Pollution control and other measures to protect Lake Tanganyika's biodiversity

Strategic Action Plan

Burundi

National Sectoral Problem Review: objectives, main issues and directives

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Appendices Tables A list of acronyms and abbreviations

1. How the NSPR (National Sectoral Problem Review) fits into the process of drawing up the SAP (Strategic Action Plan)

An essential objective of the LTBP, as stated in the project document was to "put in place a plan for long term regional management to control pollution and preserve and safeguard the biodiversity of Lake Tanganyika". The approach adopted since to achieve this management objective is that of a Strategic Action Plan (SAP). The SAP concept is based on the idea that management must be continually revised according to how circumstances change. Instead of having a definitive management plan, the SAP establishes a process for planning and management, as well as a system which prioritises the action to be taken, according to the circumstances and the amount of knowledge available at the time.

Having adopted this principle in January 1998, the Steering Committee agreed upon a process to draw up the SAP in seven stages, three of which are at national level and four at regional level :

- a) at national level in each of the four countries :
 - the NWG is to meet
 - NSPR, National Sectoral Problem Review
 - NESPR, a Study of National Priorities and Strategies for the Environment
- b) at regional level :
 - the Technical Consultative Committee is to meet
 - TBDA, Cross-border Diagnostic Analysis
 - A SAP pilot study is to be prepared
 - Signing of the SAP (scheduled for March 1999)

The NSPR is therefore the second stage in this process. In particular, the NSPR from each of the four countries will lay the ground work for the Transboundary Diagnostic Analysis (TBDA) and therefore must be completed beforehand. Likewise the NESPR will lay the ground work for the SAP pilot study and will be completed before it.

This present document comes in between the first two stages with a view to laying the foundations for the NSPR.

2. The Objectives

The objectives of the NSPR are :

- to define the major biodiversity problems
- to identify which sectors are responsible for these problems
- to suggest preferred measures which would allow these problems to be solved

and is with the preparation of the TBDA in mind.

3. Methodological Approaches

As it is essential to arrive at a diagnosis and SAP which are coherent at a regional level, it is important that all four countries follow the same approach. In particular, each of the ADNs must be devised according to the TBDA (Transboundary Diagnostic Analysis) for which they lay the foundations and which of course must be individual. To this effect, it has been suggested that the Lake Tanganyika TBDA draws on the experience of the TBDA which was established for the Black Sea. This TBDA comprises three stages :

- 1. The identification of the main problems of biodiversity, with an analysis of cross-border implications, the identification of underlying institutional causes and the identification of relevant areas for action
- 2. Proposals for measures: according to the area for action, identification of parties with interests at stake, any grey areas (where any extra studies and surveys are required), suggested measures
- 3. Details of the measures : time scale, anticipated results, prioritising the action to be taken.

At the same time the following principles and observations need to be kept in mind :

- the analysis will try to identify action which is both feasible and efficient as far as protecting biodiversity is concerned;
- with a view to deciding upon what action to take, the diagnosis must concentrate therefore on threats from human activity or at the very least on any which could be thwarted by human intervention(s) at a regional level;
- threats from nature or threats which are difficult to have any control over should only be considered as constraints, and are to be taken into account when evaluating the efficiency of the action under consideration : by way of example, if global climatic changes were identified as a major threat to a group of endangered species, which suffered in equal measure from being overfished; it would be illusory for four countries situated around a lake to tackle overfishing if the species in question were in any case doomed because of these climatic changes;
- setting an order for priorities focuses therefore on measures to be taken according to their feasibility and their efficiency, and does not necessarily correspond to the degree of seriousness of these threats.
- when identifying threats, it is important to examine recorded, estimated and foreseeable patterns of human activity and in the environment;
- activities threatening the lake's biodiversity and measures for action are to be studied in the lake's basin, however the biodiversity which the project is aiming to preserve is that of the whole lake, this includes the lake's shores as well as any associated ecosystems and species (for example birds);
- as far as protecting the biodiversity of the lake (and its associated ecosystems) attention must be focused on species, groups (fish, invertebrate groups) or endemic and vulnerable communities, as well as their habitats and ecological conditions.
- in preparing the regional SAP, the cross-border dimension of these problems is an important factor to be taken into account, and therefore efforts will be made to

identify problems which originate in Burundi but could have an influence on neighbouring countries or on the lake as a whole, and vice versa.

4. Suggested procedure

4.1 Preparing the foundation documentation before the workshop

At the planning meeting held on June 30th, the NWG decided on the topics and allocated responsibility for the preparation of the foundation documents which will be presented at the NSPR workshop.

The topics are as follows :

1.	Biodiversity and the lake
2.	Watershed (distribution of soils, erosion)
3.	Human settlements, towns, industries
4.	Lake transport
5.	Fishing
6.	Civil engineering, mines, quarries
7.	Problems specific to the Rusizi plain
8.	Institutions, legislation, education
9.	The lake's socio-economic contribution

How responsibilities have been delegated and information useful for preparing the documents can be found in a report produced after the meeting, entitled "Conclusions from the National Working Party's meeting". This information will not be repeated here.

The preparation for a document will double up as a workshop talk. Both the document and the workshop talk must be directed towards the needs of the NSPR.

4.2 Workshop talks and presenting the foundation documentation at the workshop.

As a rule it will be the principal author (co-ordinator) of a foundation document who will give the talk at the workshop, whilst drawing on any support s/he needs from specialists who have helped with part of the writing. However, it is also possible to present the talks as a team, provided that each one is a unified and coherent summary and is delivered within the time allocated.

Obviously the talks have to be written in accordance with their objective, which is to provide information useful to the whole proceedings of the workshop, as described below. Therefore the presentation will give particular emphasis to any relevant points which help define how to prioritise the action to be taken .

As far as possible any reference documents which have been used should be brought along to the workshop so that those taking part can refer to them if there is any need for clarification.

4.3 Identifying the problems of biodiversity

Let us take fishing as an example, referring to Table I in the appendix. Fishing is not in itself a problem. However, fishing and the practices associated with it (the use of poisons, or the persecution of fish-eating animals for example) can damage biodiversity, whereas on the other hand, fishing can benefit from measures taken to protect biodiversity. Let us suppose that a connection of cause and effect is either suspected or has been established between the decline of one species that is being fished and the danger of extinction of one or several other species. The decline of the species being fished, which is a problem of the fishing industry (a problem for the fishing industry and perhaps a problem caused by the fishing industry) is then also a biodiversity problem. This question has direct cross-border implications in so far as the populations of the species involved also cross borders. Let us suppose that the decline of the species in the example can be attributed to fishing, and more specifically to fishing in the spawning grounds, although other causes may be possible too. Underlying institutional factors come down to a lack of effective regulatory mechanisms. The general area for action in this case, is the regulation of pressures to fish and fishing practices.

Based on information received beforehand from the talks and the accompanying documentation, those taking part in the workshop will be invited to undertake this sort of analysis by assimilating all points of view and pooling their approaches. For example, it is possible that as far as spawning grounds are concerned, a risk may be identified which comes from a sector other than fishing. The workshop will therefore apply itself to working out this sort of analysis, ensuring that it is valid by synchronising the various diagnoses sector by sector.

4.4 Proposals for measures to be taken

Let us continue with our example referring now to Table 2 in the appendix. Having identified fishing in the spawning grounds as a problem it is now a question of establishing who are the partners or who has interests at stake. (for example there are the fishing associations, the Fisheries Department, the INECN which manages the Rusizi delta's spawning grounds ...) of working out any uncertainties, (lack of knowledge about spawning grounds), and consequently of defining what measures should be taken (such as joint research for solutions, which would be negotiated between partners, information for fishermen about the impact of their practice where they are unaware of it, or scientific research and investigations of the terrain...)

Measure to be taken are therefore not necessarily limited to direct action. From the example shown (and from the tables) it can be seen that action can include acquiring additional information : this may be research, studies, surveys or a continuous monitoring of the state of the resource. Of course it is important that any research undertaken is explicitly directed towards requirements that have been identified, and that it is of direct use to the management.

Moreover, scope for possible action may also include, for example, capacity building of institutions, new institutional campaigns, modifications to regulations, environmental education for various target groups of the population, drawing up and implementing incentive measures...

During the workshop it is likely that numerous ideas for action will be thought of and that among these some will be at variance with others or which could have consequences beyond their specific objectives. In accordance with what is generally advocated for managing the environment, it will be important to take these possible external consequences into account. Therefore, the workshop will have to devote some of its attention to checking the interaction and possible secondary affects of any course of action suggested, especially with a view to ensuring that the arsenal of recommended measures is coherent and in overall harmony.

4.5. Scheduling of the measures

Having identified the measures, the next step will be to draw up a time table (within certain limits) to show the anticipated outcome (a comparison of the results expected and the situation at the outset) to identify which organisations take action and to establish an order of priority (see Table 3 in the appendix)

In order to establish priorities, it should be remembered that the SAP is both a tool for planning action the national Government will take and a tool for funding agencies to reach decisions. It is useful therefore to consider the following two viewpoints :

- on one hand, the way to go about this process is to first ask the question: " supposing Burundi had the funds to implement only one of these measures : which one would be most appropriate one", then the question should be asked what would then be the second most appropriate measure and so on and so forth...
- on the other hand, determining priorities also means asking the question, " suppose a funding agency was willing to finance a measure, which one should he choose?" and so on and so forth.

The reply to each question depends on what is being expected from the measures as far as preserving biodiversity is concerned. If therefore some measures are inoperable because they tackle a threat beyond our control (for example global warming) then they cannot constitute a preferred option, however serious the threat posed. On the other hand, well-targeted protection of some key fish breeding areas can prove to be very feasible and very effective, even more so because it will also be of benefit to the fishermen and will receive their support.

During the workshop it will therefore be necessary to look at all the measures as a whole and to establish priorities whilst bearing in mind the feasibility of individual measures (and the restraints of putting them into operation), what can be expected from these measures and possible logical consequences interconnecting these measures.

4.6 Preparations for the next workshop

The NSPR workshop will provide an opportunity to prepare for the next workshop, the NESPR. This preparatory work will be carried out at the end of the NSPR workshop and will consist primarily of defining objectives in light of the results of the NSPR workshop and allocating responsibilities for preparing the foundation documentation.

5. A suggested programme for the NSPR workshop

The following programme has been suggested based on the dates set by the GTN's preparatory meeting held on June 30th at Bujumbura.

Day 1 (Monday 7th September 1998)

Morning

Opening and introduction Presentation of the project and the SAP Presentation of the workshop methodology

Afternoon

Talks on the topics (based on the foundation documents)

Biodiversity and the lake

Watershed (land use and erosion)

Problems specific to Rusizi plain

Civil engineering, mines and quarries

Day 2 (Tuesday 8th September)

Morning

Talks on the topics (continued) Human settlements, towns , industries Lake transport Fishing industry

Institutions, legislation, education

The lake's socio-economic contributions

Afternoon

Examination. of the main problems, the causes, areas for action, specific problems and bringing together the diagnostic elements

Day 3 (Wednesday 9th September)

Morning

Examination of the major problems, causes, areas for action..(contd.)

Afternoon

Examination of the measures proposed: inventory of measures suggested, analysis of the impact they would have, synchronisation

Day 4 (Thursday 10th September)

Morning

Scheduling of proposed measures: time-table and order of priority

Afternoon

Defining what needs to be done to prepare for the Workshop on Priorities and Strategies

Day 5 (Friday 11th September)

Morning

Allocation of responsibilities to prepare for the Workshop on

Priorities and Strategies Close

Given the expected involvement of outside contributors and the current availability of flight connections (a single weekly flight to Nairobi on Friday afternoons authorised by the United Nations) the workshop would ideally be finished by Friday midday.

Major problem of biodiversityTransboundary implications implicationsHow institutions mainly bear upon the problemArea for action	
Threats to endemic species attributed to the decline in fishing reserves The fish populations in the lake are found in all the countries and are not limited to just one area The mechanisms for regulating pressures in the fishing industry are inadequate Regulation of fishing industry	1

Appendices Table 1. Analysis of the problems (an example)

	Specific problem	Those with interests at stake	Unknown factors	Suggested measures
I		Those with interests at stake Associations for fishermen Government fisheries department Local administrative groups	Unknown factors Lack of knowledge about where spawning grounds are sited	Suggested measures Negotiate with the fishermen for a seasonal cessation of fishing in sensitive areas or in areas presumed to be such Conduct surveys of potential spawning grounds

Table 2 (follows on from Table 1): Defining the measures suggested (an example)

	Suggested	Time scale	Present situation and	Organisation which will take	Priority
1 1 1 1	measure Negotiate with the fishermen for a seasonal cessation of fishing in sensitive areas or in areas presumed to be such	Short term: 1999- 2001 if possible	anticipated outcome Present situation: the spawning grounds will be identified in part by special studies Anticipated outcome : these spawning grounds will be protected by the fishermen	Government fisheries department	

 Table 3 (follows on from Table 2): Details of the measures (an example)

A LIST OF ACRONYMS AND ABBREVIATIONS

NSPR TBDA BRARUDI CITES CCIB CIE NC CNE COTEBU CRS DGEE EE EIA NESPR	National Sectoral Problem Review Transboundary Diagnostic Analysis Burundi Breweries Convention on International Traffic of Endangered Species Chamber of Commerce, Industry, Craftsmen and Agriculture in Burundi Centre for Environmental Information National Coordinator National Council for the Environment Cottons and Textiles of Burundi Catholic Relief Service General Department of Water and Energy Environmental Education Environmental Impact Assessment Examination of National Priorities and Strategies for the
TAO	Environment
FAO	Food and Agriculture Organisation of the United Nations
FEM	Fonds pour l'Environnement Mondial (GEF)
GEF NWG	Global Environment Facility National Working Group
IGEBU	Burundi Geographical Institute
INECN	National Institute for Nature Conservation and the Environment
ISABU	Burundi Institute of Agronomic Sciences
LTR	Lake Tanganyika Research (= RAPLT)
MAE	Ministry of Agriculture and Cattle Breeding
MCIT	Ministry of Trade, Industry and Tourism
MINATE	Ministry of the Environment and National and Regional Development
MREC	Ministry of Foreign Affairs and Relations
MTPE	Ministry of Civil Engineering and Amenities
ONG	Non Governmental Organisation
EAP	Environmental Action Plan
PAEMR	Project to Supply Drinking Water to Rural Districts
PARGE	Support Project for the Restoration and the Management of the Environment
SAP	Strategic Action Plan
LTBP	Project for the fight against pollution and for other measures to protect Lake
	Tanganyika's biodiversity
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
REGIDESO	National Authority for the Production, Distribution and Marketing of Water
	and Electricity
SIP	Public Real Estate Company
SETEMU	Local Technical Services
SNEB	Burundi National Environmental Strategy
UB	University of Burundi
UPP	Population Planning Unit