

## Transboundary Fish and Fisheries Management Planning in the Prespa Lakes Basin

Mission Report No. 1 (20 December 2008)

*(Includes minutes from tri-lateral stakeholder consultation workshop  
on 27 Nov 2008)*

1<sup>st</sup> Field Visit (24-28 November 2008)

*Wolf D. Hartmann*

*Transboundary Fish and Fisheries Management Specialist*

*The views expressed herein are those of the author and do not necessarily reflect the official position  
of the United Nations Development Programme.*

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## 1. Background

The aim of the UNDP - GEF Prespa Regional Project 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 at the local, national and trans-boundary level in the three riparian countries in the Prespa region by piloting ecosystem-oriented approaches into spatial planning, water management, agriculture, forest, fisheries and protected area management.

The Prespa Regional Project is responsible for catalysing the stakeholder involvement in ecosystem management and sustainable development in the Prespa Lakes Basin.

In order to initiate the integration of the fisheries sector into basin management planning and implementation, a Transboundary Fish and Fisheries Management Consultancy is under implementation. This consultancy will provide a situational analysis of fisheries in the basin and lead to a transboundary stakeholder workshop during which additional information will be compiled and a systematic, integrated and participatory process for setting up and implementing transboundary fisheries cooperation.

The above mentioned field visit was the first event leading to this process.

## 2. Objective

The objective of the field visit was:

*Key stakeholders provide relevant information on basin fish and fisheries and contribute methodologically and technically to the formulation of a process for transboundary cooperation in fisheries management and development.*

## 3. Outputs

The above mentioned event will lead to the following outputs:

1. Existing information on fish and fisheries management compiled.
2. Key stakeholders consulted on occasion of a tri-lateral stakeholder consultation.
3. Information gaps identified and process for obtaining missing and/or necessary information agreed upon (including the option of commissioning of technical papers).
4. On the basis of information gaps identified, thematic priorities for a Transboundary Fisheries Workshop to be held in February 2009 formulated.

## 4. Results

### 4.1 Compilation of Information on Features and Issues of Prespa Fisheries

Information on features and issues of Prespa fisheries was obtained by compiling scientific literature and project documents (Annex 1), and from presentations made and discussions held at the Transboundary Stakeholder Consultation in Korcha, Albania, on 27 November 2008 (Annex 3). In order to obtain comparative information for presentation and discussion at that event, a checklist of key points was distributed ahead of the Meeting (Annex 2). Preliminary information organized according to the checklist is presented in Annex 4. Annex 5 contains the Minutes of the Stakeholder Consultation held in Korcha.

On the basis of information received, the following preliminary conclusions (or 'hypotheses') can be made for discussion, clarification and further verification on occasion of the upcoming Transboundary Fisheries Workshop to be held in possibly in February 2009:

- Changes in species composition are mainly due to changes in habitat and changes in water body available, which shows a reduction of approx. 7% in comparison to earlier years (due to decrease in water level and eutrophication).
- Catches are dominated by indigenous species; however, the extent of catches of the alien species may be significant (insufficient information as these fish are discarded before landing).
- About 136 fishing units were licensed in the Prespa lakes, involving a total of about 360 fishers in 2007 (fishing in FYR MK Prespa closed in 2008).
- Total catches in AL and FYR MK Prespa were in the range of 80 – 90 t in 2007. It appears that actual landings are well below total allowable catch, which, based on information from FYR MK, may be in the range of 450 t/year (AL 80 t; GR 80 t; FYR MK 290 t [of which 260 t for commercial fisheries and 30 t for recreational and sports fisheries]). While presently dominating species are underutilized, species such as carp may be overfished.
- Underutilization of fish stocks may be due to the low commercial value of certain species. In order to encourage harvesting of these species, provisions for improved utilization and value addition have to be made.
- Contribution of national inland fisheries to GDP in all three riparian countries is low, and the contribution of Prespa fisheries almost negligible regionally. However, Prespa fisheries may be important locally.
- There is extensive fisheries legislation in Albania and FYR Macedonia (little or no information on the situation in Greece), both primary legislation (specific fisheries laws) and secondary legislation (by-laws, decrees etc.). Many aspects and issues (such as gear...) are governed by national legislation, which may difficult harmonization of fisheries legislation for Prespa fisheries between the riparian countries. A degree of 'harmonization' exists as all riparian countries strive to develop legislation and policies in accordance with

international legislation and conventions (such as EU and FAO Code of Conduct for Responsible Fisheries).

- There are good possibilities for fisheries co-management in all three riparian countries, with fisheries organizations existing in all three riparian countries. Fisher organizations are already now expected to participate (or are actively participating) in important management activities such as data collection, law enforcement, habitat protection and fisheries enhancement. The costs of management will have to be estimated, and mechanisms for management funding developed.
- The formulation of fisheries management plans is required by law in AL and FYR MK. Not so in GR. Under the auspices of SPP species Prespa-wide action plans for trout and barbel were developed. However, whose responsibility it is to implement these plans.
- Fisheries management planning and implementation may continue to be a task for national, regional and local institutions, which, after all, is in line with the important governance principle of subsidiarity. However, it has to be guaranteed that national planning and implementation is coordinated by and between the three riparian countries. While the project presently makes progress in improving communication with the public in general (through thematic brochures, websites and similar), it is imperative that an efficient system and mechanisms of internal communication between major stakeholders is developed.

## 4.2 Identification of Information Gaps and Agreement on Process of Obtaining Missing Information

Three national working groups discussed, identified and prioritized areas where information is insufficient and which will have to be addressed with special emphasis in the preparation and implementation of transboundary fisheries management in the Prespa lakes basin.

### Priorities for Information Collection

Issue	AL	GR	FYR MK
Data collection and statistics	X	X	X
Infrastructure for processing etc.	X		X
Status of species/monitoring	X	X	X
Illegal gear/prohibited gear	X		
Reduction of invasive species	X	X	
Protected areas/key habitats	X	X	
Coordination with other countries/institutions	X	X	X
Proposal of AL Micro Prespa	X	X	
Clearing house for collected information			
Stocking		X	

The following thematic areas were identified which are of interest and concern for all riparian countries:

- Data collection; statistics; monitoring;
- Status of fish species;
- Coordination with other countries/institutions.

Thematic areas of interest for most riparian countries are:

- Fisheries infrastructure (for landing, processing and marketing of catches);
- Reduction of alien species;
- Protection of key habitats.

Consequently, the following priority areas for discussion at the upcoming workshop were identified as:

- Fisheries data collection and monitoring;
- Fisheries ecology;
- Fisheries and livelihoods, and
- Institutional Set-up of fisheries management.

It was discussed and agreed that information in addition to what was presented at the Stakeholder Consultation should be provided in the form of working papers prepared by a lead author with the possible contribution from collaborating authors in order to cover all three riparian countries. The working papers are expected to contain a description and analysis of experiences made so far and lessons learned, as well as suggestions for future arrangements.

## 5. Itinerary

22 – 23 November 2008	Travel from Vientiane through Bangkok, Istanbul to Skopje by air. Taxi Skopje-Bitola. Meeting with A. Lopez and P. Whalley, TB Diagnostic Analysis, Consultant. Overnight Bitola.
24 November 2008	Bitola – Resen. Study of project documents in UNDP/GEF Project Office. Discussion with Mr. N. Zdraveski, National Project Specialist. Overnight Bitola.
25 November 2008	Bitola – Resen. Study of project documents in UNDP/GEF Project Office. Introduction to UNDP/GEF Project by Mr. A.Lopez. Discussion with Mr. D. Sekovski. Overnight Bitola.
26 November 2006	Bitola – Resen. Literature review. Discussion of project issues with Mr. A. Lopez. Vist to Lake Macro Prespa. Afternoon: Travel to Korca, Albania. Overnight Korca.
27 November 2008	Stakeholder Consultation, Korca, Albania. Evening: Travel Korca – Resen- Ohrid. Overnight Ohrid.
28 November 2008	Meeting with Dr. Z. Spirovski and visit of the Hydrobiological Institute, Ohrid. Discussions with Dr. Spirovski, Ms. Illik-Boeva, and Mr. A. Lopez.

- Afternoon: Travel Ohrid – Resen and work on project documents.  
Resen – Ohrid. Overnight Ohrid.
- 29 – 30 November 2008 Return travel from Ohrid through Skopje and Istanbul to Utapao in Thailand. Travel by taxi Utapao – Pattaya – Udon Thani.
- 01 December 2008 Travel Udon Thani – Vientiane.

## 6. Persons Met

During the field visit, I was able to interact with 36 persons from the three riparian countries (AL: 10; GR: 2; FYR MK: 24), who provided information in the project office in Resen, FYR Macedonia, in particular during the Stakeholder Consultation in Korcha, Albania and during a visit to the Hydrobiological Institute in Ohrid, FYR Macedonia.

More detailed discussions were held with the following persons:

- Rezant KapedaniArdit Konomi, National Project Officer, UNDP GEF Prespa Project, Korcha, Albania;
- Irene Koutseri, Society for the Protection of Prespa; Agios Germanos, Greece;
- Alvin Lopez, International Transboundary Advisor, UNDP GEF Prespa Project, Resen, FYR Macedonia;
- Dimitar Sekovski, Project Manager, UNDP GEF Prespa Project, Resen, FYR Macedonia;
- Dr. Zoran Spirovski, Hydrobiological Institute, Ohrid, FYR Macedonia;
- Nikola Zdraveski, Project Specialist, UNDP GEF Prespa Project, Resen, FYR Macedonia.

## 7. Next Steps

The following steps will be taken:

<u>Task</u>	<u>Person(s) responsible</u>
Development of TOR for lead authors o technical working papers (developed)	Wolf Hartmann
Development of draft agenda for upcoming Fisheries Workshop in February 2009	Wolf Hartmann
Review and analysis of scientific literature and project documents compiled on occasion of 1 <sup>st</sup> field visit	Wolf Hartmann
Sub-contracting of technical specialists as lead	Alvin Lopez



authors for preparation of working thematic papers

Dissemination of invitation to participants of Alvin Lopez  
upcoming workshop

Elaboration of thematic working papers in Lead authors  
collaboration with TB Fish and Fisheries Consultant

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## Annexes

Annex 1: Literature Compiled

Annex 2: Checklist for Data and Information Identification and Compilation

Annex 3: Presentations Received

Annex 4: Preliminary Information on Features and Issues of Prespa Fisheries

Annex 5: Minutes of the Transboundary Stakeholder Consultation, Korcha, 27 November 2008

Annex 6: TOR for Writers' Contracts (Working Papers)

Annex 7: Elements of a Draft Agenda for a Transboundary Fisheries Workshop (25 February 2009)

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## Annex 1

### Literature Compiled

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- (Detailed bibliographic references will be given in the Situational Analysis Report.)

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## Annex 2:

### Checklist for data and information identification and compilation

1.1. Info on key parameters of fish fauna (relative abundance, species diversity, population trends)

1.2 Fisheries management issues:

- Fisheries ecology [migration; inventory of spawning sites and other key habitats)
- Fishing effort (craft; gear; fishers; increase/decrease)
- Catches (increase/decrease)
- Post-harvest (processing [incl. traditional products]; marketing; infrastructure)
- Impacts on/from fisheries

1.3. Current management practices

- Fish conservation
- Introduction/stocking of non-native/native species
- Data collection/statistics
- Institutional setup: Legislation/rules; administration; policy; research; planning and decision-making

1.4. Contribution of fisheries to livelihoods

- Employment/income
- Present 'Alternative fishing incomes'

## Annex 3

### Presentations Received

Dzurovski, Z.: Actuality and experience with fishery in Macedonian part of Prespa Lake.

Krsteovski, L.: Adaptation of the location Fisherman Village in Otesevo in the Pilot center for restocking with monitoring station.

Dzurovski, G.: Partnership for managing of the natural hatcheries of the carp in the Prespa Lake.

Tapandzioska, E.: Ministry of Agriculture, Forestry and Water Economy. Fishery Legislation and Institutional/Administrative Capacity (Overview of Progress).

Spirkovski, Z., Talevski, T., & Ballik-Boeva, D.: Fisheries at Big Lake Prespa at the Macedonian Part.

Kapedani, R.: Prespa trilateral workshop on fisheries – Albania.

## Annex 4:

### Preliminary information obtained through presentations and interviews

#### Fisheries ecology:

Over the centuries, lake has experienced significant water level oscillations (10<sup>th</sup> and 11<sup>th</sup> century lower than in 20<sup>th</sup> century). End of 20<sup>th</sup> century: Over a short time lake has dramatically changed from oligotrophic to mesotrophic and eutrophic conditions, with oxygen depletion >15 m depth and high phosphorous concentrations, mainly due to water extraction for irrigation, as well as effects from global warming.

**Habitat changes:** Shrinking of water volume and disappearance of spawning habitats (Lowering of water level leads to drying up of spawning areas (expansion of the littoral zone); spreading (enlarging) of emergent macrophyte vegetation on the lake bottom leads to presence of anoxic water layers below 15 m depth – reduced water space available for fish; in addition, algae blooms, decreased transparency lead to declined bottom fauna abundance.

#### Fish fauna, abundance and diversity

**Indigenous (16):** Albanian Roach *Pachychilon pictum* (Hec. et Kn.); Barbel *Barbus prespensis* (Kar.); Bleak *Alburnus alburnus arborella* (Fil.); Carp *Cyprinus carpio* (L.); Common Minnow *Phoxinus phoxinus* (L.); Common Nase *Chondrostoma nasus* (L.); Dace *Leuciscus cephalus* (L.); Eel *Anguilla anguilla* (L.); Elver *Cobitis taenia meridionalis* (Kar.); Gudgeon *Gobio gobio* (Kar.); Kamnar *Nemachilus barbatulus sturanyi* (St.); Pearl Roach *Scardinius erythrophthalmus scardafa* (Bon.); Ray-finned Fish *Phoxinellus minutus* (Kar.); River Trout *Salmo peristericus* (Kar.) in tributaries; Roach *Rutilus rubilus ohridanus* (Bon.); Spirin *Alburnoides bipunctatus* (Kar.).

**Exotics (3):** Catfish *Silurus glanis* (L.); Crucian Carp *Carassius carassius* (L.); Sunfish (also called Pumpkinseed?) *Lepomis gibbosus* (L.).

#### *Relative abundance:*

Species distribution (% in the catch)

Species	1959-1984	1989-1999
Cyprinus Carpio	9.22	0.40
Barbus Plejebus Prespensis	2.84	0.83
Chondrostoma nasus Prespensis	43.81	5.02
Rutilus Rubilus Prespensis	5.95	12.07
Alburnus Alburnus Belvica	25.43	70.06
Leukos Aula Prespensis	12.76	10.62

Source: Ribomak concessionaire

**Changes in fish ecology:** From phytophilyc to psamophilyc and littophilyc, mostly expressed in the spawning ecology (spawning site substitution in the case of bleak, carp, undermouth and barbel. Presence of alochtonous/alien/exotic species.



*Causes for changes in the species structure (from Ribomak):* Mortality of carp due to fish disease ('eritrodermatitis') in 1973; decrease of the level of the lake (loss of natural carp spawning grounds). Disregard of closed seasons; fish not protected during spawning season. Disregard of using only legal fishing gear. Increase in pollution.

*Species diversity:* Species introduction: In AL, introduction of Pumpkinseed (accidentally, with other stocking material), around 20 years ago; an exotic species highly detrimental to native stocks. Possibly makes up a large proportion of catch, but doesn't enter statistics as it is being discarded.

### Fisheries management issues

*Fishing effort (fishers; craft; gear; increase/decrease):*

AL: 1996 – 150 fishers on Makro Prespa; 2007 – 25 'subjects' (fishing units [license, 1 boat and 2 fishers]), or 52 fishers on Macro Prespa and 16 'subjects', or 16 fishers, on Micro Prespa. Unknown number of illegal fishers; family fishing for subsistence by everyone. Decrease:

GR: 35 licensed fishers on Macro Prespa (village of Psarades). Unknown number of illegal fishers (problem).

FYR MK: Presently fisheries has been stopped (since July 2008), expecting the ruling of a new concession. Before July 2008: 240 fishers with 60 licenses.

*Catches (increase/decrease):*

AL: 1996 Bleak 300 t; 2007 Bleak 60-70 t (a decrease of almost 80%). 1996 Carp 20 t; 2007 2-3 t (a decrease of almost 90%). Main fishery: For bleak; small amount of carp (decrease of quantity of fish of all species, but particularly carp).

GR: Fisheries banned in Micro Prespa; Macro Prespa: carp population crashed; habitat destruction, overfishing. Recently carp and other populations have been stabilised. Catches:

FYR MK: Bleak dominates the catch. Total annual catch (1946 [118 t] - 2007 [19t] from the FYR Macedonian part of lake Macro Prespa. This signifies a decrease by more than 80% (84%).

### Current management practices

*Fish conservation:*

3 different closed seasons: FYR MK 2 months; AL 1 month; GR 1 ½ months. (Trilateral agreements until last year on spawning season).

*Introduction/stocking of non-native/native species:*

300,000 of carp fingerlings/year in AL (broodstock from lake); using existing genetic pool; preservation of endemic carp. Stocking strategy in AL: To maintain stock of native carp as major commercial stock, as carp critically for Prespa: addressed nationally, with regional/transboundary collaboration. Stocking programs through 'Repro Centers': AL/FYR MK (Ohrid); AL Prespa), to stock Prespa with native carp and other wild native species. Problem of lack of evidence of positive impacts from stocking.

### Institutional setup

#### *Legislation/rules:*

AL: National level (gears); GR: National level (gears); regional level/prefecture (closed seasons; bans). Harmonization of legislation and policies: Not so much trilaterally, but more according to regional/global directives (EU; CCRF; IUU; [AL: National legislation aligned with pertinent EU legislation]; etc.).

#### *Fisheries Management Organizations and Institutions:*

AL: Directorate of Fisheries, Korcha and Gjirokastra Region.

GR: Management Board of Prespa National Forest (since May 2008). Management Board: Prespa National Forest Management Board also manages fisheries

FYR MK: ??

*Trilateral:* Trilateral communication and collaboration on fisheries issues) since 1946 (?). 1990s [Tri-/bi-lateral commissions for Prespa and Ohrid]?). In 2002, an Annual Meeting on Decision-making on Closed Seasons for Fishing was established (on occasion of or as a result from Meeting of Prime Ministers), which meets regularly (except in 2008, when it was to be hosted by Greece). Questions: Who initiated/initiates? Name? Composition? Objectives? Decision-making on basis of what?

### Fisher organizations

AL: 1 Fisheries Management Organization (FMO) for fishers from Prespa Lakes (FMO of Korcha?); established since 2002 (based on law No. 8870); attempt by Gov. to make sector more active, with support from WB; main activities: Awareness creation (legal/illegal fishing; sustainable fisheries); provision of equipment and boats; Monitoring.

GR: 1 Fisher Association in village of Psarades; 35 members, all licensed fishers.

FYR MK: 1 Fisher Organization, Resen. Receives support from UNDP/GEF (?). Aim of collaboration: guards protecting the lake.

### Collaborating government organizations

AL: Ministry of Environment, Forestry and Water Administration – MEFWA in charge of fisheries since 2005. Its Directorate of Fishery Policies (DFP) responsible for setting closed seasons/areas, legalization of fishing gear and craft. On district level (14 districts) there are Fishery Inspectorates tasked with designing and implementing fisheries management plans involving fisheries communities and Fisheries Management Organizations (FMOs) and implementation of fisheries laws. Also: Center for Fisheries and Aquaculture (What exactly is its role and status?).

GR: ??

FYR MK: Fisheries are under the Ministry of Agriculture, Forestry and Water Economy, Department for Agriculture, Unit for Fishing and Aquaculture. The Ministry of Natural Resources is also concerned with fisheries, in particular fisheries conservation.

### Collaborating NGOs

AL: ??

GR: Society for the Protection of Prespa (SPP); Monitoring of endemic species (autochthonous; relic); formulation of Action Plans to protect habitats and species (lakes and rivers; Prespa Barbel; Prespa Trout); Long-term monitoring by NGO (SPP), focused on Micri Prespa;

FYR MK: Association of Sportsfishermen ("Pelikan"); Association of Sportsfishermen and Young Musicians; NGO helping fishers with monitoring. Committed themselves financially.

Project: „ Setting up a Pilot Center for Restocking and a Monitoring Station in the Fishing Village of Otesevo“ by the NGOs ‘Young Musicians’, Resen, and Sportsfishing Association ‘Pelikan’, Resen.

**Objectives:** 1. Improved monitoring of fish fauna, spawning areas ('hatcheries'), fishing methods, and fish landings. 2. Stocking of the lake with carp and barbell fingerlings (?).

**Activities:** 1. Establish partnership between concessionaire, government and NGOs. 2. Equipping of boats for monitoring (how?). 3. Training of 10 persons in monitoring and realization of 9 days of monitoring (When? Where?). 4. Preparations of reports, proposing management measures to be taken. 5. Preparation of the area for restocking; preparation of a traditional method of enhancement ("Koca"), cultivation of Californian worms to feed fish (for what?). 6. Purchase of fry/hatchlings, raising of fingerlings to advanced stages in fish ponds and feeding of fingerlings. 7. Moving of the fingerlings to Oteso, feeding and restocking in the lake. 8. Organization of events to raise public awareness regarding fisheries in Lake Prespa.

**Results:** 1. More people are involved in monitoring; monitoring is carried out according to a schedule (how many? How often?). 2. Improved technical capacity for monitoring (what exactly?) and supply of natural food (what?) for fish. 3. Increase quantity of fingerlings for restocking (how many?). 4. Increased fish population in the Prespa Lake (how much? How is this monitored/estimated/assessed?) 5. Increased knowledge and public awareness for problems of Prespa fisheries (what exactly? How is this monitored?).

Project: „Partnership for managing natural carp spawning grounds in Prespa Lake“ by the NGOs ‘Young Musicians’, Resen, and Sportsfishing Association ‘Pelikan’, Resen.

**Objective:** Involvement of the local population in the protection of natural carp spawning grounds in Prespa Lake, through awareness creation and capacity-bulding of local fishermen from four villages (Asamati, Perovo, Stenje and Dolno Dupeni) and sports fishermen.

**Activities:** 1. Implementation of a workshops for managing natural spawning grounds (sharing of experiences; creation of new insights and approaches into the management of natural spawning grounds and areas [geographical borders; condition of flora and its influence on the carp; condition of fauna important as feed for carp; condition of the lake bed (substrate?); levels of light penetration in lake water; anthropogenic influence on the spawning grounds. 2. Experimental fishing (determination of movements of carp through spawning grounds over a six-months period; biometrical analysis of the carp (lengths/weights?); presence of predators of the carp in spawning grounds).

**Results:** Mapping and marking of four spawning grounds; placing of informative tables; accurate information on conditions in four carp spawning grounds in Prespa Lake available; 20 fishers trained in proper management of spawning grounds (?); involvement of local fishers Asamati, Perovo, Dolno Dupeni and Stenje in the management of spawning grounds by forming a Fisher Association; increased knowledge of fishers, tourists, local community members regarding borders of four carp spawning; increased carp population in Prespa Lake; increased income to local fishers due to increased catch of carp.

#### Research (Collaborating universities/research institutes)

AL: ??

GR: ?? (What is actual/possible role of universities [Salonic; Ioannina]?)

FYR MK: Hydrobiological Institute, Ohrid; University of Skopje (Fac. of Biology; Fac. of Mathematics; Fac. of Veterinary Sciences)

#### Policy, Planning and decision-making

**Transboundary management:** National allowable fish catch (TACs) to take into consideration the total fish stocks in Prespa. While presently different fishing gears are used, in future only certain fishing gears should be legalised in all 3 countries. Furthermore, fisheries law and regulations should be harmonised. Collaboration in fisheries management by and between the 3 countries is presently insufficient and needs to be intensified.

**Role and activities of last concessionaire (SIZ Ribomak):** Cooperative relationship with individual fishers; maintenance of fishing stations (?); (provision of) fishing gear (?); purchase of fish from fisher and sale to traders (middleman function?); patrolling/enforcing fishing regulations on lake; collaboration with government agencies concerned; (promotion of ) sports fishing (how?)

**Management measures directed at the protection, sustainable exploitation and further development of fish fauna and stocks:** Proper use of the fishing gear; only gill-nets ('hanging fishing nets') to be used. Mesh-size restrictions/regulations. Control/eradication of illegal gear. Enforcement of minimum lengths of fish.

Close collaborations with all competent institutions (such as scientific institutions, local government agencies, local community, NGOs) in the implementation of the fishing concession.

**Management plans:** Are management plans compulsory? In FYR MK management plan required by law. However, no fisheries management strategy on national level. In AL Regulation No. 1 says that management strategies or management plans should be drawn up. In GR: no management plans required. Nevertheless, SPP has formulated Action plans.

Fisheries Co-management Plans in AL: Determining exploitation potential of fish stocks; number of fisher licenses; number and types of gear; Total Allowable Catch. In collaboration with police, eradication of illegal fishing, apprehension and destruction of illegal boats; reparation of maps of spawning grounds, protected areas; taking measures for enforcing fishing ban during spawning season.

### Contribution of fisheries to livelihoods and economies

What is the importance of inland fisheries nationally? In AL, 80% of fisheries are marine. In FYR MK only freshwater fisheries, as it is a land-locked country. In GR:?

Fishing is reported to be one of the most important sources of income for the Albanian part of the basin. In Albania, in 2004 15 license holders generated about 24,000 EUR, which corresponded to an income of 1,600 EUR per capita (15% of the annual per capita income).

GR: 2% of local work force employed/active in Prespa fisheries.

FYR MK: (Inland) fisheries contributes 0.1% to GDP.

### Fisheries development needs

Enforcement (GR); Establishing fisheries database (GR; FYR MK); Legislation harmonization (FYR MK); Joint Fisheries Management Plans (FYR MK)

Elimination of exotics (GR); Acting on habitat (spawning) (GR);

Need for quality addition/value addition (canning; smoking; drying); as some of the fish difficult to being sold (Bleak; Pumpkinseed). Opportunities for funding of livelihood activities (incl. infrastructure for fish utilization) through EU, from 2009 onwards.

Establishment/maintenance of 'Repro Centers'; Need of fingerlings to be tagged/marked, to evaluate impact/success/usefulness of stocking programmes (FYR MK).

Action Plans: Species Action Plans and Habitat Action Plans (including for commercial species); TB Action Plan (GR/FYR MK) (Who and how to implement?)

Better collaboration with scientific institutions ("In fisheries meetings normally little science...").

## Annex 5

# Tri-lateral Stakeholder Consultation for Trans-boundary Fish and Fisheries

**Date:** 27 November 2008  
**Venue:** Grand Hotel, Korca  
**Time:** 08:30 – 16:00

**Report prepared by:** Zdraveski Nikola, Project Specialist  
Gordana Cvetkoska, Project Assistant  
Alvin Lopez, International Trans-boundary Advisor



## Contents

1. Aim of the Tri-lateral Stakeholder Consultations for Trans-boundary Fish and Fisheries management in the Prespa Lakes Basin .....?
2. Presentation on fish and fisheries management at Prespa Lakes and its tributaries: situation, needs, plans and policies – the government perspective .....?
3. Presentation on fish and fisheries management at Prespa Lakes and its tributaries: situation, needs, plans and policies – the user/fisher perspective... ..?
4. Identification of information gaps.....?
5. Identification of and agreement on process to close information gaps, including the thematic priorities for scheduling technical workshop.....?
6. Wrap-up and closing of workshop.....?.

Annex I: List of Participants at the Tri-lateral Stakeholder Consultations for Trans-boundary Fish and Fisheries management in the Prespa Lakes Basin

Annex II: Presentation from the Albanian Ministry of Agriculture

Annex III: Info needs and gaps

Annex IV: Presentation from Hydrobiological institute

Annex V: Presentation from the FYR Macedonian Ministry of Agriculture, Forestry and Water Economy

Annex VI: Joint presentation from the former concessionaire and local NGOs from FYR Macedonia



## Agenda

- 8:30 – 8:40 Introduction of meeting theme and background; adoption of agenda (*Alvin Lopez, International Trans-boundary Advisor – UNDP/GEF Prespa regional project*)
- 8:40 – 10:10 Presentation on fish and fisheries management at the Prespa Lakes and its tributaries: situation, needs, plans and policies – the government's perspective (*National Fish and Fisheries Management Specialists*)
- 10:10 – 10:30 Coffee break
- 10:30 – 12:00 Presentation on fish and fisheries management at Prespa Lakes and its tributaries: situation, needs, plans and policies – the user/fisher perspective (*representatives of fisher or other civil society organizations*)
- 12:00 – 14:00 Lunch break
- 14:00 – 14:45 Identification of information gaps (*Wolf Hartman – Trans-boundary Fish and Fisheries Management Consultant*)
- 14:45 – 15:00 Coffee break
- 15:00 – 15:45 Identification of and agreement on the process to close information gaps, including the thematic priorities for scheduled technical workshop (*Wolf Hartman – Trans-boundary Fish and Fisheries Management Consultant*)
- 15:45 – 16:00 Finalization of the meeting: Next steps (*Wolf Hartman – Trans-boundary Fish and Fisheries Management Consultant and Alvin Lopez*)

## **1. Aim of the Tri-lateral stakeholder consultations for trans-boundary fish and fisheries management in the Prespa lakes basin**

The aim of the UNDP - GEF Prespa Regional Project 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 at the local, national and trans-boundary level in the three riparian countries in the Prespa region by piloting ecosystem-oriented approaches into spatial planning, water management, agriculture, forest, fisheries and protected area management.

The Prespa Regional Project is responsible for catalysing the stakeholder involvement in ecosystem management and sustainable development in the Prespa Lakes Basin.

Current fisheries management practices in the Prespa Lakes Basin remains a cause for concern. In the past, various detrimental activities have been reported to have severely impacted fisheries in the Prespa lakes basin (i.e. including several major contributing tributaries). These practices have particularly impacted several endemic fish populations.

Fish-stocking exercises (with the intention of increasing volume) have also reportedly resulted in the introductions of several exotic fish species in Prespa Lake. The detrimental impacts of these exotics have not yet been fully understood. Amongst the three littoral States, fishing is conducted at differing levels of intensity with differing management guidelines and institutional arrangements. Overall, fisheries management policies have until now placed very little emphasis on aquatic ecosystem health. The three States however, in principal, agree on a ban of fishing during spawning season (April-June), though enforcement remains sporadic.

The effort to monitor fish population trends and quality of its habitat also differs amongst the littoral States. Insufficient staffing and logistics to carry out duties is often the main challenge. The significance of fisheries to livelihoods of the people in Prespa is also not fully documented.

In order to initiate the integration of the fisheries sector into basin management planning and implementation, a Trans-boundary Fish and Fisheries Management Consultancy is being conducted.

The consultancy is expected to provide a situational analysis of the fish and fisheries management issues in the Preps lakes basin emphasizing on fish conservation issues and introduction on non-native fish species. Upon series of two workshops the consultant will collect all relevant necessary information to develop a proposal outlining a systematic, integrated and participatory process (including resource requirements-financial and human resources) with clear milestones to ensure trans-boundary cooperation in dealing with fisheries management issues. It is anticipated the process to be implemented within the life-time of the GEF project with support of the various national institutions relevant for fish and fisheries management in the littoral states.

This trilateral consultations meeting will be the first event leading towards this process. The objective of the meeting is to ensure that:

*Stakeholders identify, compile and provide and share relevant information on basin fish and fisheries and contribute methodologically and technically to the formulation of a process for transboundary cooperation in fisheries management and development.*

The above mentioned event will lead to the following outputs:

- Situation of fish and fisheries on each portion of the Prespa Lakes presented and discussed by members and representatives of fisheries agencies and fisher organizations.
- Existing information (scientific literature, project and agency documents, other grey literature, expressions from fisher and/or other civil society organizations [petitions, plans, requests, etc.]) on fish and fisheries management compiled and made available in electronic and/or hardcopy formats.
- Information gaps identified and process for obtaining missing and/or necessary information agreed upon (possibly including the commissioning of technical papers).

Thematic priorities for Transboundary Stakeholder Workshop to be held in February 2009 discussed and agreed upon.

## **2. Presentation on fish and fisheries management at Prespa Lakes and its tributaries: situation, needs, plans and policies – the government perspective**

This Agenda session started with presentation by the representative from Albanian Ministry of Environment and Forests. During the presentation he elaborated the fish and fisheries management in the Prespa Lakes basin from a government perspective emphasizing the main legislations, institutional setup and other issues which regulate this productive sector management. (For additional info please refer to the presentation included in the Annex II of this report).

After the presentation the floor was open for discussion.

### **Q&A**

Q: It seems that the whole legislation is on high national level, are any other levels in legislation in Albania where the project can intervene?

A: Perhaps local level some regulations can be harmonized especially among the three countries as are: technical minimum dimensions for fishing equipment, spawning ground protection, etc.

Q: Mentioned during the presentation - the Albanian strategy for fish management includes carp restocking. Question was whether somebody monitors this since the carp species is very important one?

A: Carp is not endemic species but has sub-endemic peculiarities. Nevertheless, the restocking is exercised with populations from the lake which are used for spawning in the shoreline hatcheries and the new young populations are then released in the lake. Therefore, there is no need for concerns.

Comment: Regarding joint trans-boundary activities, it was noted that on the local level every year the three countries are taking turns organizing trilateral meeting. The last was supposed to be organized by Greece but unfortunately did not happen.

Q: What is the status of carp since its population status is very critical?

A: Response from the Albanian representative was that there should be collaboration by the three countries and exchange of information, well established methodologies for data collection and dissemination since it is very important for knowing the real situation with populations not only with carp species but also with the other species in the. Unfortunately the data that they have are not so realistic with real on-ground situation.

Comment: Mr. Zivko Dzurovski proposed this kind of meetings to continue in the future since the fish don't recognize borders and visas. We should have a tradition to inform all relevant institutions and to alert them. Together with the journalists and the non-governmental organizations we should raise the importance of this issue otherwise this critical situation is unlikely to become better.

#### Presentation from Greece

The Greek representatives from the Society for the Protection of Prespa SPP and the representative from Prespa National Forest management Body gave a brief presentation regarding the fish and fisheries management in Greece. Unfortunately they were not able to give more details since Greek national representatives were not present at the meeting. From their perspective and experience they briefly explained regarding the fish and fisheries management legislation that there is an official ban on trout beginning from 15 November until 15 February. And there is permanent ban for some species. Every year there is carp restocking which is implemented by the Greek Fisheries Department.

Q: Mr. Lopez asked for more in deep explanation on fisheries legislation on the Greek side and how is the overall institution set up regarding fisheries management?

A: Representatives from Greece answered that although most of the legislation and institutional set up is on the national level there are some provisions on prefecture level.

Q: Mr Aleksandar Ivanovski asked whether Albanian Law on fisheries and aquaculture includes provisions for inland fisheries apart of the marine fisheries management provisions.

A: Mr. Kapedani answered that although the main legislation is focused in dealing with marine fisheries management there are provisions regulating inland fisheries.

Comment: The Greek representatives added that from the Greek side still there is no fisheries management plan developed.

### **3. Presentation on fish and fisheries management at Prespa Lakes and its tributaries: situation, needs, plans and policies – the user/fisher perspective.**

During this Agenda session several presentations from the Institutions and Local organizations currently involved with fisheries management took part.

Mr Zoran Spirkovski representative from the Hydrobiological Institute presented the situation with fish and fisheries management on behalf of its institution which is responsible for the monitoring and of the fish population in Prespa Lake during the past period. According to the new law on fisheries and aquaculture the monitoring and restocking of the fish population will go under the authorized institution previously selected on competitive basis. (For the details of the presentation please refer to the Annex IV).

After the presentation the most important fact Mr. Spirkovski mentioned was that if there is an opportunity for cross check of the fish catch data to be compared between the three countries in that case the situation would be more realistic. Also he emphasized that harmonization of the legislation is very necessary issue. He suggested that for some species it is necessary undertaking meliorative fishery especially for the bleak. He mentioned also as proposal the repro-center for carp to be revitalized for Prespa.

Mr Goce Dzurovski asked in regard of bleak meliorative fishery how can be the local community stimulated to be focused on this species since the marked demand for this species is very low and the prices is not enough to stimulate the fishermen in larger extend to focus on this species.

Mr. Zoran answered that during this workshop we should be focusing of the objectives of this workshop which are ecosystem oriented fisheries. Bleak fisheries stimulating issue could be subject on some other meeting although there is official information that beginning from the next year EU will open funds for supporting small inland fishery family business.

After the extensive discussion the representative from the FYR Macedonian Ministry of Agriculture, Forestry and Water economy gave presentation on the main institutional and legislation set up in FYR Macedonia regarding the fish and fisheries management (for details of the presentation please refer to the Annex V at the end of this report)

Mr Pelumb Hoxha from Albania presented the main issues regarding fishery management. He mentioned that in Korca district there are two fishery regions: first Korca-Devolli and the second in Podgradec. The fisheries activities are



mainly in Prespa Lake and in the surrounding wetlands. According to the information in Macro Prespa there are 25 licensed fishermen and in Micro Prespa their number is 15. Regarding the catch quantities especially with carp species there trend of decline within the past years. Comparing the catch quantities from the last years with the one from 1996 there is remarkable trend of decline from 25 tons to 2-3 tons.

Bleak catch decreased from 200 tons to 6-7 tons. This data are collected from the fishermen. Regarding the fisheries management in Micro Prespa Lake the fishermen were organized in fisheries association with support of the GEF funds. According the local fishermen as well as institutions in Albania there is need for harmonizing the ban enforcement period. One of the outcomes from this workshop should be joint proposal address to our respective authorities. According to Hodza the problem with illegal fishing is apparent and shouldn't be neglected. In Albania people who live near the lake considers fishery as their major economic activity.

Mr Zoran asked whether there is some information on the percentage of the families which mainly depend on fisheries to which Mr. Hoxha answered that from the time when he assumed the position environmental inspector, he has registered almost 100-150 families. Today the number of licensed fishermen totals 25.

Mr Irene asked, since in Albania the yearly fish quota is 300 tons in Greece it is almost half of that, it is obvious that there is bound to be a decline in the fish population. Is the restocking sufficient to compensate the catch and to maintain viability of the fish populations?

Albanian Ministry representative answered that for the carp obviously is not a problem the issue of overstocking. Most probably is the competition for the available habitats between the carp and the Pumpkin seed fish (*Lepomis gibosus*). (Please clarify this statement)

Mr Irene pointed on improving of the autochthonous fish monitoring in terms of using markers for marking the small fish individuals. There should be established system for marking the one that are coming from the Lake habitats and the other from the artificial hatcheries.



Albanian Ministry representative on this issue emphasizes that they started with some marking but it is the matter of complexity of this method since it requires long time after the fish individuals are marked. Also the equipment is quite expensive for this method.

Regarding the fisheries management institutional setup, Mr Zoran pointed that in Albania fisheries is within the Ministry of Environment and in FYR Macedonia is within the Ministry of Agriculture. While in Greece the main responsibility falls under the Ministry of Environment. Maybe this issue presents additional complication in terms of harmonizing regulation provisions.

Mr Wolf asked in terms of changes in spawning habitats which are present, whether this situation is reflected in the whole lake and for all species?

Mr Zoran elaborated that it will take big effort for assessment of the species ecology. After some comprehensive research we could have information to say what are the key habitats that should be restored and revitalized.

Albanian representatives again stressed the importance of harmonizing the legislation and joint agreement on the period of ban enforcement.

Regarding the joint trilateral meeting that is organized every year, Mr. Lopez asked about the institution/ ministry responsible for organising such meeting to which the Albanian representatives responded that it was the Ministry of Environment, Forests, and Water Administration in cooperation with the Ministry of Foreign Affairs.

Mr Lopez raised a question regarding the quantities of fish catch and Mr Zoran answered that the data are not too much relevant since permanent monitoring as a whole is still lacking.

Mr Zivko with his discussion went little bit more in the past period during the transition period and he mentioned that the trans-boundary cooperation for the time being was on different level. If we compared the date from 1946 with the one for the last years it is evident that the cooperation is missing. In the past used to be fisheries commission formed on the state level. During that period the commission conducted two year research study. The study revealed important data for every species in the lake its ecology, population status and based on that joint enforcement of the ban was agreed by the two Ministries-Albanian and FYR Macedonia. After that, there was a trilateral agreement which was signed by the three countries and series of meetings started where the concessionaires took part. But despite the joint initiative which came out from these meetings the problem was that beginning from the first meeting and onwards the scientific institutions were neglected. Due to that the situation now days is so unrealistic. The Commission that time supposed to liaise with Scientific Institutions. His idea is

that this kind of meetings as is this workshop should continue since in the practice very often ad hoc meetings bring ad hoc solutions.

Greek representatives on behalf of the Society for Protection of Prespa SPP instead of having representative from relevant ministry briefly presented some points and facts regarding their experience with fisheries management in Small Prespa Lake. The carp species is subject to continuous management and the main activities are focused on improvement of spawning habitats. According to them the carp population is stable for the past years. The main objectives for the future should be improvement of the carp populations and establishment of permanent monitoring system. They mentioned the ongoing GEF project activity Species and Habitats conservation Action Plan which is in preparatory phase and it should facilitate and attribute the main further conservation plans for all important fish species too.

Mr Wolf asked whether there is fishery organization in Greece. The answer was that there is Fishermen Association which is located in village of Psarades and consists of 35 fishermen.

Regarding the species action plan for the trout that recently has been prepared by the SPP, Mr Wolf commented that there is no provision with regard to the responsible institution which will undertake the proposed conservation measures. Ms Irene said that they are aware of the lack of funds for implementation of the proposed actions but the plan itself has been commented and agreed by the various national and local organizations

Mr Zivko Dzurovski the previous FYR Macedonian concessionaire for Preps Lake made a presentation on fisheries management in Preps from the experience he gained during period of concession. (For detail of the presentation please refer to the Annex in the end of this report).

During his presentation he underlined that during his time as concessionaire the government did not supported the management enterprise “Ribomak” with funds. Although there was a good collaboration with Institutions the costs that were coming from the registered fish catch were not sufficient to cover even the warden services.

Mr Trajce Talevski mentioned that according to his extensive experience in Hydrobiological Institute with fisheries related issues it is obvious that the concessionaire are more interested for the benefit from the fisheries management rather that conservation management.

#### **4. Identification of information gaps**

This agenda session was introduced by the International Fish and Fisheries management Consultant who guided the participants from the three littoral states to split in three working groups and to assess the main issues related with fisheries management in Prespa Lake basin. (For details see the Annex III at the end of this report)

The results of the joint work of the working groups are summarized below:

Albanian working group findings:

1. improving statistical data collection (possible creation of common database)
2. Improving and creation of new facilities (cold storage, processing facilities)
3. Marketing (where, how, etc)
4. Status of the species (structure of the catch.)
5. Regulating some fishing year (prohibition of hook lines)
6. Reduction and prohibition of illegal fishing.
7. Invasive species (plan for eradication, can be used?)
8. Determination of strictly protected areas (eg. the carp spawning grounds)
9. Coordination with other states (common management plans, prohibition periods, etc)
10. Proposals for the improvement of situation in Macro Prespa

FYR Macedonia working group findings:

What information do government agencies have and can share

1. Law on fisheries
2. Second legislation, ordinances, guidelines
3. Fisheries master plan for Prespa Lake
4. National Strategy for Agriculture and Rural Development
5. State Inspectorate (local branches) for Ministry of Agriculture, Forestry and Water Economy (various kind of reports, registered fishermen, etc)
6. Ministry of Agriculture, Forestry and Water Economy, State institute for Statistics – information and data on artisan fishery

What information do government agencies need from users

1. Number of licensed fishermen, provision on fishing equipment
2. Information on quantities of fish catch (stock) for each commercial species-daily, monthly, yearly
3. Ordinances determining all information that should be provided
4. information on timely relevant monitoring of fisheries/ exceptional conditions (fish kills, algal blooms, unconditional behavior)

What information do government agencies need (from any other source) to manage fisheries sustainable.

1. NGOs (previously implemented project activities related with fisheries)
2. Tourism entities and lake traffic subjects
3. Sources from different projects, web sites, individual publications, scientific research articles, etc.
4. Information from local authorities

Main conclusion and recommendation from FYR Macedonian group- Available information that can be obtained from various sources are questionable in terms of reliability since the last scientific research was conducted in the period from 1970 to 1972. The most important priority should be conducting minimum one year field research which will reveal the on ground situation with fish population in the lake.

GR group findings:

??

## **5. Identification of and agreement on the process to close information gaps, including the thematic priorities for scheduled technical workshop**

According to obtained information during the working groups' assessment, Mr Wolf raised the question of clarification if additional expertise would be required to fill some information gaps.

Mr Lopez explained that there will be organized technical workshop possibly at the end of February 2009. The main idea is to fill the info gaps we have identified in this process to date and also to invite experts from other Lake basins to present case studies which would be useful for Prespa. However, in case if additional expertise is required that it must follow procurement procedures. Beginning from now until February all documents, articles summaries should be prepared.

Mr Zoran outlined that Fisheries Master Plan for Preps Lake is already prepared but it is on FYR Macedonian language. It will be good if the project can facilitate its English translation.

National UNDP-GEF project staff from FYR Macedonia agreed to translate the document.

Regarding the participation of experts from various basins Mr Zoran pointed out that it is useful to invite people from Peipsi Lake to share their experiences.

Some experience could be useful from the agreement signed by the FYR Macedonia and Albania for Ohrid Lake in terms of establishing joint warden service together with the border police in the three countries. Some lessons from this experience could be replicated in Prespa lake.

## **6. Wrap-up and closing of workshop**

Information gaps are identified, some of the thematic priorities captured. Mr. Hartmann will follow up a sort of report which will be subject on comments.

Few modalities: Now that information gaps have been identified, people will be identified who can provide additional and prepare the technical documentation. If additional experts are required UNDP will announce tender or invite expressions of interest.

## Annex 6

### Draft TOR for Lead Authors of Working Papers

#### TERMS OF REFERENCE

Consultant – Lead author for the preparation of a working paper on “Fisheries Ecology and Conservation in the Prespa Lakes Basin”

<b>Project:</b>	“Integrated Ecosystem Management in the Prespa Lakes Basin of Albania, FYR of Macedonia and Greece”
<b>Position/Level:</b>	Consultant (SSA)
<b>Location:</b>	Home based
<b>Duration:</b>	7 days input (20 December 08 – 30 April 2009 )
<b>Application deadline:</b>	15 December 2008, 1200hrs local time

#### Background

The Prespa region is situated in the Balkan Peninsula and is shared among the three neighbouring countries Albania, FYR Macedonia and Greece. The entire Prespa Region hosts unique habitats that are important from both European and global conservation perspective. However, unsustainable agricultural, fisheries, water and forest management practices as well as use of non-timber forest products is causing stresses on the ecosystem health of the Prespa Basin. Amongst the decision makers and the general population, there is also a limited knowledge on contributions of ecosystems to human well being and therefore the need for integrated management approaches.

The aim of the UNDP - GEF Prespa Regional Project 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 at the local, national and trans-boundary level in the three riparian countries in the Prespa region by piloting ecosystem-oriented approaches into spatial planning, water management, agriculture, forest, fisheries and protected area management.

In order to initiate the integration of the fisheries sector into basin management planning and implementation, a situational analysis of transboundary fish fisheries issues is being conducted and a proposal is developed for a systematic, integrated and participatory process for setting up and implementing transboundary fisheries cooperation in the Prespa lakes basin.



A Transboundary Fish and Fisheries Consultation Workshop involving representatives from government line agencies, research institutions, non-governmental organizations and fisher organizations from the littoral countries was conducted as the first event leading towards this process, in Korcha, Albania, on 27 November 2008.

The following results were achieved at the preliminary Stakeholder Consultation Workshop:

5. Information on the situation of fish and fisheries on each portion of the Prespa Lakes was presented and discussed by members and representatives of fisheries agencies and fisher organizations.
6. Information gaps identified and process for obtaining missing and/or necessary information agreed upon.
7. Thematic priorities for a Transboundary Fisheries Workshop to be held in February 2009 discussed and agreed upon.
8. Additional existing information (scientific literature, project and agency documents on fish and fisheries management) was identified. This will be consulted in the preparation of the Transboundary Fisheries Workshop to be held in possibly February 2009 at the earliest.

#### **Objective, scope of work, duties and responsibilities**

The objective of this contract is as follows:

*A working paper on the thematic priority area "Aspects of Fisheries Ecology in the Prespa lakes" prepared for presentation and discussion at an upcoming Transboundary Stakeholder Workshop (in February 2009).*

The information contained in the working paper will be an important contribution to the development of the Proposal for a systematic, integrated and participatory process for setting up and implementing transboundary fisheries cooperation in the Prespa lakes basin.

This paper will address major issues connected to this, including, but not necessarily limited to:

- Description of key habitats; spawning grounds; species enhancement/stocking practices; efficiency of stocking; impacts from stocking on endemic species; other possible enhancement activities [incl. habitat protection, enhancement and restoration];
- What are immediate priority research gaps that need to be addressed in the area of fisheries ecology (e.g. priority threats to indigenous, particularly the endemic fish species from: introduction of non-native and/or predatory species, habitat degradation and change, over fishing and other factors). What is your assessment of the ecology of the four exotic fish species *Carassius auratus gibelio*, *Silururs glanis*, *Pseudorasbora parva* and *Lepomys gibossus* and their known impacts on native and endemic species of fish in Prespa Lakes? How should the assessment of impacts of exotics be carried out in the future?



- What are present practises of monitoring of relative abundance, species diversity and population trends in Prespa fisheries, and how should such monitoring be conducted in the future? Are there any lessons to be learned from fisheries monitoring in other water bodies?
- From a fisheries ecology point of view, what should be major elements and concerns of a transboundary fisheries management plan/guidelines?

The working paper will be elaborated by a lead author who should, as much as possible, identify and involve in the elaboration one or two more contributing authors from the other littoral countries.

The authors are encouraged to make maximum use of graphs, charts, tables and other types of presentation of data. Furthermore, they are expected to use information from official and unofficial sources, and information provided by government agencies as well as fisher/user communities and their organizations.

#### **Deliverables and timelines**

Deliverable/milestone	Timeline
Writer's contract	Jan 2009
- Information compiled (in addition to the one presented at the Korcha Meeting, 27 November 2008) - Abstract prepared	Feb 2009
Draft working paper submitted	March 2009
Presentation of working paper including a power point presentation at the Regional Fisheries Workshop	April 2009
Revised working paper submitted	May 2009

#### **Payments**

The consultant will receive a lump sum payment upon submission of the final version of the working paper and accompanying presentation in electronic format after the Transboundary Fisheries Workshop scheduled for Feb 2009.

#### **Terms and Conditions**

- Reporting: The consultant will report directly to the International Transboundary Advisor (ITA) on administrative matters and to the International Fisheries Expert on programmatic/ technical issues.
- The findings presented in this paper will require trilateral input and the consultant shall strive to present a transboundary perspective of issues. The consultant will therefore be required to seek contribution from his/her counterparts in the littoral

countries and to engage them as contributing authors providing due acknowledgement as such.

- The consultant may seek advice/ input from the international fisheries expert with regard to the structure and content of the working paper.
- All communications with the International Fisheries expert shall be copied to the ITA.
- Travel: It is not expected that this assignment would require any field work.
- Payments and milestones: See above section on payments.

#### **Required expertise and experience**

The consultant shall have:

- Familiarity with the subject matter identified as thematic priority area – i.e. fisheries ecology, conservation and management;
- Experience in addressing this issue;
- Familiarity with the Prespa transboundary Fish and Fisheries management process.
- Participated in the first transboundary fish and fisheries management stakeholder workshop held on 27 November 2008 in Korcha, Albania.
- is a strong Involvement in the process so far. This means, the lead author has to have participated in the Transboundary Fish and Fisheries Consultation Workshop held in Korcha, on 27 November 2008.

#### **Submission requirements and deadline for application**

The applicant shall provide the following information:

- A brief (maximum 1 page A4 ) expression of interest demonstrating the consultant's suitability and professional experience in undertaking this assignment.
- A financial offer (lump sum in US Dollars) demonstrating the relevant professional experience identified as needed.
- An updated CV with contact details of three references
- A completed United Nations P11 form (downloadable from [www.undp.org](http://www.undp.org))

Please submit applications to [gordana.cvetkoska@undp.org](mailto:gordana.cvetkoska@undp.org) and cc to [alvin.lopez@undp.org](mailto:alvin.lopez@undp.org) by **Monday, December 15, 2008, 1200hrs** local time.

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Similar TOR were developed for the following personnel:

- Consultant – Lead author for the preparation of a working paper on "Livelihoods and Fisheries in the Prespa Lakes Basin"
- Consultant – Lead author for the preparation of a working paper on "Aspects of Institutional Set-up for Transboundary Fisheries Management in the Prespa Lakes Basin"
- Consultant – Lead author for the preparation of a working paper on "Fisheries Monitoring in the Prespa Lakes Basin"

- Consultant – Lead author for the preparation of a working paper on “Lessons Learned from Transboundary Fisheries Management at Lake Ohrid, Albania/FYR Macedonia”
- Consultant – Lead author for the preparation of a working paper on “Lessons Learned from Transboundary Fisheries Management at Lake Peipsi/Pihkva, Estonia/Russia”.

DRAFT

## Annex 5:

### Elements of a Draft Agenda for a Transboundary Fisheries Workshop (April 2009)

#### Institutional setup of meeting:

Participation by relevant government agencies and institutes has to be guaranteed, in particular from the Greek side (this is an important condition):

- Agencies responsible for fisheries on national level (from Tirana, Athens, Skopje).
- Agencies responsible for fisheries on regional (province, district prefecture) level.
- Relevant research institutes from three countries (Albania?; Hydrobiological Institute, Ohrid; Faculty of Biology etc., Skopje;
- 3 National Consultants (one in Albania, one in FYR-Macedonia, the Society for the Protection of Prespa (SPP) in Greece) whose mission will be to assist as “hubs” for information about their respective countries (see TORs Lead Experts for Expert Study on the Transboundary Monitoring System)
- The relevant ministries that have a jurisdiction over the Prespa area, and in particular the ministry/ies (or their services) in charge of the environment, of forests, and of water affairs ;
- The Regional/ Prefecture authorities that have a jurisdiction over the Prespa area, and in particular their departments/ sections/ services in charge of the environment, of forests, and of water affairs ;
- The municipalities and in Albania, the communes;
- the protected area management bodies : the National Park authorities in Albania and FYR of Macedonia, the PNFMB (Management Body of the Prespa National Forest in Greece), responsible for the Natura 2000 site in Greece ;
- the transboundary Prespa Park, especially its Coordination Committee ;
- the organizations providing technical assistance to management bodies, e.g. SPP in Greece ;
- all NGOs, socio-professional organizations/cooperatives (farming, fishing), and Universities/ Research centres active in the Prespa basin, in a field linked to the environment or natural resources ;
- Agencies involved in fisheries monitoring/data collection
- AL: MoEFWA (fishery assessment)
- GR: SPP (fish monitoring)

## Agenda/Contents

### Presentations of Working Papers

- Lead author – Fisheries ecology issues
- Lead author – Fisheries and livelihood issues
- Lead author – Institutional issues

### Outside papers

- Lake Peipsi (N.N.)??
- Lake Ohrid (N.N.)??
- TAB (Wolf)
- Fish and Fisheries monitoring (Lead Expert from Tour du Valat (TdV) [Study on the transboundary monitoring system])
- Socioeconomic monitoring (Lead Expert [Study on the transboundary monitoring system])
- Presentation of Fisheries Management Plan for FYR Macedonia
- Paper on communication and information strategy etc. (Communication focus [external/internal]; Communication structure).
- International legislation and conventions as a framework for Preps trilateral fisheries management.

### Discussion and possibly working groups

- Can FYR Macedonian Prespa Plan be adapted as a starting point for a trilateral management plan?
- Trilateral Management Plan for Prespa Lakes Basin (Macro Prespa, Micro Prespa, tributaries)
- Incorporation and Implementation of Species Action Plans into Trilateral Management Plan

### Field visit

A possible field visit to NGO activities in FYR MK Prespa.

## Annexe 6: ToR for International Transboundary Fish and Fisheries Management Specialist (Wolf Hartmann)

### International Consultant

#### Transboundary Fish and Fisheries Management Specialist

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

**Location:** Home based with trips to project site

**Duration:** 30 days (15 Oct 2008 – 06 March 2009)

**Deadline for application:** Aug 29, 2008 (1700hrs; GMT+1)

#### Background

The Prespa region is situated in the Balkan Peninsula and is shared among the three neighbouring countries Albania, FYR Macedonia and Greece. The entire Prespa Region hosts unique habitats that are important from both European and global conservation perspective. However, unsustainable agricultural, fisheries, water and forest management practices as well as use of non-timber forest products is causing stresses on the ecosystem health of the Prespa Basin. Amongst the decision makers and the general population, there is also a limited knowledge on contributions of ecosystems to human well being and therefore the need for integrated management approaches.

The aim of the UNDP - GEF Prespa Regional Project 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 at the local, national and trans-boundary level in the three riparian countries in the Prespa region by piloting ecosystem-oriented approaches into spatial planning, water management, agriculture, forest, fisheries and protected area management.

The Prespa Regional Project is responsible for catalysing the stakeholder involvement in ecosystem management and sustainable development in the Prespa Lakes Basin.

Current fisheries management practices in the Prespa Lakes Basin remains a cause for concern. In the past, various detrimental activities have been reported to have severely impacted fisheries in the Prespa lakes basin (i.e. including several major contributing tributaries). These practices have particularly impacted several endemic fish populations.

Fish-stocking exercises (with the intention of increasing volume) have also resulted in the introductions of several exotic fish species in Prespa Lake. The detrimental impacts of these exotics have not yet been fully understood.

Amongst the three littoral States, fishing is conducted at differing levels of intensity with differing management guidelines and institutional arrangements. Overall, fisheries management policies have until now placed very little emphasis on aquatic ecosystem health. The three States however, in principal, agree on a ban of fishing during spawning season (April-June), though enforcement remains sporadic.

The effort to monitor fish population trends and quality of its habitat also differs amongst the littoral States. Insufficient staffing and logistics to carry out duties is often the main challenge. The significance of fisheries to livelihoods of the people in Prespa is also not fully documented.

The UNDP-GEF Prespa Regional Project is therefore seeking a transboundary fish and fisheries management expert to conduct a situational analysis of the fish and fisheries issues in the Prespa Lakes basin initiate the process of transboundary cooperation on fish conservation and fisheries management.

### **Duties and responsibilities**

1. Conduct a situation analysis on key parameters relating to fish (in particular information on relative abundance and species diversity and population trends) and fisheries management issues in the Prespa Lakes Basin. This assessment should be based on literature review and interviews with relevant stakeholders. The report should include an analysis of current management practices in the three countries emphasising on fish conservation issues and introduction on non-native fish species. This situational analysis shall also address issues with regard to the current contribution of fisheries to livelihoods of people in the Prespa Lakes basin.
2. Function as the main facilitator in a transboundary fisheries workshop. The consultant will be responsible for the preparation of all the material for this workshop, facilitation during the workshop and the compilation of the workshop report. It is expected that the input from this workshop will contribute to the key outputs the consultant is responsible for.
3. Prepare a proposal outlining a systematic, integrated and participatory process (including resource requirements – financial and human resources) with clear milestones to ensure that transboundary cooperation in dealing with fisheries management issues will be established over a period of 1.5 years. The focus will be on fish conservation and wise use including ecosystem oriented fisheries management. The consultant will take into consideration the limited budgets available within the GEF project for this task and also propose possible co-financing options. It is anticipated that this process will be facilitated by an independent fish and fisheries management expert over the period of 1.5 years with support from national



experts. The consultant is expected to develop the relevant ToRs for both the international and national experts. The following milestones will need to be taken into consideration when preparing the proposal.

- a. Immediate priority research gaps that need to be addressed (Priority threats to the indigenous, particularly the endemic fish species from: introduction of non-native and/or predatory species, habitat degradation and change, over fishing and other factors). Assessment of the ecology of the four exotic fish species *Carassius auratus gibelio*, *Silurus glanis*, *Pseudorasbora parva* and *Lepomis gibbosus* and their known impacts on native and endemic species of fish in Prespa Lakes. (Develop ToRs for relevant assessments)
- b. An agreement amongst the three States on trans-boundary fish conservation priorities that reflect ecological management objectives for sustainable use and conservation of native species and aquatic ecosystem health (by Sept 2009). The agreement should also include the strict control on introductions of non-native fish species of potential commercial value interest that threaten the ecological character of the lake.
- c. A transboundary fisheries management plan/guidelines drafted and presented at the tri-lateral forum for adoption (Expected input - *from national project components*) plus national or international experts on fish of Prespa).
- d. Guidelines in place for allowable fish catch which is linked to population size estimates and other indices (# of fishing boats, territory of fishing area in each country, fish migration patterns etc.) (This is part of the mgt plan)
- e. Facilitation and support for regular meetings between fisheries authorities of the three countries to reach common decisions on allowable fishing tools, closed seasons and other sustainable management measures (input and resources required)
- f. Harmonised by-laws on fisheries amongst the 3 littoral states (*Input from national project components*)
- g. In consideration of the requirements of the key fish species, liaison with national project component and focal points in Greece to establish agreements on environmental flows in Golema Reka, Brajcino, Krani, Leva and Aghios Germanos Rivers by December 2009. (This task will also link to the activities conducted by the transboundary water management working group and development of the water management plan including water dialogues).
- h. Habitat protection status ensured in the three countries (establishment of protection zones, protection of spawning areas, maintenance of riparian forests etc.). The consultant will clearly outline the process on how this can be achieved and define the roles and the responsibilities of the various players.
- i. Establishment of efficient wardening for illegal fishing by end of 2009.
- j. Capacity building of relevant fisheries management organisations.

### **Main deliverables and schedule**

#### **Deliverable #1**

#### **Initial stakeholder consultations and mission report with drafted thematic priorities for the scheduled tri-lateral fisheries workshop.**

The consultant will make a first trip to the region for initial consultations with key stakeholders (if deemed feasible a tri-lateral stakeholder workshop will be organised). The consultant will

prepare an initial preliminary consultation report which will include thematic priorities for the scheduled tri-lateral fisheries workshop.

#### **Deliverable #2**

**Consultancy Report - A situational analysis on fish and fisheries management in the Prespa Lakes basin.** This section will contain issues related to fish biodiversity, current management practices, threats of exotic fish species, significance of fisheries from the livelihoods perspective, institutional arrangements (and tri-lateral cooperation) in relation to fish and fisheries, legal framework etc. In addition to literature review, it is expected that the consultant will facilitate a workshop (see below) on transboundary fisheries and the discussions and inputs from this workshop will contribute to the situational analysis.

#### **Deliverable # 3**

**Compiled report and technical papers** from the “regional workshop on transboundary fisheries management and fish biodiversity conservation issues in the Prespa Lakes Basin”. Compiled workshop report with the relevant technical papers. The consultant is expected to coordinate the preparation of all the technical content of this workshop and liaise with all the contributors. The consultant will coordinate the preparation of the workshop programme, working documents prior to the workshop and finally the compilation of the workshop report.

#### **Deliverable #4**

A detailed proposal outlining a systematic, integrated and participatory process (including resource requirements – financial and human resources, ToRs) with clear milestones to ensure that transboundary cooperation of critical fisheries management issues will be established over a period of 1.5 years. (see point 3 under ‘duties and responsibilities’ section above)

<b>Deliverables</b>	<b>Indicative timelines</b>	<b>Payment</b>
Completion of 1 <sup>st</sup> field trip, stakeholder and initial stakeholder consultations. Submission of preliminary consultation report with thematic priorities for scheduled technical workshop.	20 November 2008	Reimbursement of travel expenses and initial payment of 40%
Submission of Deliverable # 2 and #3	20 Feb 2009	30%
Submission of Deliverable # 4	28 Feb 2009	-
Final approval and acceptance of all deliverables by UNDP	06 March 2009	30%
Other travel related costs		Will be reimbursed upon

		completion of travel
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### Terms and Conditions

- It is anticipated that this assignment will require the consultant to spend at least 10-12 working days at the project site. Further travel to the project site (if required) will be agreed upon based on task requirements and prior agreement with the ITA.
- The consultant is expected to maintain regular communication with the ITA via Skype, email and/or phone.
- The consultant will submit deliverables in electronic format to the ITA in accordance with the agreed timelines.
- Where applicable, travel costs and per diems (DSA) will be reimbursed separately, following UNDP's rules and regulations.
- UNDP will provide the required logistical support with regard to the organising of the workshop and meetings.
- The outcomes of this assignment will need to contribute to a parallel process – the development of a Strategic Action Programme for the Prespa Lakes Basin. With the ITA as the focal point, the consultant shall take this requirement into consideration and provide the relevant information as requested and contribute to relevant discussions.

### Required expertise and experience

The consultant shall have:

- A university degree in ecology, environmental sciences, natural resources management or other related fields. An advanced degree (especially in fish and fisheries management) would be an asset.
- A sound understanding of and practical experience (at least 5 years) in fisheries management issues, especially in relation to fish biodiversity conservation. Experience in dealing with transboundary fisheries management issues will be an asset.
- Excellent and demonstrated communication, consultation and drafting skills
- Excellent command of English;
- Computer literacy (MS Word, MS Excel, MS Power Point etc.);
- Knowledge of transboundary IEM issues in the Prespa Region is an asset.

### Submission requirements and deadline for application

The applicant shall provide the following information:

- An expression of interest demonstrating the relevant professional experience identified as needed above indicating consultancy fee (in lumpsum excluding travel and DSA).
- An updated CV with contact details of three references
- A completed United Nations P11 form (downloadable from [www.undp.org](http://www.undp.org))

Applications should be submitted with the above documentation by 1700 hrs (GMT +1) on 29 Aug 2008. Submissions are to be made in MSWord format via email to [hr.mk@undp.org](mailto:hr.mk@undp.org). Please

indicate vacancy reference number (XXXX) when submitting the application. Only short-listed candidates would be notified.

Please note that applications received after the deadline will not be accepted.

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