Addressing ecosystem management challenges first by sectors will be easier for stakeholders to understand and act upon.
Outcome 1: Stakeholders establish land and water use management basis for maintaining and restoring ecosystem health in the Prespa Lakes Basin.	Spatial plan (MK)/LEAP (AL) incorporate ecosystem management objectives in detail.	No spatial plan in place; No LEAP in place.	Done by end of year (EoY) 2.	Spatial plan /water management plan/ LEAP documents.	Government of MK will finalize water law by end of '05 and assign responsibilities for water management to MoEPP.
	Main sectoral laws incorporate ecosystem health objectives/priorities; strengthened regulations for water, spatial planning and environmental management at local level.	Water, Ag, Forest, Fishery Law do not prioritize ecosystem health.	In-stream flows for fish become priority use of water; Ag/pesticide certification criteria strengthened for aquatic ecosystem health; Forest law incorporates maximizing ecosystem services as priority objective; Regulations for local water use management, spatial plan enforcement and environmental management adopted by EoY 3.	Specific language in respective laws and policies; Wording of key regulations.	Governments will proceed with their program of assessing and revising legal framework to meet EU- <i>aquis communautaire</i> .
	Two priority streams in Macedonian Prespa maintain in-stream flow year-round for endemic trout.	Baseline tbq; Currently, both run dry in summer months.	Surface flow maintained year round by EoY 4.	Surface flow measurements on each stream; water users agreement signed by all stakeholders. Site visits.	
	Strengthened local management of shoreline habitat.	No conservation or management of shoreline habitat.	40 kilometers of shoreline habitat by EoY 2; EoY 4	Shoreline management plan; Interviews with municipality	Governments of AL and MK will actively support the decentralization of key

				officials and MoEPP/MoE officials.	environmental management tasks.
	Replication: Watershed planning manual adopted as official manual by MoEPP and MoE for rest of country.	No manual; replication not facilitated.	Manual integrated into watershed planning nationwide by EoY 4.	Official policy adopting manual by MoE/MoEPP.	
Outcome 2: Stakeholders modify productive sector resource management practices to reduce pesticide inputs, increase habitat heterogeneity, and improve the status of target species and communities in the Prespa Basin.	Reduction in frequency and quantity of pesticides applied each season.	Baseline 10-15 applications/season;	50% reduction by EoY 3.	Farmer association; Field interviews with farmers and farmer association.	Farmers will overcome ingrained aversion to risk.
	Reduction in the number of harmful pesticides utilized in MK-Prespa	KfW figures; 10 of the 15 in use are toxic to aquatic orgs.	Only 5 of the pesticides in use are harmful by EoY 3; the remaining phased out by EoY 4.	Interviews with MoEPP and MoE; Pesticide supply stores.	Farmers will overcome aversion to risk and adopt integrated pest management practice.
	# of farmers applying integrated pest management practices in MK and AL.	None	20 farms by EoY 2; 50 by EoY 4.	Interviews with farmer association; project reports; agricultural extension agent.	Same
	Reduced costs for water, pesticide and fertilizer inputs for local farmers.	Costs tbd in first six months.	Reduced in monitored farms by significant percentage by EoY 3.	Interviews with farmer association; project reports; agricultural extension agent.	Same
	Cost savings to specific farmers from use of fertilizer made from waste apples.	Costs tbd in first six months.	Reduced in participating farms by significant percentage by EoY 4.	Interviews with participating farmers.	
	% of wood community forest (CF) contribute to two communities' needs for fodder and fuel wood.	CF provides none of the fuelwood and fodder needs.	CF provides 50% of 2 target villages' needs by EoY 4.	Field visits; interviews with forest users associations.	
	# hectares of forest under improved biodiversity-oriented management in MK, GR, AL Prespa.	No ha of forest under this kind of management	2,000 ha in MK by EoY 3. 3,000 ha in AL by EoY 3; and 1,000 ha in GR by EoY 3.	Forest management plans; Interviews with forest managers; field ground truth visits.	
	Eutrophying inputs (N, organic material) to Macro Prespa reduced m ³ through small-scale wastewater treatment pilots.	No small-scale wastewater treatment.	Two pilots reduce inputs by 1000 m ³ by EoY 3.	Field visits to pilot facilities.	

	Replication of those pilots reduces eutrophying input in two other places w/in Prespa.	No pilots to replicate currently.	Replication in at least 2 other places by EoY 4.	Project reports; Field interviews with responsible local authorities.	
	Improved overall quality of life in villages with small-scale wastewater treatment.	Community survey measures quality of life baseline first 6 months.	Significant increase in quality of life measurement from survey of participating local communities.	Before/after survey of local residents.	
	Decline in sales of detergents containing phosphorous in Resen municipality.	Baseline TBD in first six months.	Decline of 50% by EoY 3; 75% by EoY 4.	Survey of markets; Government data.	MoEPP policy banning phosphorous detergents will have an impact.
	Allowable fish catch linked to population size estimates.	There is no limit on fish caught during regular season.	Allowable fish catch is linked to population size estimates for five species by EoY 4.	Fish catch level information; Fish population data; Interview with fishery managers.	
	Change in awareness among local people regarding the Prespa ecosystem;	Baseline to be verified at inception.	20% improvement by end of EoY (EoY) 2; 50% by EoY 4.	Awareness surveys themselves; report of the results.	
Outcome 3: Stakeholders conserve priority biological diversity across the Prespa Basin and make key protected areas (PNP, GNP, and ENR) fully operational.	Trans-boundary monitoring functioning/not functioning.	No monitoring system in place.	Monitoring system in place and generating useful data by end of EoY 2.	Inspect monitoring infrastructure; Shared, web-based data base.	Sustainability of monitoring system will rely upon 1) existing institutional capacity w/in MK and AL; and 2) the ongoing support and capacity building from SPP over the long term.
	Presence/absence of up-to-date information on extent/condition of priority species and habitat distribution, abundance, and condition.	Information spotty, dated, and focused on single species.	Updated data by EoY 2.	Database on biodiversity of each national sector of Prespa.	
	Protected Area Management Effectiveness Tracking Tool (METT) score for PNP, GNP, and ENR, PPA-Greece.	X (TBD at project inception)	X + 20% by mid term; X + 40% by project end.	Survey forms themselves. Interviews with PA managers.	
	ENR is/is not gazetted and boundary is/is not clearly marked on maps or on the ground.	Not gazetted; Not clearly marked	Is gazetted by end of EoY 3; Is clearly marked on official planning maps and local municipality maps by end of EoY 3.	Official documents; Official maps; Field visits.	
	# hectares of priority habitat for birds, fish, rare plants, and mammals under improved	No management plans; no active management; no	At least 2,000 hectares in AL and 4,000 ha in MK by EoY 5.	Approved habitat management plans.	

	conservation management.	specific # of hectares under special management.			
Outcome 4: Stakeholders build upon ongoing trans-boundary cooperation in the Prespa Basin by strengthening the trans-boundary coordination mechanism and piloting trans-boundary conservation and water management.	PPCC is/is not a legal entity under International Law	PPCC is an informal institution with no legal basis.	PPCC is legal entity as agreed to under trilateral agreement.	Tri-lateral Agreement.	Political disagreement between FEYO-Macedonia and Greece could hamper progress on trans-boundary work.
	Governments commit to funding full time executive secretary position for Prespa Park Coordination Committee.	No such position or funding exists.	Commitment by EoY. 3. Funding by EoY. 4.	Written funding commitments; funded project proposals.	Governments will support stronger trans-boundary institution with basis in law.
	Three states agree on trans-boundary fish conservation priorities that reflects ecological management objectives for sustainable use and conservation of native species and aquatic ecosystem health and agree upon specific program of measures for cooperative fish management.	Management regime does not reflect ecosystem objectives, though three countries ban fishing during spawning season.	Three states cooperate on enforcement; monitoring; and research by EoY 3.	Signed agreement; Shared data sets; Management plan; Examples of success in cross-border enforcement collaboration.	
	Robust shared database on priority ecosystem and species health parameters.	No shared database w/ updated information; x-boundary discussions occur w/no support data.	Shared database populated with reliable data supports x-boundary discussions.	Database itself; analysis of quality of data.	Decision makers will utilize this data as it is intended. Databases will continue to be managed by anchor institutions (SPP, MoEPP)
	Imperial eagle nesting habitat enhanced/protected.	Ecological needs of eagle not understood by protected areas, forest managers or MoEPP.	At least two different potential eagle nesting areas under special management by year 3.	Site visits; management plans for forest and PA.	Actual changes in numbers of animals will be difficult to measure and show causal link a five year time span; better to focus on process, habitat conserved, and reduction of threat.
	Bat colonies protected and monitored.	Bat colonies known, but not protected or monitored.	Priority bat colonies protected and monitored by year 3.	Site visits; management plans for forest and PA.	Same

	Ecological requirements for endemic trout understood and protected.	Not understood or protected.	In-stream flows for endemic species of trout maintained in Brajcino and Aghios Germanos Rivers by end of year 3.	Water management plan from Outcome 1; Site visits.	Same
	Reduction in level of threat to endemic fish posed by exotics.	Not understood or even recognized as a problem.	Priority threats to endemic fish from exotics understood and measures underway to reduce them by end of year 4.	To be detailed at inception.	Same
	Tri-national ecotourism management plan is/is not endorsed and promotion underway.	No regional tourism management planning.	New tourism management and investment plan in place by year 5.	Endorsed plan itself; promotion materials.	
	Continuing financial and institutional commitment from three littoral states (local and/or national commitments)	No long-term formal commitments.	Continuing financial and institutional commitments made to adequately staff and continue operations of key project-inspired processes and use of tools.	Specific commitments made as part of Strategic Action Program.	GEF's experience with and commitment to SAP process will serve as a catalyst for countries to achieve new levels of commitment to trans-boundary action.
Outcome 5: Lessons learnt and adaptive management of project.	Effective delivery rate	Block B delivery	As good or better than Block B delivery rate.	Annual ATLAS reports.	UNDP will assign sufficient staff resources to enable them to keep up with increased volume from full size project.
	Positive evaluations	First evaluation.	Improvement with each successive evaluation.	Evaluation reports.	

SECTION III: Total Budget & Workplan

Co-financing and GEF Financing

Outcome/Outputs	GR-MoEPP/ MoFA	AL-DoF/ MK-MoEPP, MoR	NATO	UNDP/ SDC/ REC	KfW	GEF	Total
Outcome 1: Stakeholders establish land and water use management basis for maintaining and restoring ecosystem health in the Prespa Lakes Basin.	202,500	140,000	0	170,000	0	575,000	1,087,500
1.1 Pilot land-use spatial plan (MK) and Local Environmental Action Plan(AL)	202,500	140,000		135,000		190,000	667,500
1.2 Mainstreaming ecosystem health priorities into water-use law						110,000	110,000
1.3 Pilot ecosystem-oriented water management plan for local scale.						90000	90,000
1.4 Capacity for water and watershed management built at municipal and commune level in MK and AL respectively.				10,000		120,000	130,000
1.5 Pilot flexible pollution reduction techniques and the use of incentives strengthens enforcement of and compliance with environmental laws protecting ecosystem health.				25,000		65,000	90,000
Outcome 2: Stakeholders modify productive sector resource management practice to reduce pesticide inputs, increase habitat heterogeneity, and improve the status of target species and communities within the Prespa Basin.	149,000	874,459	0	869,000	1,875,000	705,000	4,472,459
2.1. Reduced environmental impacts of agriculture in AL and MK Prespa.				714,000		115,000	829,000
2.2 Forest managed for native species composition and forest stand heterogeneity in MK and AL.						140,000	140,000
2.3 Restoration/reforestation of degraded forest in AL Prespa NP.				35,000	1,875,000	65,000	1,975,000
2.4 Pilot small-scale wastewater treatment facilities measurably reduce eutrophying inputs to Lakes Prespa.	149,000	739,459		70000		145,000	1,103,459
2.5 Strengthened civil society partners for ecosystem-oriented fishery management in AL and MK Prespa.		135,000				150,000	285,000
2.6. A marketplace to foster the knowledge, goods and services of a conservation economy				50,000		90,000	140,000
Outcome 3: Stakeholders conserve priority biological diversity across the Prespa Basin and make key protected areas in Prespa Basin (PNP, GNP, and EWR) fully operational.	435000	33000	0	450000	3125000	775,000	4818000
3.1 Transboundary monitoring program						340,000	340,000
3.2 Landscape scale conservation planning.						180,000	180,000
3.3 Restoration of the Golema Reka		30,000		450,000		55,000	535,000
3.4 PNP and GNP management capacity is strengthened and the parks fully operational.					3,125,000		3,125,000
3.5. Ezerani Wildlife Reserve is re-authorized and fully operational.		3,000				185,000	188,000
3.6: Prespa Protected Area - GR fully operationalized.	435,000					15,000	450,000
Outcome 4. Stakeholders build upon ongoing transboundary cooperation in the Prespa Basin by strengthening the transboundary coordination mechanism and piloting transboundary conservation and water management.	653,500	5,000	252,000	20,000	0	1,295,000	2,225,500

4.1 Strengthened operational capacity of Prespa Park Coordinating Committee.	375,000	2,000				125,000	502,000
4.2 Prespa Water Working Group established by the PPCC		2,000				90,000	92,000
4.3 Transboundary communication.	56,000	1,000				340,000	397,000
4.4. Pilot species and habitatconservation inititaives.	22,500					330,000	352,500
4.5 Tri-national ecotourism and visitation strategy and management plan designed and approved by stakeholders.				20,000		130,000	150,000
4.6. Supplementary diagnostic analysis fills gaps in existing analysis and supports preparation of SAP.	200,000		252,000			150,000	602,000
4.7. Strategic Action Program for Prespa Lakes Basin developed and negotiated and committed to by highest levels of Government in AL, GR and MK						130,000	130,000
Outcome 5: Lessons learnt and adaptive management of project.	100,000	50,000	0	0	0	785,000	935,000
5.1 Monitoring and Evaluation						150,000	150,000
5.2 Adaptive management at national levels.	100,000	50,000				260,000	410,000
5.3 Lessons learnt are elaborated and shared worldwide.						75,000	75,000
5.4 Adaptive management at transboundary level.						300,000	300,000
Total:	1,540,000	1,102,459	252,000	1,509,000	5,000,000	4,135,000	13,538,459

SECTION IV : ADDITIONAL INFORMATION

PART IA: ENDORSEMENT LETTERS

Letter from Macedonia

00-00-2002 17:00 FROM:UNEP SKOPJE

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**REPUBLIC OF MACEDONIA
MINISTRY OF ENVIRONMENT AND
PHYSICAL PLANNING**

Skopje, July 10, 2002

Our No. 09-2403/1

TO
Mr. Mohamed T. El-Ashry
CEO&Chairman
Global Environmental Facility
1818 H.St., NW
Washington, DC 20433

Subject: Endorsement of Project Proposal "Integrated Ecosystem Management in the Trans-boundary Prespa Park Region"

Dear Mr. El-Ashry,

In my capacity as GEF Operational Focal Point for the Republic of Macedonia, I am pleased to endorse and submit to you the "Integrated Ecosystem Management in the Trans-boundary Prespa Park Region" Project for funding consideration by the GEF.

The proposal has been elaborated under the trilateral initiative for establishment of "Prespa Park", among the Republic of Albania, Republic of Greece and the Republic of Macedonia. It is considered as priority on the environmental agenda of the Ministry of Environment and Physical Planning of our country.

I strongly believe that the Project "Integrated Ecosystem Management in the Trans-boundary Prespa Park Region" will be fully supported by GEF.

Sincerely yours,

Metodija Dimovski, M.Sc
Head of Department

CC - Nick RAMPLE
KJADA LOGAROVKA

C.c. Ms. Vesna Dzutevska Bisheva
Program Officer, UNDP CO Macedonia

1000 Skopje, "Dzardovska" 32. phone (+389 91) 344-939; fax 344-931



REPUBLIC OF ALBANIA
MINISTRY OF ENVIRONMENT
Directorate of Nature Resources Management and Biodiversity

Rruga Durrësi, Nr. 27, Tirana, Tel. +355 42 70 624 Fax. +355 42 70 627

Tirana, on 7.08.2002

Subject: Integrated Ecosystem Management in the Transboundary Prespa Park Region

Mr. Mohamed T. El-Ashry
CEO & Chairman
Global Environment Facility
1818 H. St., NW
Washington, DC 20433

Dear Mr. El-Ashry,

As the Albanian Minister of Environment, I am pleased to endorse and submit to you the UNDP/GEF "Integrated Ecosystem Management in the Transboundary Prespa Park Region" for PDF B funding consideration by the GEF. The PDF B concept document for this project is attached.

The Project will support the sustainable development of the Prespa Park Area with a high level of biodiversity and vital economic value for the community. The proposal has been elaborated together with the other two countries (FYROM and Greece) in the framework of the trilateral cooperation initiative.

Let me express my strong believe that the project will be fully supported by GEF.

LUFTER XHUVELI

MINISTER



PART IB: COMMITMENT LETTERS

Commitment letter from the Hellenic Ministry for Environment, Physical Planning and Public Works

HELLENIC MINISTRY FOR THE ENVIRONMENT,
PHYSICAL PLANNING AND PUBLIC WORKS
DEPUTY MINISTER

To:
Ms. Nataly Olofinskaya
GEF Regional Coordinator for Europe and CIS
UNDP/RBEC Regional Support Centre
Grosslingova 35
811 06 Bratislava
Slovak Republic
F: +4212-59337-450

Cc:
Mr. Frode Mauring
Resident Representative
and
Ms. Anita Kodzoman
Programme Officer in Environment
UNDP Skopje
Dimitrie Cupovski 8
1000 Skopje
F: +389 2 118261

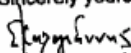
Mr. Batkhuyag Baldangombo
UNDP Tirana
Deshmoret e 4 Shkurtit Street, No. 35
Tirana
F: +355 4 232075/234 448

Athens, 10 June 2005
Ref No: 3407

Re: Greek Co-funding for the GEF Project "Integrated Ecosystem Management in the Prespa Lakes Basin of Albania, FYR-Macedonia and Greece"

Dear Madam,

The Hellenic Ministry of Environment, Physical Planning and Public Works would like herewith to express its continuing support to the transboundary Prespa Park process. We also support the activities undertaken for the project *"Integrated Ecosystem Management in the Prespa Lakes Basin of Albania, FYR-Macedonia and Greece"*, to be submitted to the Global Environment Facility for co-funding. The Hellenic Government is strongly committed to co-financing national and transboundary programmes or projects that complement the above mentioned GEF project. In the attached table, the relevant projects along with their timeframe, budget and funding source are listed. Secured Greek co-funding amounts to 1,232,000€, while additional programmes or projects already in the pipeline total 2,006,318€.

Sincerely yours,

Stavros Kalogiannis

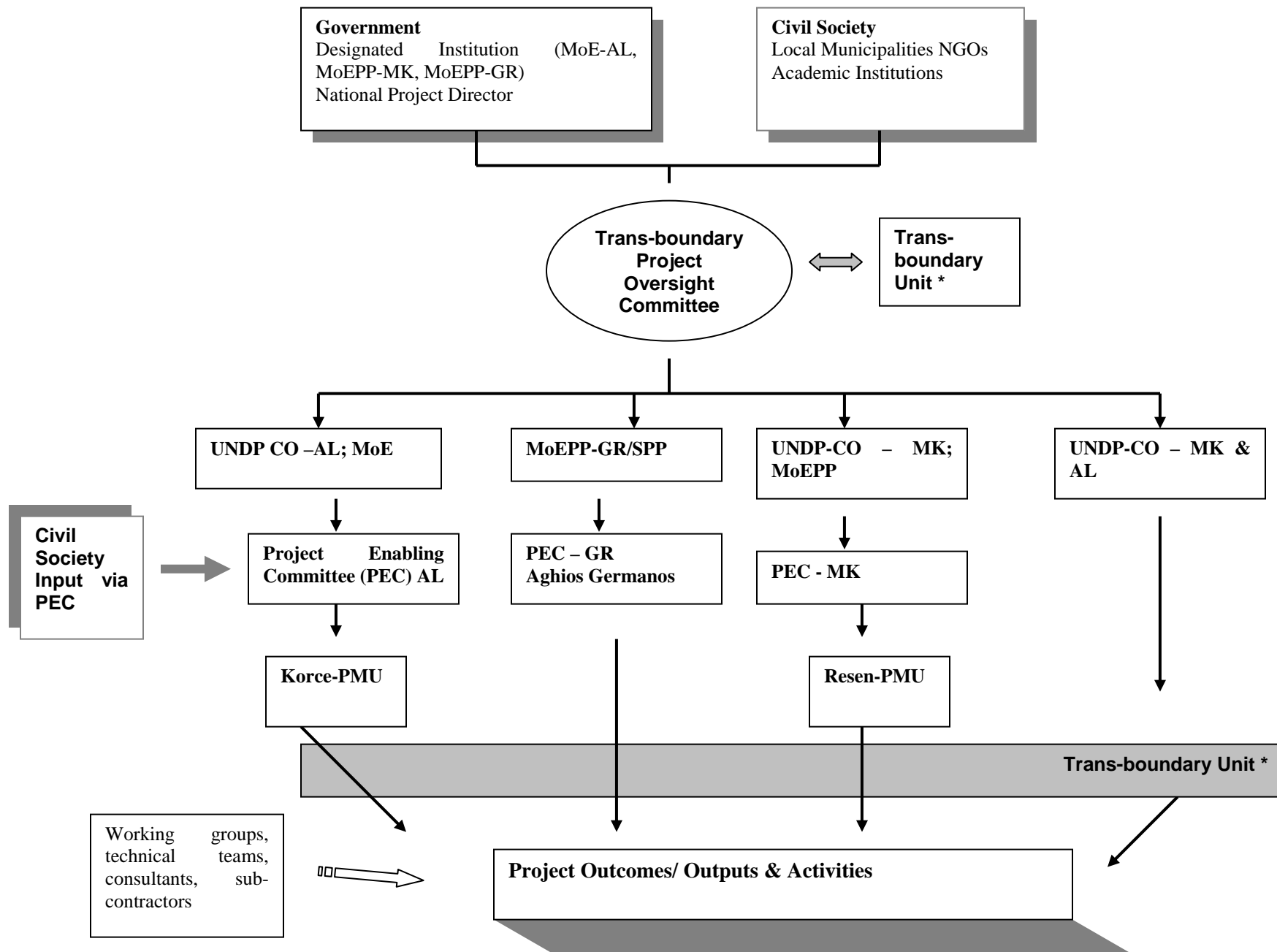
Attachment: Table of Greek Co-funding for the Transboundary Prespa Park GEF Project

CC: Nature Management Department

Greek Co-funding for the Transboundary Prespa Park GEF Project

Activity	Secured Funding	In the Pipeline
Operational funding to the Prespa Management Body, including coordination of GEF project activities on the Greek side (2005-2008)	428,000 € (Ministry of Environment, Operational Programme Environment/ EC and national funds)	
Prespa Park programme of the Society for the Protection of Prespa, including mainly PPCC Secretariat support (2005-2008)	~300,000 € (Society for the Protection of Prespa/WWF Greece)	
Study for Spatial and Urban Planning for the Municipality of Prespa, Greece (2005-2006)	162,000 € (Society for the Protection of Prespa/ WWF Greece)	
Devolli - Mikri Prespa Study (2005-2006)	160,000 € (120,000 € Hellenic Aid/ Ministry of Foreign Affairs; 40,000 € Society for the Protection of Prespa/WWF Greece)	
Wastewater treatment – final technical study (2005)	119,000 € (Local Development Fund/ Prefecture of Florina)	
Establishment of an Information Centre in Zagradec, Albania, including training (2005-2006)	45,000 € (Society for the Protection of Prespa/WWF Greece)	
Study of endemic trout in Aghios Germanos and Brajcinska River (2005-2006)	18,000 € (Society for the Protection of Prespa)	
Wastewater treatment works for 95% of the population of Municipality of Prespa, Greece		1,250,000 € (Regional Operational Programme – National and EC Funds)
Promotion of the Transboundary Prespa Park with the Creation of a Website, Audiovisual Material and Publications for the Visitors (2005-2007) (Including development of transboundary GIS cartographic base)		Total 387,318 €, including 160,000 € for transboundary GIS (Interreg IIIA Greece-FYROM, National and EC Funds),
Design and organization of transboundary environmental monitoring system (2005-2007)		271,000 € (203,250 € Hellenic Aid/ Ministry of Foreign Affairs; 67,750 € Society for the Protection of Prespa)
Study for the organization of Transboundary EIA and Strategic Impact Assessment procedures in the Prespa Park area (2005-2006)		98,000 € (73,500 € Hellenic Aid/ Ministry of Foreign Affairs; 24,500 € NGO "Nomos and Physis")
Study for the application of Drip-Irrigation System in Greek Prespa		(Amount and timeframe not finalized yet)
Total:	1,232,000 €	2,006,318 €

PART II: ORGANIGRAM OF THE PROJECT



PART III : TERMS OF REFERENCES FOR KEY PROJECT STAFF AND MAIN SUB-CONTRACTS

[NOTE:. This Part should be added only after the GEF has approved the project, and before requesting CEO endorsement. Include TORs for Project Manager, and CTA. TORs for other key staff or sub-contracts can be developed during the project's inception workshop].

PART IV: STAKEHOLDER INVOLVEMENT PLAN

FYR-Macedonia

Partner	Role in Project
1. Ministry of Environment and Physical Planning (MoEPP)	<ul style="list-style-type: none"> • Chair of national oversight committee for project management unit. • Will make Prespa a model for local spatial planning and water use management. • Will make Prespa a model for strengthening national-municipal partnerships for environmental management. • Preparation, drafting and implementation of laws and by-laws on water resources management in close cooperation with, MoAFWE. • Increasing role in environmental and natural resource management, economic development, at the local level. • Will be key play in making municipality a model for local management of environmental resources. • Responsible for management of Ezerani Nature Reserve • Representative of FYR-Macedonia on PPCC.
2. Municipality of Resen	<ul style="list-style-type: none"> • Member of PPCC • Territory of MoR encompasses entire MK-Prespa. • Process of decentralization gives it an increasing role in environmental management and economic development. • Main partner for MoEPP to implement environmental laws at the local level. • Tourism is priority for development in municipality.
3. Farmer Association of Resen	<ul style="list-style-type: none"> • Main stakeholder organization for project's co-funded work with reducing impacts of agriculture on water quality.
4. Ministry of Agriculture, Forestry and Water Economy (MoAFWE)	<ul style="list-style-type: none"> • Responsible for oversight of forest and fishery management in Prespa. • National policy and development of agricultural production and water resources. • Preparation, drafting and implementation of laws and by-laws on water resources management. • Control, supervision and enforcement of laws and regulations on water resources management.
a) Makedonska Forest Enterprise Prespadrvo (Office in Resen)	<ul style="list-style-type: none"> • Responsible for forest management in MK-Prespa. • Will be the main stakeholder organization for project's work to mainstream diversity conservation objectives into productive forestry practice.
b) Ribomak Fishery Management Enterprise & Fishers Association	<ul style="list-style-type: none"> • Will be the two stakeholder organizations for project's work to mainstream diversity conservation objectives into productive fisheries practice.
5. Ministry of Health – Public Health in Bitola	<ul style="list-style-type: none"> • Responsible for monitoring water quality (abiotic) in Prespa • One of two stakeholder institutions currently responsible for monitoring environmental parameters in MK-Prespa.
6. Institute of Biology - Ohrid	<ul style="list-style-type: none"> • Responsible for monitoring health of aquatic ecosystem

	(biotic) in Prespa <ul style="list-style-type: none"> • One of two stakeholder institutions currently responsible for monitoring environmental parameters in MK-Prespa.
7. NGO – Fokus, NGO- Resen	<ul style="list-style-type: none"> • Members of PPCC. • Partner in conservation and awareness work in MK-Prespa.

Albania

Partner	Role in the Project
1. Ministry of Environment (MoE)	<ul style="list-style-type: none"> • Chair of national oversight committee for project management unit. • Will oversee local environmental action plan in AL-Prespa; • Will make Prespa a model for strengthening national-municipal partnerships for environmental management. • Responsible for approving management plan and management committee for Prespa National Park. • Responsible for protecting trans-boundary lakes environmental quality. • Representative of Albania on PPCC.
a. Regional Environmental Agencies - Korca (REA)	<ul style="list-style-type: none"> • Local implementation – control and enforcement – of laws and by-laws on environmental protection. • Will play key role in strengthening AL-Prespa Commune's environmental management capacity.
2. Ministry of Agriculture and Food (MoAF)	
a) Protected Area Management Directorate.	<ul style="list-style-type: none"> • Administrative home for Prespa National Park. Will play key role in strengthening of Park's management capacity. • Is willing to make PNP a model in terms of involving local communities in PA management and in establishing strong, cross sectoral PA management committee.
b) Directorate of Forestry and Pastures (DoFP)	<ul style="list-style-type: none"> • PNP is reliant upon DoFP for administrative support and most of PNP's staff are still formally affiliated with DoFP. • Will play a key role in reforestation of AL-Prespa areas.
c) Directorate of Fisheries	<ul style="list-style-type: none"> • Responsible for fishery management in AL-Prespa. • Are establishing the OFM in Prespa and will be an important partner in strengthening the OFM's management capacity.
o Organization for Fisheries Management (OFM)	<ul style="list-style-type: none"> • Will be main stakeholder group for project's efforts to improve fishery management and mainstream ecosystem management objectives into productive fishery sector.
3. National Water Council (NWC), River Basin Agency for Semani River Basin.	<ul style="list-style-type: none"> • RBA responsible for Prespa water management. • Will be one of the main agencies involved in preparing policies to conserve Prespa Water quality in the future.
4. Regional Council of Local Government – Korca.	<ul style="list-style-type: none"> • Regional body responsible for coordinating development within AL-Prespa's two Communes: Liqenas and Proger. • Will play an important role in applying Millenium Development Goals to Prespa Region in AL; to promoting and facilitating sustainable development in Prespa region (ecotourism, improved transportation infrastructure, etc..)
5. Commune of Liqenas (CoL)	<ul style="list-style-type: none"> • The two communes whose territory comprises AL-Prespa.

Commune of Proger (CoP)	<ul style="list-style-type: none"> • CoL is the main local authority in AL-Prespa and home to 90% of AL-Prespa's residents. • CoL is member of PPCC. • Increasing role in environmental and natural resource management, economic development. • Main partner for MoE to implement environmental laws at the local level. • Responsibilities not clear – evolving. Will be key play in making commune a model for local management of environmental resources. • Tourism is priority for development in municipality.
NGO – PPNEA.	<ul style="list-style-type: none"> • Member of PPCC. • Conservation partner for work in AL-Prespa.

Greece

Partner	Role in the Project
1. Ministry of Environment Physical Planning and Public Works (MoEPP)	<ul style="list-style-type: none"> • Responsible for approving management plan and management committee for Prespa Protected Area. • Member of and represents Greece on PPCC.
2. NGO - Society for Protection of Prespa (SPP). Note: WWF-Greece is a member group of SPP.	<ul style="list-style-type: none"> • Member of PPCC; Hosting of and participation in PPCC Secretariat. • Main project partner from Greek side for: monitoring, targeted research, public awareness and education, and wetland management. • Important mentoring NGO for underdeveloped NGO community in MK and AL.
3. Municipality of Prespa	<ul style="list-style-type: none"> • Member of PPCC. • Territory of MoP encompasses entire GR-Prespa. • Increasing role in environmental and natural resource management and economic development: Member of the Protected area Management Board, implementing body of infrastructure and other works. • Tourism is priority for development in municipality.

Trans-boundary

Partner	Role in the Project
1. Prespa Park Coordination Committee	<ul style="list-style-type: none"> • Will serve as the Project Oversight Committee for this project. • Will be instrumental in furthering the development of trans-boundary cooperation and enabling the project's trans-boundary activities under Outcome 4.
2. MedWet	<ul style="list-style-type: none"> • Partner in sharing lessons learned. • MedWet will provide technical and institutional advice based on its experience in the Mediterranean. • It will transfer the know-how of the Convention on Wetlands (Ramsar, 1971), derived from the lessons learned from many other trans-boundary sites in other parts of the world, and on

	<p>the related work of its Scientific and Technical Review Panel.</p> <ul style="list-style-type: none"> • It will make use as required of the specialised knowledge of the research and conservation centres that are members of the MedWet Team²⁷ to cover specific requirements.
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Primary mechanisms for stakeholder participation and influence of project implementation as well as the exchange of technical information among stakeholders and Project.

1. Trans-boundary Project Oversight Committee (POC) meetings – the Prespa Park Coordination Committee (See implementation arrangements for details).
2. Two Project Enabling Committees – one in MK and one in AL for the national/local levels. In MK, the Watershed management council (WMC) will play this role. In AL, the Prespa National Park Management Committee (PNPMC) will play this role. (See Outcome 1 and implementation arrangements for details).
3. Organization for Fishery Management and Fishers Association. (Outcome 2)
4. Prespa Working Group on Water Management (Outcome 4).
5. Working Group on Monitoring of Prespa Ecosystem Parameters (Outcome 4).
6. Annual lessons learned workshops and roundtable discussions.
7. Mid-term evaluation. Evaluators will consult the POC, the WMC and PNPMC as part of the evaluation, allowing for another opportunity to have input into project management.
8. Participatory monitoring (Outcome 3)

Activities planned during implementation and evaluation, including topics, groups involved, and outcomes.

Type of Stakeholder Participation activity/outcome	Who is participating	Where Cost is Reflected in the Budget <i>Excluding project team Staff time</i>	Time frame
Inception Workshop (IW)	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO/UNDP GEF ▪ Project development team leader & Strategic Action Program expert. ▪ POC members/representatives 	Project Management	Within first two months of project start up
Project oversight meetings at the trans-boundary level.	Project Oversight Committee Members along with any invited contributors/observers.	Cost reflected in project implementation costs.	Following Project IW and subsequently at least once a year.
Project enabling committee (PEC) at national level.	PEC members. Note: PEC will be the Watershed Management Council in MK and Prespa National Park Management Committee in AL.		
Cross –sectoral coordination of spatial planning, water use	Watershed Management Council (MK): Municipality of	Cost reflected in Output 1.4	Established within first two months of

²⁷ ARPAT in Italy, CEZH/ICN in Portugal, EKBY in Greece, SEHUMED in Spain, and Tour du Valat in France.

planning and project implementation in MK-Prespa.	Resen; MoEPP, MoA, Forest Prespa Drvo, Farmers Association of Resen, protected area manager; Prespa Fishers Association; Public Water Management Authority-Resen.		project start up and meet quarterly.
Development of Local Environmental Action Plan for AL-Prespa; cross-sectoral coordination of project implementation in AL-Prespa.	Prespa National Park Management Committee (PNP-MC); Communes of Liqenas and Proger; MoE, PNP Director; Regional Council of Korca, local NGO, Organization for Fishery Management; Directorate of Fisheries; Directorate of Forests and Pastures.	Cost reflected in Output 1.4	Established within first two months of project start up and meet quarterly.
Reducing the environmental impacts of agriculture in Prespa. Demonstrating new techniques; building local capacity to monitor agricultural conditions and apply integrated pest management practices.	Farmer associations in Resen and Liqenas.	Cost reflected under Output 2.1	
Strengthening fishery management by giving local people more of a stake in the benefits of fisheries conservation.	Fishermen; Organization for Fishery Management (AL-Prespa) and Prespa Fishers Association (MK) Fisheries Directorates in MK and AL.	Cost reflected under output 2.6	
Strengthening information baseline and developing conservation plan for Prespa Basin.	Protected area directors; University of Tirana; University of Skopje; NGOs,	Cost reflected in Output 3.1.	Year 1 and ongoing.
Monitoring of biodiversity and ecosystem health parameters.	Appropriate participatory monitoring approach to be developed and implemented. MoEPP; MoE; Prespa Drvo, Fishers Associations; Universities;	Cost reflected under Output 4.4.	Beginning end of year 1 and ongoing.
Consultations to generate lessons learned.	<ul style="list-style-type: none"> ▪ PNP-MC; WMC; ▪ Project team ▪ UNDP-GEF Regional Coordination Unit (RCU) formats for recording best practices. 	Cost reflected under Outcome 5.	Yearly

Note: The cost of stakeholder participation is reflected in nearly every output budget line of the project.

C. Long-term involvement and level of stakeholder participation.

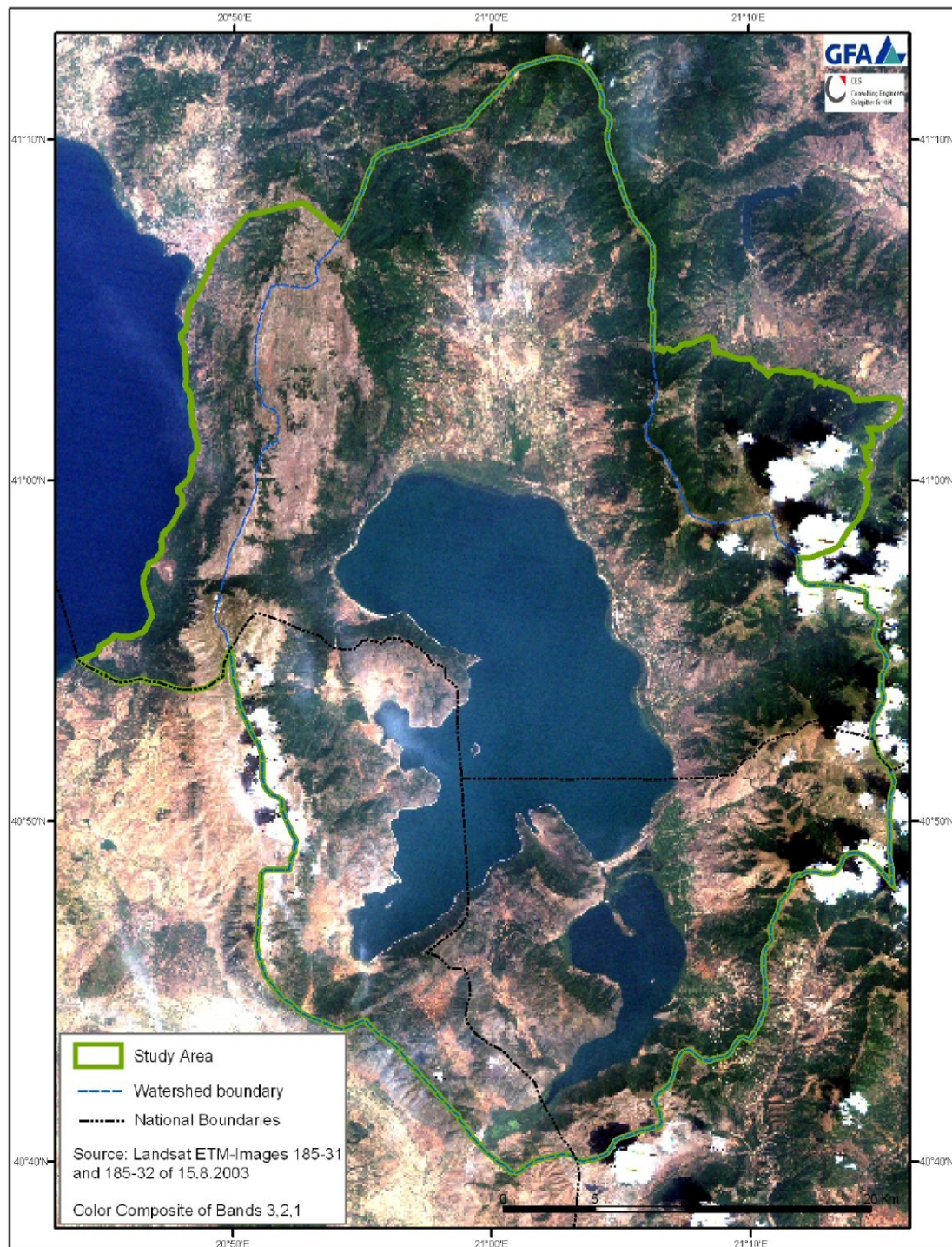
The project must involve stakeholders at three different levels: local, national and trans-boundary. The emphasis of the project is first on the local, second on the national, and third on the trans-boundary. Mechanisms will be in place for stakeholder involvement at all three levels. One of the key messages of the recently published Millennium Ecosystem Assessment report was that measures to conserve natural resources are more likely to succeed if local communities are given ownership over them, share the benefits and are involved in decisions. The project design incorporates this emphasis on local ownership and involvement in

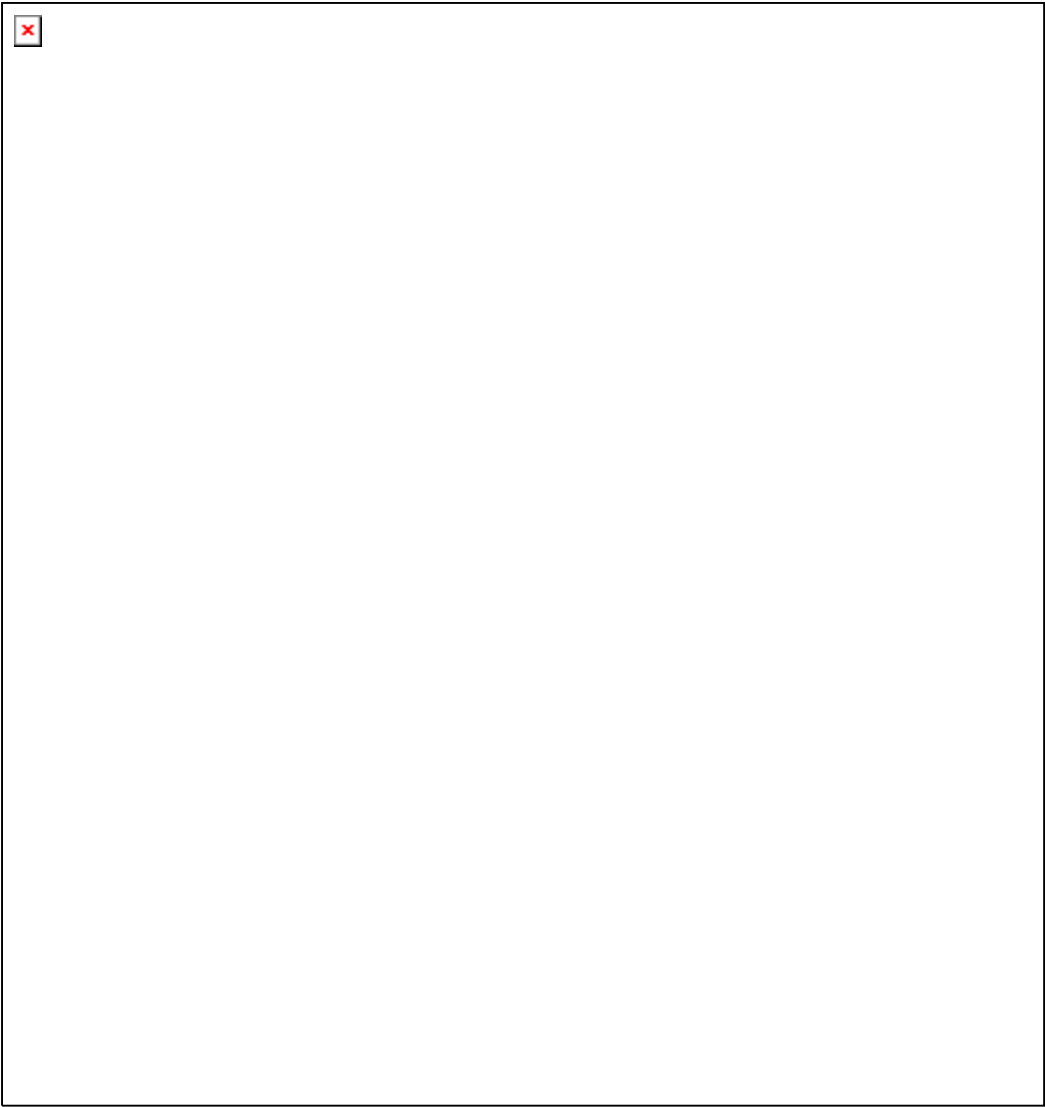
practically everything it seeks to do in Prespa. A crucial aspect of ecosystem management is that it be transparent and participatory.

The impacts of the project on beneficiaries and vulnerable communities, especially women and displaced households are envisioned to be largely positive, as the project aims to empower these groups and communities to collaborate in a mutually beneficial way.

PART V: MAP – PRESPA BASIN

Prespa Park Study 2004 Natural Color Satellite Image Mosaic of Study Area





PART VI: OVERVIEW OF PROJECTS IN SOUTHERN EUROPE/MEDITERRANEAN REGION THAT ARE RELEVANT TO THE PROJECT'S APPROACH.

⇒ UNDP-GEF Project “Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region”

The project addresses biodiversity conservation in coastal and wetland sites of global importance, situated in 5 countries of the Mediterranean region. Priority actions include the development of innovative legal frameworks; development of intersectoral management structures able to address complex land management issues; capacity building, and, the promotion of a regional network able to exchange experience, providing economies of scale and the transfer of innovative components of the project within the region.

This project has already provided some very practical input to the design of this project. The Prespa team considered this project's experience with the management of trans-boundary activities across these five countries and consulted the project manager on this topic. While the two projects are quite different, these insights were incorporated into the design of the Prespa project's management arrangements. In addition, the Prespa project will seek to learn from the past and future evaluations of this project regarding its successes and failures in terms of developing cross-sectoral management structures, and modifying land and water use management practices.

⇒ WB-GEF Lake Ohrid Conservation Project

This project has assisted FYR-Macedonia and Albania in: (1) creating an international Lake Ohrid Management Board to develop the institutional, legal and regulatory framework for trans-boundary cooperation; (2) establishing a monitoring program for water quality, discharges into and uses of the Lake, and changes in natural resources like fish stocks; (3) preparing a Lake Ohrid Strategic Action Plan and Investment Program to address issues of trans-boundary pollution, natural resources management, and environmental impacts; and (4) financing a public awareness campaign and small investments to promote community support, test new technologies and serve as catalysts for future investments.

The project has done some minor piloting initiatives in the Prespa region, primarily related to waste management. This is being built upon by UNDP through its solid waste management work in Prespa now as part of its co-funding for the Prespa project. The project has also generated useful lessons learned, among them being successes and failures associated with establishing a trans-boundary management body and financing it and vesting it with real decision making authority. Some of the other lessons learned that will be incorporated into the Prespa project's activities are the following²⁸:

- ⇒ A trans-boundary resource needs an international board or agency to establish priorities, facilitate cross-boarder communication, and coordinate an integrated action plan.
- ⇒ Stakeholder involvement and public participation are key to effective action.
- ⇒ Build local capacity and use local groups for implementing watershed management projects.

²⁸ Watson et.al. “Lake Ohrid: Lake Basin Management Initiative Experience and Lessons Learned Brief” presented at Lake Basin Management Initiative Regional Workshop for Europe, Central Asia and the Americas. Saint Michaels College. Vermont. USA. 2003

- ⇒ Administrative training and capacity building to meet World Bank, GEF, Ministry and other administrative requirements is critical as early as possible in the project.
- ⇒ Research and monitoring is essential to assess baseline conditions in the ecosystem and provide the information necessary to guide decision-makers.
- ⇒ Use early successes to draw new investments. Seek a broad base of support and funding, capitalizing on a trans-boundary awareness and constituency.

⇒ **Med-Wet: The Mediterranean Wetlands Initiative**

MedWet, a partnership among the European Commission, the Ramsar Bureau, the governments of France, Greece, Italy, Portugal and Spain, and several Non-Government Organisations (NGOs) - Wetlands International, WWF International, the Station Biologique de la Tour du Valat and the Greek Biotope/Wetland Centre.

MedWet is a coordination mechanism for wetland activities in the Mediterranean Basin, designed to involve all major stakeholders. It owes its origins to an international conference organized by Wetlands International in Italy in 1991. The MedWet1 project (1992-1996), funded by the European Union began building the collaborative MedWet network and developed regional methods and tools.

In 1999 MedWet became a formal inter-regional structure for the implementation of the Ramsar Convention. A MedWet Coordination Unit was established under the Ramsar Convention Bureau comprised of a Coordinator and four staff based in Athens, Greece, with financing from the Greek Government. It is assisted by the MedWet Technical Network of four research and conservation institutes units (EKBY, SEHUMED, Tour du Valat, and ICN).

MedWet is already an important participant in the trans-boundary aspects of work in Prespa, holding permanent observer status on the PPCC. MedWet will continue to play an important role in helping bring best practices and lessons learned to Prespa and in helping to disseminate the Prespa Project's best practices and lessons learned to other initiatives in the region.

⇒ **UNEP-GEF Regional Project "Enhancing Conservation of the Critical Network of Sites of Wetlands Required by Migratory Waterbirds on the African/Eurasian Flyways."** (Estonia, Hungary, Lithuania, Mauritania, Niger, Nigeria, Senegal, Gambia, South Africa, Tanzania, Yemen, Turkey)

This project aims to improve the conservation status of African/Eurasian migratory waterbirds by enhancing and coordinating the measures taken by countries to conserve key critical wetland areas that these birds require to complete their annual cycle, including their stop-over sites and "wintering grounds". The project will be a catalyst for integrating best practices into conservation efforts throughout the flyway, using existing coordinating mechanisms and commitments, particularly those of the Ramsar Convention and the Agreement on the Conservation of the African-Eurasian Migratory Waterbird Accord of the Convention on Migratory Species (AEWA/CMS), and a number of international and local NGOs. It will combine a high proportion of catalytic regional activities, aimed at all the GEF-eligible countries on the flyway (particularly training, exchange of know-how/best practices, and communications activities), with a number of national and site-based demonstration actions. The project area covers the African/Eurasian area as defined in the AEWA Accord. This includes Africa, Europe, south-west Asia, Greenland and the Canadian Archipelago.

This UNEP project and its networks promote capacity building, international cooperation and exchange of information and expertise and the establishment of international reserve networks, specifically also for endangered migratory waterbird species. The Prespa project will both share lessons learned through this network and seek to benefit from lessons learned and best practices generated by the network.

⇒ **LakeNet** (www.worldlakes.org)

LakeNet is a global network of more than 1000 people and organizations in 100+ countries working for the conservation and sustainable management of lakes. The LakeNet Secretariat is a U.S.-based nonprofit organization dedicated to bringing together people and solutions to protect and restore the health of the world's lakes. All of LakeNet's diverse programs are aimed at improving the stewardship of lake ecosystems by educating and inspiring people, cultivating leadership, and strengthening lake organizations. LakeNet is already an important contributor to GEF's lessons learning networks and will be an important facilitator for the Prespa project's many needs for learning and sharing of best practices in lake management and conservation.

SIGNATURE PAGE

[Note : leave blank until preparing for submission for CEO endorsement]

Country: _____

UNDAF Outcome(s)/Indicator(s): _____

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s): _____

(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s): _____

(CP outcomes linked to the SRF/MYFF goal and service line)

Implementing partner: _____

(designated institution/Executing agency)

Other Partners: _____

Programme Period: _____

Programme Component: _____

Project Title: _____

Project ID: _____

Project Duration: _____

Management Arrangement: _____

Total budget: _____

Allocated resources: _____

- Government _____
- Regular _____
- Other:
 - Donor _____
 - Donor _____
 - Donor _____
- In kind contributions _____

Agreed by (Government): _____

Agreed by (Implementing partner/Executing agency): _____

Agreed by (UNDP): _____

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