

*A project funded by the United Nations Development Programme/Global Environment Facility (UNDP/GEF) and executed by the United Nations Office for Project Services (UNOPS)*

## **Progress Report No. 13**

**March 1999 - May 1999**

### **Pollution Control and Other Measures to Protect Biodiversity in Lake Tanganyika (RAF/92/G32) Lutte contre la pollution et autres mesures visant à protéger la biodiversité du Lac Tanganyika (RAF/92/G32)**

Le Projet sur la diversité biologique du lac Tanganyika a été formulé pour aider les quatre États riverains (Burundi, Congo, Tanzanie et Zambie) à élaborer un système efficace et durable pour gérer et conserver la diversité biologique du lac Tanganyika dans un avenir prévisible. Il est financé par le GEF (Fonds pour l'environnement mondial) par le biais du Programme des Nations Unies pour le développement (PNUD)''

The Lake Tanganyika Biodiversity Project has been formulated to help the four riparian states (Burundi, Congo, Tanzania and Zambia) produce an effective and sustainable system for managing and conserving the biodiversity of Lake Tanganyika into the foreseeable future. It is funded by the Global Environmental Facility through the United Nations Development Programme.

**Burundi: Institut National pour Environnement et Conservation de la Nature**  
**D R Congo: Ministrie Environnement et Conservation de la Nature**  
**Tanzania: Vice President's Office, Division of Environment**  
**Zambia: Environmental Council of Zambia**

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RAF/92/G32 - POLLUTION CONTROL AND OTHER MEASURES TO  
PROTECT BIODIVERSITY IN LAKE TANGANYIKA

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# **1. Project Co-ordination Unit**

## **1.1 Project Co-ordinator and Scientific Liaison Officer**

### 1.1.1 Introduction

A number of important events took place this quarter with regard to ongoing project implementation but with respect to the broader picture of project progress and project strategy for the remaining period the concluding phases of the Mid-Term Evaluation (MTE) were clearly the most important. In particular the Tri-Partite Review meeting (TPR), which used the MTE report as the basis for its deliberations, and the Steering Committee Meeting (SCM).

### 1.1.2 General summary of key events

The full version of the Mid Term Evaluation Report was received by the project in March and distributed through the PCU office. National affiliates and NRI consortium members alike studied the report. NRI consortium members and the Project Co-ordination Unit met in London on 15-16 April to discuss the findings. Concerned by several factual errors and perceived misrepresentations in the report, the NRI consortium drafted a detailed response to the report that was also distributed.

After some delay owing to the difficulty of finding a time slot when all parties were available and the need to move the venue from Bujumbura because of the unstable security situation in eastern DR Congo, the Second Tri-Partite Review and the 4<sup>th</sup> Steering Committee Meeting were held in Nairobi from 25-27 May 1999.

Present were representatives from the four countries, GEF, UNDP, UNOPS the PCU and a number of resource persons from the NRI consortium. A full list is given in Annex 1. All representatives were present at both the TPR and SCM. Although the meetings were most fruitful it is unfortunate that once again the majority of countries were not represented at the Principal/Permanent Secretary level as called for by the agreed composition of the Steering Committee.

All the key issues concerning project implementation were raised at the TPR as delegates assessed each of the MTE recommendations in turn. Of particular importance to delegates were matters related to national capacity building and participation in project planning. In addition, the crucial question of what happens beyond August 2000, the current end date of the project, was addressed. While it was made clear by UNOPS that some additional funds remained from the original total allocation and would be made available to the project to complete its work, it was noted that this would result in only a short extension to the current time frame of the project. UNOPS and NRI were asked to clarify the final amount of funds available and taking account of the resolutions of the meeting, draw up a final workplan and budget to take the project to the end of its current phase. This work-plan would also make provision for a strategy to secure funds for a second project to build on the current

one. In this respect, the representative from GEF stressed that “process indicators” would be crucial to improving chances of obtaining funds from GEF for a second project. These are indicators that clearly demonstrate country commitment in terms of allocation of country resources albeit modest to the goal and purpose of the project. It was agreed that the revised budget and workplan would be presented and discussed at an extraordinary meeting of the Steering Committee, tentatively scheduled for September 1999. A summary of main findings and recommendations from the TPR and SCM are given at Annex 2 and 3. Full minutes of both meetings will be distributed in due course.

Following the meetings Mr. Ingolf Shuetz-Mueller, Chief, Division for Environmental Programs, UNOPS and Ms. Margaret Chi, Project Management Officer, UNOPS visited LTBP’s Bujumbura Office 28-29 May 1999. In addition to meeting with the Minister of the Environment for Burundi and other high-level officials within the Ministry of the Environment, they had a tour of Bujumbura and Rusizi Delta National Park.

Other key project events this quarter include a visit by the Project Co-ordinator, Scientific Liaison Officer and a senior scientist from each of the four riparian nations to the SADC/GEF Lake Malawi Biodiversity Conservation Project in Senga Bay, Malawi on the occasion of its final wrap-up conference, 4-6 March 1999. LTBP members attended the meeting to share results and experiences with the Lake Malawi team. The Malawi GEF project is implemented by The World Bank and although it is structured quite differently from LTBP, we learned a great deal in sharing our experiences. This was an invaluable forum for exchange between African Great Lakes GEF projects. GEF has spoken in the past of arranging a more formal exchange of ideas between GEF projects through meetings etc and based on our Malawi experience we would most certainly encourage GEF to pursue this idea. Another perhaps more far reaching approach would be to develop internet sites similar to our own, for other GEF projects.

In early March an EE workshop was held in Kigoma, Tanzania for the National Environmental Education Co-ordinators and associates. They had met last quarter at the Bujumbura workshop in their role as Training Liaison Officers and one of the objectives of the Kigoma workshop was to clarify and integrate these two roles as part of the overall training strategy. Moreover they advanced EE work plans.

Under the Biodiversity special study a number of key activities took place consecutively throughout March and the early part of April involving joint activities by all four national teams operating as a single regional team. First 8 candidates (2 from each riparian country) all of whom became qualified divers completed the second dive training course held at Kigoma. Following the dive-training course an intensive Taxonomic Training Course was held in Kigoma on the 10-19 March 1999. Organised by the BIOSS facilitator, the course was taught by local experts, Dr. Ntakimazi (Professor of Biology, University of Burundi), Dr. Nshombo (D.G. Centre de Recherche en Hydrobiologie, Uvira DRC) and Dr Kelly West (Scientific Liaison

Officer). BIOSS technicians from the four riparian countries participated in the bilingual course designed to reinforce taxonomic expertise in fish and molluscs for BIOSS survey work.

The Taxonomic Training Course was immediately followed by an 18-day field survey of Mahale Mountains National Park in Tanzania. BIOSS teams from the four riparian countries, along with the BIOSS facilitator and Scientific Liaison Officer, conducted aquatic surveys in the remote and pristine park. The 60+ km of park coastline were mapped using the manta technique and dive surveys of habitat, fish and mollusc diversity were carried out.

Further progress has been made under the Socio-economic component of the project following the recent assignation as SE/EE co-ordinator of Dr Kate Meadows. A field facilitator was identified (Ms Karen Zwick) and her appointment approved at the recent meeting of the Steering Committee. Dr Meadows is proceeding with a "status analysis" of the SE work based on all the work and reports carried out to-date. This will form the basis of a workplan to be formulated by Dr Meadows, the National Socio-Economic Co-ordinators and the regional facilitator.

The Seventh Meeting of the Lake Tanganyika Fisheries Research Project (LTR) Co-ordination and International Scientific Committees and the eighth Session of the Sub-Committee for Lake Tanganyika of the Committee for Inland Fisheries of Africa (CIFA) were held from 18 to 21 May 1999 in Lusaka, Zambia. Ms Vicki Cowan Fishing Practices and legal study co-ordinator attended the meeting on behalf of LTBP. Her aim was to help ensure coherence between the two projects with respect to the ongoing LTR fisheries monitoring programme and the proposed fisheries management body.

The sedimentation teams have also had a very active quarter involving activities in all four countries. Following the production of a major document/questionnaire outlining the SedSS plans to completion, the regional facilitator has gathered comments from all the national teams and nominees for participation in the proposed final data analysis and interpretation workshop.

In mid-March, the rehabilitation of the Centre de Recherche en Hydrobiologie (CRH) in Uvira, RD Congo, was resumed. The electrical and plumbing installations of this historic building were completely refitted. The roof was repaired while woodwork and painting continues. The work is scheduled to finish in June 1999. We hope for a more formal hand-over in late July.

## **2. Strategic Action Plan**

### **2.1 Endorsement of the Preliminary TDA.**

The TDA document has been translated into French and was distributed to all countries prior to the Tri-Partite Review and Steering Committee Meeting.

An outline of the conclusions of the TDA was presented to the SCM and the document was endorsed.

DR Congo have provided some corrections to the French text version, however the majority of changes were in response to typographic errors introduced in the translation from the English version.

### **2.2 Timetable for Action**

Following the endorsement of the preliminary TDA, an outline framework for the draft SAP will be prepared incorporating concepts from the draft Legal Convention, which is expected to be available in August 1999.

The conclusions of the TDA will be combined with the framework for the SAP and developed into a preliminary by the TAC SAP Planning Team at a workshop that is likely to be held in September/October 1999.

### **2.3 Goals for the Next Quarter**

The main output during the next quarter is expected to be the preparation of the framework for the preliminary SAP.

### **3. Reports of Special Study groups**

#### **3.1 Progress Report: March – May 1999 for "Biodiversity" Special Study and "Conservation Activities"**

##### 3.1.1 Overall Summary of Progress

BIOSS achievements in this quarter were centred on an intense period of joint activity by all four national teams operating as a single regional team. The Special Study's second dive training course held at Kigoma was completed in the second week of March. Of the 8 candidates (2 from each riparian country) all qualified for their PADI Open Water certificate and a further 6 gained their Advanced Open Water qualification. Significantly, two experienced members of the existing BIOSS team assisted the external PADI instructor throughout, with teaching and course administration. The addition of 8 trained divers will make a significant contribution to the long-term sustainability of the national teams.

Following the dive-training course the novice divers were joined by the remainder of the BIOSS teams to participate in a taxonomic training course held in Kigoma. The aim of the course was to equip all team members a basic standard of taxonomic knowledge of the fishes and molluscs of Lake Tanganyika, so they participate fully in all future survey activities. The course was devised and delivered using resources from within LTBP, i.e. no external consultants were contracted. The principal instructor was Dr. Gaspard Ntakimazi (BIOSS Co-ordinator, Burundi), assisted by Dr. Muderhwa Nshombo (Director General, CRH Uvira) and Felix Nicayenzi (LTBP Bujumbura). Dr. Kelly West (SLO) delivered the module on mollusc taxonomy. The course format was lecture based, with knowledge being confirmed by laboratory identification of fish samples caught with gillnets and snorkelling to practice identification in the field.

After the completion of the taxonomic training the 20 strong regional dive team deployed to Mahale Mountains National Park, Tanzania for two and half weeks to survey the park. They were accompanied by the BIOSS Facilitator, SLO, Dr. Nshombo and Dr. Ntakimazi. The survey was undertaken in accordance with the objectives of the special study namely to review current levels of biodiversity and the distribution of major habitat types with particular emphasis on existing protected areas. It also provided an excellent opportunity to confirm the knowledge gained in the dive and taxonomic training. Major activities included: coarse habitat mapping of the entire shoreline of the park, above and below the water, as well as detailed habitat, fish and mollusc surveys at 27 separate sites. The newly qualified divers were trained in the wide range of survey techniques used by their more experienced colleagues. Individuals from different riparian countries worked closely together in the planning preparation and execution of all aspects of the survey, thereby exchanging skills and ensuring capacity building across all four national teams. The regional dive team



returned to Kigoma in the second week in April from where they dispersed to their home stations.

In April, representatives from all four teams were given an introduction to the Survey Database by the BIOSS facilitator. Subsequently, they began the task of entering the data collected at Mahale in preparation for analysis and report writing. Responsibility for drafting different sections of the report will be divided amongst the national teams. Throughout the period the work of entering data into the Literature Database was continued by Robert Kumana, supervised by Dr. Ntakimazi.

In Burundi the team has transferred the manta habitat mapping data collected for the entire Burundian coastline onto maps for visual display. They have also begun the process of identifying and surveying potential monitoring sites. Eleven sites have been short-listed of which four have been surveyed by the BIOSS team in detail. The Zambian team continued the quarterly monitoring programme in conjunction with SedSS and PolSS, which has been in place since mid 1998. During April and May they also participated in a joint experiment with the SedSS to assess the effect of sediment load on biodiversity at a range of sites in the vicinity of Mbita Island. The Tanzanian team also carried out a number of dives at potential monitoring sites. The recent deterioration in the general security situation in DRC means that the potential for future monitoring activities remains unclear. The BIOSS facilitator hopes to visit the team in Uvira and make a further assessment in July.

During May the BIOSS facilitator returned to UK for briefings with the Dr. Eddie Allison, BIOSS Co-ordinator and Vicki Cowan of MRAG. Recent progress and the work plan up to the end of the special study were discussed. In light of experience gained at Mahale, further revisions to the survey protocols were discussed and agreed. Suitable, editorial changes to the standing orders for survey techniques were planned. As a result of field-testing and the refinement of the survey protocols, a brief for the supporting changes to BIOSS survey database was developed in consultation with the MRAG IT team. Additional technical updates for the literature database were also agreed with MRAG.

For the next quarter, the priorities for the special study will include the survey of the shoreline of Nsumbu National Park, Zambia and the establishment of a long term monitoring programme in all four riparian countries. The latter will be carried out in conjunction with the other special studies as appropriate. In addition, data will continue to be entered into both BIOSS databases enhancing their capacity as tools for the special study and lake management in general. The changes to the Standing Orders document will be made and the next version issued to the teams.

### 3.1.2 Chronology of Activities

- Mar: Second week of PADI dive training course, Kigoma.
- Mar: All BLOSS members participate in Taxonomic training course on of fishes and molluscs of Lake Tanganyika held in Kigoma (10-18 March).
- Mar-Apr: Combined regional BLOSS team survey of Mahale Mountains National Park, Tanzania (22 March - 9 Apr).
- Apr: Teams introduced to Survey Database in Kigoma (Tanzanians and Zambians) and Bujumbura (Burundians and Congolese).
- Apr: Burundians transfer manta technique habitat data on to maps for visual display.
- Apr-May: Entry into Survey Database of data from Mahale survey and previous survey work.
- Apr-May: Zambian team carry out quarterly monitoring in conjunction with other SS and join SedSS to carry out habitat modification experiment in area of Mbita Is.
- May Burundian teams commence process of selecting long-term monitoring sites.
- May Tanzanians conduct dives at potential monitoring sites in vicinity of Kigoma

### 3.1.3 Staffing Schedule

#### 3.1.3.1 *Burundi*

Dr Gaspard NTAKIMAZI, Burundian Co-ordinator

Robert KUMANA, Responsable de la Base de donnees.

#### 3.1.3.2 *DR Congo*

Dr Muderhwa NSHOMBO, Directeur Général, C.R.H. – Uvira

### *Regional Dive Team:*

Burundi	Celestin	BIGIRIMANA	Kanyosha Secondary School		PADI Advanced open water
	Terence	HAKIZIMANA	Cibitoke Secondary School		PADI Advanced open water
	Libére	NDAYISENGA	LTBP	– Bujumbura	BSAC-sport
	Félix	NICAYENZI	DEPP	– Bujumbura	BSAC-sport
	Albéric	RUGIRABIRORI	IECN	– Bujumbura	BSAC-sport
	Bernard	SINUNGUKA	Univ Bu	– Bujumbura	BSAC-sport
Congo	Constantin	AMUNDALA	CRH	– Uvira	BSAC-sport
	Byeragi	BAHANE	CRH	– Uvira	PADI Open water
	Alexis	BASHONGA	CRH	– Uvira	BSAC-sport
	Patrick	BUDA	CRH	– Uvira	BSAC-sport
	Donatien	MUZUMANI	CRH	– Uvira	BSAC-sport
	Igundji	WATUNA	CRH	– Uvira	PADI Advanced open water
Tanzania	Robert	KAYANDA	TAFIRI	– Kigoma	PADI Advanced open water
	Bakari	MNAYA	TANAPA	– Gombe	PADI Advanced open water
	Robert	WAKAFUMBE	TAFIRI	– Kigoma	BSAC-sport
Zambia	Charles	LUKWESA	DoF	– Mpulungu	BSAC-sport
	Maybin	MWENDA	DoF	– Mpulungu	BSAC-sport
	Reuben	SHAPOLA	DoF	– Mpulungu	BSAC-sport
	Robert	SINYINZA	DoF	– Mpulungu	PADI Open water
	Isaac	ZULU	DoF	– Mpulungu	PADI Advanced open water

#### *3.1.3.3 International*

Dr Ian Payne, MRAG Ltd, BIOSS Director

Dr Eddie Allison, MRAG Ltd, BIOSS Co-ordinator

Vicki Cowan, MRAG Ltd, BIOSS Management

Richard Paley MRAG Ltd, BIOSS Facilitator

Crag Jones, John Pearce, Connor O’Kane, MRAG Ltd, BIOSS IT specialists

#### *3.1.3.4 BIOSS Consultants*

Dr Kelly West (SLO, LTBP)

Christian Furrer (Diving Instructor)

#### **3.1.4 Main Outputs and Achievements**

- Second regional dive training course successfully completed: two new divers trained from each riparian country.

- Inventories of equipment at each station completed and supplementary/replacement kit ordered and delivered to region.
- Taxonomic training course held in Kigoma, Tanzania attended by all BIOSS team members.
- Survey of Mahale Mountains National Park, Tanzania by regional dive team.
- Drafts of standing order text on data analysis and monitoring sent to the region for discussion during Mahele work.
- Representatives of each national BIOSS team introduced to the Survey Database by the Facilitator.
- Process of selecting long term monitoring sites begun.
- Congolese team submission of report on sampling activities July - December 98.
- Further amendments to draft Standing Instructions and Survey Database submitted to BIOSS Co-ordinator and MRAG.
- Allocation of responsibility for data analysis and report writing agreed amongst the four riparian teams, BIOSS facilitator to act as editor in this first regional production.
- System whereby the regional teams report on activities in each quarter is established. The facilitator then draws from these national reports to draft this BIOSS progress report.

#### 3.1.5 Main Objectives for the Next Quarter

- Teams to produce technical report from survey of Mahale National Park, Tanzania, with technical support from regional facilitator.
- Survey of Nsumbu National Park, Zambia.
- Selection of sites and commencement of long term monitoring programme in all four riparian countries.
- Final revision and distribution of Standing Instructions document.
- Final revision the Literature and Survey Databases.
- Plans for end of year workshop (final analysis and report writing) advanced.

#### 3.1.6 BIOSS Facilitator: Summary of Activities

01-21Mar. Participation and administration of dive and taxonomic training. Planning and preparation for the Mahale Survey.

22Mar-9Apr Co-ordination of Mahale National Park survey.

10-19Apr Kigoma station. Post survey administration and introduction of Survey Database to Zambian and Tanzanian teams.

- 20-30Apr. Bujumbura. Introduction of Survey Database to Burundian and Congolese teams. Discussions with Dr. Nshombo (DRC) and Dr. Ntakimazi (Burundi).
- 10-29May UK for meetings with Dr. Ian Payne and Vicki Cowan of MRAG, and with Dr. Eddie Allison (BIOSS Co-ordinator) to discuss progress, objectives and workplan for BIOSS.

## **3.2 Progress Report: March – May 1999 for Fishing Practices Special Study**

### 3.2.1 Overall Summary of Progress

This special study suffered a serious set back early in this quarter as the proposal to match an international researcher with a regional researcher to meet the need for a replacement facilitator was not agreed to the region. Therefore, the search continues for a bilingual fisheries biologist with sufficient experience to take on the role of FPSS regional facilitator. The position was re-advertised and at the closing date the response has been very disappointing: four applications, with three being completely inappropriate and the fourth not a strong technical contender. Alternative strategies will have to be considered if Dr Dorr's work plan, developed after consideration of the SAP and LTR, is to be implemented before the end of the project. This is a severe constraint to the success of FPSS.

Potential overlap with LTR has been informally discussed at a recent CIFA meeting in Lusaka. Vicki Cowan had many meetings with the leaders at each of the four field stations who will implement the LTR monitoring programme as well as Finnish scientists who administer the programme. It should be possible to implement a programme for FPSS, by refocusing protocols and information management systems developed for the commercial stocks towards the fishing practices and species of interest to LTBP. A workplan to implement this will be developed early in the next quarter and will at least ensure FPSS is operational to some degree on the lake while the search for a regional facilitator continues.

While at the CIFA meeting, also discussed the potential for LTBP support of a gill net survey which has been carried out in Zambian waters every 10 years with Mr Mwape, DoF, Mpulungu. Mr Mwape will prepare a workplan and budget indicating where LTBP support (operational funds only) is needed. MRAG will consider against both FPSS and BLOSS field priorities and submit to PCU for budgetary consideration.

A revision of the field programme for the Tanzanian team was completed in this quarter in order to consolidate sites and focus. The team is operating with no direct international support since Dr Dorr's departure and should be commended for maintaining their programme. They continue to submit regular reports to Vicki Cowan in lieu of regional support from a facilitator.

### 3.2.2 Chronology of Activities

March: Facilitator team proposal submitted for consideration of regional researchers, and not accepted

April: FPSS regional facilitator position re-advertised

April: FPSS reports distributed to field stations

May: Attendance at CIFA sub committee.

### 3.2.3 Staffing Schedule

Regional team

#### *Tanzanian Team*

Mr Omari Kashushu (TAFIRI, Kigoma)

Mr Hamza Maboche (Community Development)

#### *Zambian Team*

*To be rationalised to two members.*

Mr Joseph Chimanga (DoF, Mpulungu)

Mr Whiteford Chumba (DoF, Mpulungu)

Mr Charles Lukwesa (DoF, Mpulungu)

Mr Isaac Zulu (DoF, Mpulungu)

Mr Khalfan Kaweme (DoF, Mpulungu)

Burundian Team (proposed)

+ a representative from the Departement des Eaux, Peche et Pisciculture (DEPP)

+ one other representative if the level-of-work justifies

Congolese Team (proposed)

Representative from Centre for Hydrobiological Research

+ a representative from the Secteur Peche du Service de l'Environnement (SPSE)

International team

Dr Ian Payne, MRAG Ltd, FPSS Director

Ms Vicki Cowan, MRAG Ltd, FPSS Management

Dr E Allison, MRAG Ltd, FPSS consultant

### 3.2.4 Main Outputs and Achievements

- Plans to establish workplan in absence of a regional facilitator advanced

- Technical reports covering earlier FPSS fieldwork edited and distributed.

#### 3.2.5 Main Objectives for the Next Quarter

- Regional facilitator appointed and operational on the lake as soon as possible.
- If unable to appoint a facilitator, alternative measures will have to be implemented to achieve the aim of supporting field programmes in each riparian country.



### **3.3 Progress Report: March – May 1999 for Legal and Institutional Component**

#### 3.3.1 Summary of Progress

Work on the draft Agreement has begun in this quarter and the lawyers are on time to deliver this document by 9<sup>th</sup> August 1999, i.e. in advance of the sub-regional workshops. Planning for these two workshops has been advanced. The dates have been confirmed as 24<sup>th</sup> - 27<sup>th</sup> August for the Anglophone and 30<sup>th</sup> August - 3<sup>rd</sup> September for the Francophone. A letter has been sent to each of the national co-ordinators updating them on progress and seeking confirmation that they and two lawyers can attend the relevant workshop. MRAG has yet to receive replies from all four delegations.

Documents presented by LTR at a recent CIFA (Sub-committee for Lake Tanganyika) meeting have been passed to LTBP's lawyers. The documents deal with legal and institutional issues specifically relating to fisheries and will be used as resource materials during drafting the regional agreement. The formation of a regional body to take responsibility for the fisheries plan is of particular relevance to the lawyers drafting the agreement and their regional colleagues and the team developing the Strategic Action Plan (SAP). Documentation on the fisheries plan was forwarded to colleagues developing the SAP.

#### 3.3.2 Chronology of Activities

Mar-May      Drafting text of Agreement

April          Letter to National Co-ordinators confirming workplan sent out

May            Vicki Cowan attended a recent FAO meeting of CIFA (Committee for Inland of Africa, Sub committee for Lake Tanganyika) as an observer. Particular interest in legal initiatives and institutional development accompanying the fisheries management plan and relevance to LTBP's work in this field.

#### 3.3.3 Current Staffing Schedule

Proposed delegations to attend the sub-regional workshops in August/September are listed below. Awaiting confirmation of names from National Co-ordinators. See previous reports for institutional affiliations.

<p><b>Burundi</b></p> <p>M. Jean Bechmans Manirakiza (NC)  M. Benoit Bihamiriza  M. Damien Nindorera</p>	<p><b>DR Congo</b></p> <p>Mr. Amule Pascal Mady (NC)  Dr. Lunpungu Kalanbay  Mme. Gode Mbombo-Mangangi</p>
<p><b>Tanzania</b></p> <p>Mr. Rawson Piniel Yonazi (NC)  Ms. Verdiana Macha Macha  Ms. Alicia Bosensera Magabe OR  Ms Alice Chinguwile</p>	<p><b>Zambia</b></p> <p>Mr. James Simoko Phiri (NC)  Mrs Chanda J. Lubasi Punabantu  Mrs Doris Mwiinga</p>
<p><b>International</b></p> <p>Dr Ian Payne, MRAG Ltd, Component Director  Mr Cormac Cullinan, MRAG Ltd (Legal Specialist, Anglophone)  Mr Stephen Hodgson, MRAG Ltd (Legal Specialist, Francophone)  Ms Caroline Blatch (Legal Specialist, Francophone)  Ms Vicki Cowan, Component Manager</p>	

#### 3.3.4 Main Outputs and Achievements

- arrangements for sub-regional workshops advanced
- drafting of regional agreement started

#### 3.3.5 Main Objectives Next Quarter

- on confirmation of delegates by National Co-ordinators, PCU and MRAG will confirm arrangements for two sub-regional workshops (i.e. travel, accommodation and workshop facilities booked)
- draft agreement distributed in advance of sub-regional workshops
- hold sub-regional workshops
- advance plans for regional workshop (proposed dates 1-5<sup>th</sup> November)

### **3.4 Progress Report: March – May 1999 for Special Study on Sediment Discharge and Its Consequences**

#### 3.4.1 Overall Summary of Progress

The main objectives for this quarter were given in the previous quarterly report (December 1998 – February 1999) as follows:

Dr Sichingabula (UNZA) to travel to Mpulungu for the monitoring of Zambian rivers (mid-March).

Erik Verheyen (Royal Belgian Institute of Natural Sciences) to travel to the Lake in April-May for 4 to 5 weeks to work on Impact of sediments on biota.

Dr Nkotagu (University of Dar es Salaam) to travel to Kigoma region for the monitoring of the 2 Gombe region catchments and of the Luiche river.

M Sebahene to organise regular meetings with the 3 SedSS teams in Burundi (DGGM – IGEBU – University of Burundi).

IGEBU team to install 5 hydrometric stations on the Burundian rivers and to recruit and train gauge readers.

OD to implement workplan produced by Dr Irvine for SedSS in Zambia

OD to supervise closely SedSS team at Department of Fisheries, Mpulungu during Mr Sinyinza's training course in Tanzania

GP and OD to formulate plans for a windup meeting and reporting format for the Special Study.

This quarter was of prime importance for the study because of the occurrence of the peak of the rainy season and then the beginning of the dry season. Most of the objectives for this quarter were achieved (apart from the Burundian SedSS teams meeting as the Burundian regional co-ordinator (Mr Sebahene) was unavailable).

#### 3.4.2 Chronology of Activities

The following section lists one-off activities and does not take count of ongoing activities such as workplan development and continuous field monitoring activities.

4 March: OD attended the Zambian National Working Group meeting in Lusaka, and presented the SedSS activities which took place in Zambia during the previous quarter.

5 & 6 March: OD met Dr Sichingabula at University of Zambia (review of the work done, planning of the team during the trip to Mpulungu to carry out discharge measurements at high flows).

15 March: Mr David Shokora, technician from Water Department in Kigoma refused the contract proposed by the Project to carry out work on Luiche river in Tanzania.

15 - 29 March: discharge measurements at high flows were conducted by Dr Sichingabula, his research assistant, Mr Sikazwe (Water Affairs, Lusaka), the Water Affairs team from Kasama. Mr Mwansa (Provincial Water Engineer, Water Affairs, Kasama) toured the 5 hydrometric stations with the team during one week for a better understanding of the work carried out and the importance of the stations for the Northern Province.

2 - 16 April: OD toured Kigoma station, Tanzania to learn how to install radio equipment at Kigoma at the PCU request and worked with the team at the LARST station.

9 April – 7 May: Erik Verheyen from the Royal Belgian Institute of Natural Sciences travelled to Mpulungu to initiate a field experiment survey with the SedSS and BioSS teams from the Department of Fisheries to measure the impact of sediments on biota.

14 April: Mr Sinyinza returned to Mpulungu station after his 7 week participation in Dive 2 with the BioSS divers from the four riparian countries (diving and taxonomic training and then survey of Mahale National Park, Tanzania).

20 April: Dr Robert Duck (University of Dundee) drafted a methodology for loss on ignition to be included in the laboratory procedures for the analysis of sediments by the SedSS teams (following a MTE recommendation).

21 April – 11 May: OD toured Bujumbura and Uvira stations to follow up the visit made in February (Meetings and field work with SedSS teams in Burundi (DGGM – IGEBU – University of Burundi), visit of IGEBU in Gitega, meetings and training with SedSS team at CRH, Uvira, DR Congo).

28 April: the SedSS team from CRH, DR Congo participated to a computer training (software and Project Website) made by OD in Bujumbura.

end of April: Mr Rubabwa (MSc student from University of Dar es Salaam) travelled to Kigoma region for a 3 month period to carry out work in Gombe National Park

7 May: Ian Donohue (student University of Dublin) left Mpulungu after a 3 month period sampling some river mouths and carrying out taxonomic observations with the SedSS team from Department of Fisheries to measure the impact of sediments on biota.

11 May: OD installed a computer in the DGGM office in Bujumbura, Burundi and trained briefly Mr Songore on the use of software and the Project Website.

16 – 21 May: IGEBU team installed the 6 hydrometric stations, recruited and trained gauge readers for the rivers in Burundi.

18 – 23 May: Mrs Mbwambo from the Tanzanian Bureau of Standards travelled to Kigoma (as Dr Nkotagu was not available) to carry out discharge measurements on the streams of Gombe National Park (along with Mr Rubabwa) and water analysis in the labs.

23 May - end of July: Mr Mpyalimi, technician from Water Department in Kigoma carries out work on Luiche river in Tanzania.

25 – 29 May: OD on leave.

28 May: Dr Nkotagu of University of Dar es Salaam travelled to University of Arizona for a 6 week period to carry out with Dr Dettman isotope analysis on samples collected in Gombe National Park streams.

#### 3.4.3 Staffing Schedule

Tanzania: unfortunately the technician from Kigoma Water Department who was in the process of being engaged by the Project for a 5 month period to carry out intensive discharge measurements on Luiche river refused the offer made by the Project.

Burundi: 6 gauge readers were recruited by IGEBU to record twice a day the water levels at the hydrometric stations installed this quarter.

#### 3.4.4 Main Outputs and Achievements

LARST reports (Kigoma) were produced for each of the three months of the quarter. A defective UPS at the station caused some inconveniences during a short period of this quarter. It was sent to Dar es Salaam office for repairs/replacement.

Zambia: Dr Sichingabula continued his work monitoring Zambian rivers. He produced a quarterly report (6th) of the work done during the previous quarter. He carried out discharge measurements at high flows on the 5 rivers during the peak of the rainy season with the Water Affairs team. Mr Mwansa (Provincial Water Engineer of the Northern Province) was shown the stations installed by the Project and discussions have started for the future of the stations and the gauge readers possible employment by Water Affairs at the end of the Project. Now that the dry season has begun, the Water Affairs team from Kasama carries out monthly discharge measurements. It was confirmed by GP that the work carried out by the Water Affairs team will go on at least until end of December 1999. Dr Sichingabula is preparing a quarterly report (7th)

which will be available early in the next quarter. The final report to be produced by Dr Sichingabula by end of July is also in preparation along with digitalisation of maps for incorporation into the TANGIS database.

The letters for the gauge readers were issued during this quarter.

SedSS team at Department of Fisheries, Mpulungu continues their work on suspended matters and granulometry analysis and impacts of sediments on biota, some intensive sampling in the river mouths took place this quarter at the peak of the rainy season. Ian Donohue (student at University of Dublin, working under Dr Irvine's supervision) is carrying out work impacts of sediments on biota with the SedSS team at Department of Fisheries and a field experiment in the Lake was initiated by Erik Verheyen during his visit. The monitoring of this site is made by SedSS along with BioSS teams.

Mr Sinyinza attended successfully Dive2 (diving and taxonomy training course organised by the BioSS with the divers of the four riparian countries) before participating to the BioSS survey in Mahale National Park in Tanzania.

Burundi: DGGM - IGEBU teams and Dr E Nzeyimana, University of Burundi continued their work program. DGGM and IGEBU produced a third quarterly report in May (including results of mineralogical analysis of sediments collected in river mouths). The 6 hydrometric stations have been installed during this quarter; gauge readers were recruited locally and trained by IGEBU to record the river water levels twice a day at the stations. IGEBU team has begun the monthly program for the dry season. OD visited IGEBU office in Gitega and worked with the team on the digitalisation of maps (ArcView package). A computer was installed in the DGGM office in Bujumbura and Tharcisse Songore was shown useful packages and how to surf the Project Intranet CD-ROM.

Tanzania: Nkotagu of University of Dar es Salaam produced a quarterly report on his work on the rivers of Gombe region during this quarter but did not have time to travel to Kigoma region, Mrs Mbwambo was asked to travel to Kigoma to work with Mr Rubabwa in Gombe National Park, during her visit she did water analysis in the labs at Kigoma station also. Mr Mpyalimi is now carrying out discharge measurements and collecting sediment samples on Luiche river until the end of July. Dr Nkotagu is visiting University of Arizona to carry out isotope analysis on the water samples collected in Gombe catchments previously.

DR Congo: The final version of the report for Stage 1 (incorporating a French translation of the methodology proposed by Dr Robert Duck) was completed and will be distributed soon by Bujumbura Station. As the security situation around Uvira made fieldwork possible most of the time during this quarter, the SedSS team at CRH Uvira monitored the rivers and the river mouths and carried out analysis in the labs according to the workplan. Bombi Kakogozo and the team produced a report for each of the three months of the quarter, and a quarterly report for February - March - April period. As the dry season has begun also in Uvira area, the team carries out now the

dry season program. OD met the team at the CRH, Uvira twice this quarter and organised computer training on redaction of reports, data presentation and the Project Intranet Website CD-ROM in Bujumbura (which took place on 28 April).

Following the production by GP of a major document/questionnaire outlining the SedSS plans to completion, OD has gathered comments from all the regional consultants nominees to participate in the possible final meeting and has provided details about the data formats to be incorporated into the TANGIS database to the teams at their request.

#### 3.4.5 Main Objectives for the next quarter

M Sebahene to organise regular meetings with the 3 SedSS teams in Burundi (DGGM – IGEBU – University of Burundi)

Tharcisse Songore (DGGM) to meet with Dr Ntakimazi (BioSS Burundian Co-ordinator, University of Burundi) and Dr Kelly West to evaluate the impact of landslides on biota in the Burundian part of the Lake.

Dr Sichingabula (UNZA) to produce the Zambian final report of the SedSS at the end of July.

Dr Nkotagu (University of Dar es Salaam) to travel to Kigoma region for the monitoring of the 2 Gombe region catchments after his return from the US.

GP and OD to finalise plans for the SedSS windup meeting.

OD to travel to Kigoma to work with Mr Rubabwa on Gombe National Park streams.

OD to meet Dr A Cohen (University of Arizona) during Nyanza Project in Tanzania.

OD to attend the ‘Training for Trainers’ workshop in Bujumbura in July.

OD to travel to Uvira with Dr Kelly West to establish the CRH labs (last stage of the rehabilitation of the CRH).

OD to install HF radio equipment at Mpulungu station at PCU request

### **3.5 Progress Report: March – May 1999 for Special Study on Pollution and its Effects on Biodiversity.**

#### 3.5.1 Overall summary of progress

The Pollution Special Study (PSS) continues to maintain its focus on 'ascertaining the nature and (where possible) the extent of pollution on biodiversity, and develop the human and equipment resources that will allow the work to be sustained after the end of this particular Project'.

As in previous reports, this document summarises contributions from Dr Francis Chale in Kigoma, Mr Mwape and Mr Makassa in Mpulungu, and Mr Gabriel Hakizimana (PSS Co-ordinator in Burundi) and his team in Bujumbura. Generally good progress has been maintained in the areas that the PSS Co-ordinator has stressed from the outset i.e. the provision of information on aspects of water quality including the phytoplankton. The data accrued will influence decisions on such issues as choosing areas worthy of “reserve” status, and the siting of water intake and effluent discharge pipes. Work on eutrophication and related limnological aspects have been maintained along the lines summarised in previous reports although much more work remains to be done on pesticides and heavy metals.

Of the three objectives featured in the previous PSS quarterly report, we have concentrated very largely on that concerned with our proposal.

#### 3.5.2 Brief chronology of activities and visits

Only one consortium management meeting was held during the quarter; it concentrated almost entirely on the Project's response to the mid-term evaluation report. Of the three objectives featured in the previous PSS quarterly report, we have concentrated very largely on that concerned with our proposal (as part of our on-going on-the-job training of African personnel) to carry out a series of workshops on Analytical Quality Control (AQC) field and laboratory practises (see below).

Dr. Chris Foxall visited the Institute of Freshwater Ecology (IFE) Edinburgh Laboratory, on 10 May to discuss progress of the PSS. The main issue covered was the planning of the proposed PSS. AQC workshop.

Mr David Silverside (NRI, Chatham) visited the Edinburgh Laboratory on 24-25 March 1999 to with Dr Bailey-Watts future PSS activities in the context of budgetary constraints.



The production of the PSS team's response to the Mid-Term Evaluation Report occupied. A considerable amount of Drs Bailey-Watts and Foxall, and Mr Kirika's time during this quarter. This included Dr Bailey-Watts attendance at the meeting on this issue at NRI, Chatham on 16 and April 17 April.

Dr Bailey-Watts finalised the paper (now in press) on "Phytoplankton size and species richness in two very contrasting waters: Lake Tanganyika and Loch Leven (Scotland)"; this preliminary study suggests that the net phytoplankton species richness of the large lake is approximately only double that of the small Scottish system.

Dr Bailey-Watts and Mr Kirika have made considerable progress over the "Standing instructions" for the large array of field and laboratory activities in the PSS programme.

### 3.5.3 Current staffing schedule

The staff complement is the same as that outlined in the previous report:

In Burundi: Mr Hakizimana, Mrs Aline Irimbere (INECN), Ms Consolata Musanisoni and Mr Wilondja Kamalebo.

In Congo: Dr Tshibangu (PSS Co-ordinator in Congo) and Mukungilwa Kamalebo; two other appointments are still to be made.

In Tanzania: Dr Chale (PSS Co-ordinator in Tanzania) and Ms Lyoba, D (50% of her time), Messrs Lyoba, Mfilinge, Muhoza (90%), Tegulilwa, Kadula (80%), Wakafumbe (75%).

In Zambia: in Mpulungu: Messrs Makassa and Zulu; and Chimanga, Chombe, Kaweme, Lukwesa, Mwape, Syapila (50%). Messrs Sinyinza, Shapola and others contributing to the Biodiversity and Sediment Pollution Special Studies are associated with the PSS for the purposes of synchronising sampling activities.

### 3.5.4 Main objectives for next quarter

1. To execute the first workshop on data evaluation etc.
2. To expand the work on the pesticides, heavy metals and hydrocarbon group of pollutants.

3. To schedule the ideal total of 11 consultant visits to the region - mainly for continued “on-the-job” training but also workshops on field sampling practices Analytical Quality Control (AQC), micro-algal population density and species diversity estimation AQC, and data analysis and interpretation.

Following NRI’s positive response to our recent documents on this Study’s budget and the plans proposed in the latest version of the PSS Work Plan, we suggest that the first workshop would cover issues reflecting a title of *“PSS water quality data evaluation and interpretation workshop: towards a sustainable lake monitoring and protection programme”* Subject very much to the views of the regional personnel, its primary concern would be over data i.e. their collation, examination, display, interpretation and reporting of the information gathered to date. It would embrace physical, chemical and biological (algal) aspects of water quality, and especially the concepts of e.g. precision and accuracy, Analytical Quality Control and Quality Assurance relating to these aspects. The understanding is that a separate workshop will be mounted for the pesticide, hydrocarbon and heavy metal group of pollutants.

The hope will be to minimise the “training” component in this workshop, since all of the participants are experienced in the generation of many of the data that we would analyse - prior to, as well as at, the workshop. Nevertheless, we envisage a number of participants expressing a desire to “refresh” themselves in specific field and laboratory techniques. The venue, time and duration of such a workshop will be decided in consultation with regional personnel, but a first suggestion is Kigoma, Tanzania for 2-3 week period in late autumn 1999. Assuming 4 persons from each country, I suggest the following “core” participants

From Burundi: Gabriel Hakizimana (National PSS Co-ordinator), Aline Irimbere, Consulate Musanisoni, and Wilondja Kamalebo.

From DR of Congo: Tshibangu Kalala (National PSS Co-ordinator), Mukungilwa Kamalebo and two others (Mavula Mbembe and Mbwebwe).

From Tanzania: Dr Francis Chale (National PSS Co-ordinator), Stanislas Muhoza, Elias Lyoba and Edmond Kadula.

From Zambia: Leonard Mwape (National PSS Co-ordinator), Lawrence Makassa, Isaac Zulu and 1 other (Joseph Chimanga?).

### **3.6 Progress report: March – May 1999 for Socio-Economics, Environmental Education and Training components**

#### 3.6.1 Overall summary of progress

After a hiatus owing to staffing problems progress in these project components is once again gathering pace following on from the activities of the previous quarter. Dr Kate Meadow's has been assigned by NRI as overall co-ordinator, and a field facilitator, Ms Karen Zwick, identified and her appointment approved by the Steering Committee. Dr Meadows is proceeding with a "status analysis" of the SE work based on all the work and reports carried out to-date. This will form the basis of a workplan to be formulated by Dr Meadows, the National Socio-Economic Co-ordinators and the Regional facilitator.

*A regional EE workshop took place in Kigoma for the combined EE/Training national co-ordinators (now designated Training, Environmental & Communications Co-ordinators, TECCs) and their associates, facilitated by the EE Co-ordinator Ms Monique Trudel. This workshop was a follow up from the Training and Communication Liaison Officer (TCLO) Workshop held in Bujumbura in January 1999. The TCLO Workshop recommended that a specific workshop with the National Environmental Education Co-ordinators (NEEC) be realised to clarify specific EE issues, roles and responsibilities.*

The aims of the workshop were: "to clarify the EE role and integrate it with participants' Training and Communications responsibilities, in order that they may develop workplans which will ensure they carry out activities in accordance with achieving the Project's objectives".

The workshop was largely successful but time limited the development of a final workplan based on the presented preliminary country programmes. The participants wished to consult back in their home country with LTBP staff and partners and undertook to update the workplans based on those consultations.

From the workplans presented it was, however, possible to identify major types of EE activities such as:

- village meetings aimed at fishing issues, for fishers and fisheries extension workers;
- Workshops and seminars for extension workers in different fields (fishing, agriculture, forestry, etc.) and media (Burundi EE approach). These workshops are intended to train Trainers (TOT) at the first stage and train on better practices in the near future;

- World Environmental Day and “Cleaning day” came out in 3 of 4 Countries, Special attention was made to help them build up the link within the EE programme;
- Preparation of special events such as organising cultural evenings, Contests, etc. are also very popular.

Final workplans were due to be completed by the end of June 1999.

The implementation of the training strategy has been given boost through a presentation of the project's plans to the Steering Committee where it was enthusiastically endorsed. The next major activity is the Training of Trainers workshop to be held in July. This workshop is for Training, Education and Communication Co-ordinators, Facilitators, SE Co-ordinators and key partners for LTBP activities who need to provide training and facilitation for colleagues and lake users, and will emphasise the acquisition of practical training competence and communication skills using participatory approaches.

### 3.6.2 Brief chronology of activities and visits

Feb – March: Consultancy visit by Ms Monique Trudel, Environmental Education Co-ordinator

March 2-7: Environmental Education Workshop, Kigoma, Tanzania.

April - Dr Kate Meadows assigned to project. Appointment of Ms Meadows.

May – Appointment of Ms Karen Zwick as regional facilitator approved by Steering Committee.

May – Project Training Strategy presented to Steering Committee and given formal approval.

### 3.6.3 Current staffing schedule

Unfortunately owing to pressure of other work ECZ has been obliged to re-assign Ms Kwali Mfuni and consequently she will no longer be the TECC for Zambia. She is to be replaced by Mrs Ngula Mubonda to whom we offer a warm welcome.

#### Burundi

Cecile **Gakima**, (I'INECN) Training, Environmental and Communications Co-ordinator (TECC)

#### DR Congo

Assumani Kimanuka, (CADIC) Acting, TECC

## Tanzania

Bartholomew Tarimo, (NEMC), TECC

Claude Mong'ong'o (IRA) socio-economic co-ordinator.

## Zambia

Munshimbwe Chitalu (ECZ) Socio-economic co-ordinator

Mrs Ngula Mubonda (ECZ) TECC

## International

Dr Kate Meadows SE and Overall co-ordinator.

Ms Rachel Roland Training Co-ordinator

Ms Monique Trudel EE Co-ordinator

Ms Karen Zwick Regional field facilitator

### 3.6.4 Main objectives for next quarter

- Hold Training of Trainers workshop in Bujumbura,
- Identify SE co-ordinators in Burundi and Congo
- Complete status analysis and formulate workplans for Socio-Economic special study.
- Finalise workplans for EE component

## **Progress Report: March - May 1999 for GIS and database management component.**

### 3.6.5 Overall Summary of Progress

Work has continued to prepare for the implementation of the database, metadatabase and GIS facilities in the region. The protocols for cataloguing all information have been tested and improvements have been made. Some of the gaps in the database have been filled, particularly the purchase of the land cover datasets for the Tanzanian portion of the catchment and the BIOS literature and survey databases.

NRI have searched for new datasets requested by the special studies and have received some of the databases connected with the SS.

- Copies of the current version of the BIOS Literature and Survey Databases, and the National Environmental Monitoring Council of Tanzania (NEMC) pollution abatement database have been received.
- A draft GIS contacts database has been created which will allow project participants to search for GIS facilities and expertise across the region. This will be discussed in the forthcoming visit to the region and enlarged over the next quarter.
- A draft pollution database has been created to record pollution events and locations of general pollution (e.g. sewage outfall). This again is to be taken to the region and will be discussed and improved. This is not related at present to the surveying databases for pollution.
- The FINNIDA REPORT for their Aerial frame survey has been made into a series of tables that should give some locations of landing positions soon. NRI have had to spend a lot of time typing up these datasets and transforming them into GIS-compatible tables. We urge people creating spatial data to think carefully of their table formats and read our tips on the web page / LTBP CD.
- The land cover datasets of Tanzania obtained in the last quarter have been fully catalogued and are now available.

*The proposed visit from the last quarter has been delayed due to other project commitments but is due to go ahead in June. Alan Mills (AM) is to visit region for two weeks to update GIS capability and establish location for TANGIS database. AM is to review training requirements for GIS in region, to look at integration of datasets and review the role of the LARST station in Tanzania. Because of this delay, some other activities planned for this quarter have not been able to be achieved. This includes the preparation of training material and production of a small atlas.*

*The protocols for data backup, storage, archiving and for passing metadata to the web pages, have all been tested. This is necessary to assess the ease of maintenance of the metadatabase for future sustainability.*

*There has been no feedback to NRI regarding the datasets required to support the draft Trans-Diagnostic Analysis (TDA). AM hopes to get an update on this during his imminent visit to the region.*

*Collection and archiving of NOAA satellite data has continued at the lakeside LARST station near Kigoma. Problems with the power supply (UPS) units have been responded to by the Dar Project Office and resolved.*

#### 3.6.6 Chronology of Activities

March – The GIS RS web site translated into French.

April - AM respond to Mid-term evaluation report recommendations regarding GIS and remote sensing.

April – NRI catalogued land cover datasets of Tanzania.

May – First edition of the TANGIS manual created

May – BIoSS databases sent to GIS component.

May – Draft Pollution and GIS contacts databases created.

May - Second newsletter produced.

#### 3.6.7 Staffing Schedule

UK (NRI)

Alan Mills, Geographer; GIS developer

Anne Jackson, Data liaison officer

Valerie Obsomer, GIS technician

Rupert Loftie – LARST co-ordinator

#### 3.6.8 Main Outputs and Achievements

- *Translation of the Internet pages into French.*
- Second newsletter produced.
- Protocols for backing up datasets, passing data to the web pages and translating metadata to French tested.
- Mid term evaluation responded to
- Acceptance of BIoSS and other databases ready for integration.

### 3.6.9 Main Objectives for the next quarter

- *Alan Mills to travel to region to update GIS capability in region and establish a location for the TANGIS database. AM to review the training requirements for GIS for the region, to look at integration of datasets in region and review the role of the LARST station in Tanzania.*
- *Training materials for the courses to be prepared.*
- *Small atlas of products created for web page and hard copy.*



**ANNEX 1: LIST OF PARTICIPANTS OF SECOND TRIPARTITE REVIEW &  
FOURTH MEETING OF THE STEERING COMMITTEE**

## **BURUNDI**

1. Mr Jean Berchmans Manirakiza
2. Mr Roger Kanyaru National Coordinator ; Director General INECN
3. Mr Boniface Nyakageni Director, Département Eaux, Pêche et Pisciculture
4. Mr Gaspard Ntakimazi Advisor, Ministère de l'Environnement  
Lecturer, Université du Burundi

## **DR CONGO**

5. Mr Mbusu Ngamani
6. Mr Mady Amule Secrétaire Général, Ministère de l'Environnement
7. Mr Kayembe Ditanta National Coordinator; Directeur Min. Environnement
8. Mr Nshombo Muderhwa Director, Pêche et Ressources en Eau  
Director General, CRH- Uvira

## **TANZANIA**

9. Mr Eric Mugurusi
10. Mr Rawson Yonazi
11. Ms Hawa Msham
12. Mr W.V. Haule Director, Division of Environment, Vice President's Office  
National Coordinator (Principal Environment Officer, DoE)  
Assistant National Coordinator  
Assistant Director, Division of Fisheries

## **ZAMBIA**

13. Mr James Phiri
14. Mr Georges Chitalu National Coordinator (Director ECZ)
15. Ms Maureen Nsomi Assistant National Coordinator
16. Mr Kenneth Mazingaliwa Senior Scientist, National Council for Scientific Research  
Department of Fisheries

## **UNDP**

17. Mr Louis Nduwimana
18. Mr Sylvester Sisila Burundi
19. Mr Amos Muchanga Tanzania  
Zambia

## **GEF**

20. Mr David Larouche

## **UNOPS**

21. Mr Ingolf Schuetz-Mueller
22. Ms Margaret Chi Chief, Division of Environmental Programmes, UNOPS  
Project Management Officer, UNOPS

## **LOGFRAME FACILITATOR**

23. Mr Maxim Bélot

**NRI**

24. Mr Nicholas Hodgson

25. Mr David Silverside

26. Ms Rachel Roland

SAP Coordinator

Project Finance Manager

Training Coordinator

**PCU**

27. Dr Andrew Menz

28. Dr Kelly West

29. Mr Pierre C. Nzimpora

30. Ms Maria Hiza

31. Mr Ritesh Bhandari

Project Co-ordinator

Scientific Liaison Officer

Rapporteur

Conference Secretary/Administration

Project Assistant



## **Annex 2: Summary of the 2<sup>nd</sup> TPR main Conclusions and Recommendations**

1. The project should continue to aim at the joint management of a shared water resource. All the activities and results of the project should strive for this objective. (point 4.7 para. 72)
2. The project should continue to ensure the consistency of the project with the principles for integrated management of water resources and with the pertinent conventions in this field, at a world wide as well as at regional level. (point 4.7 para. 81)
3. For the remainder of the project, UNOPS should reinforce its role of technical control according to the decisions that will be taken at the next Regional Steering Committee meeting. (point 4.7 para 118)
4. UNOPS should present a summary table at the next Steering Committee meeting, indicating the current budget situation. (point 4.7 para 123)
5. The project should identify which institutions are (or will be) mandated to fulfil each of the follow-up/evaluation functions that are planned for the future. (point 4.7 para 133)
6. The project should involve the nationals further in the definition of the work programmes. (point 4.7 para 134)
7. The project should use best-qualified national experts at regional level, to work in close relation with the recently recruited facilitators. (point 4.7 para 136)
8. The project's expenses (for expatriate or national experts) for project meetings should be limited to the minimum compatible with the achievement of expected outputs. (point 4.7 para 139)
9. Any charging of time to expatriate experts on the project budget should be limited to tasks carried out in the region, tolerating, however, (according to the agreement to be made between UNOPS and the NRI Consortium) the time spent on preparing and writing reports, if necessary; (point 4.7 para 141)

10. The project should complete the data bases regrouping for the existing data and install them in the appropriate institutions; (point 4.7 para 149a)
11. The project should make a synthesis of all the pertinent scientific knowledge acquired until now, which is necessary for the definition of the special studies and for the elaboration of management tools for the Lake; (point 4.7 para 149b)
12. The project should treat as a major problem the question of verifying (or invalidating) the basic hypothesis concerning the environmental impacts that are threatening the Lake; (point 4.7 para 155)
13. Maximum effort should be laid by the project in timely implementation of all special studies and the overall planning of activities should assure that they can provide the necessary background for the Strategic Action Plan; (point 4.7 para 156)
14. The project should prepare a document (as a supplement to the present 'standing instructions' concerning the sampling and laboratory work) on overall technical approach and on the way collected data can contribute to better knowledge of the problems and to the development of future management tools; (point 4.7 para 157)
15. The project should prepare and implement before the end of the project sustainable mechanisms/procedures for professional exchanges between the national experts in order to meet future needs for exchange of information, experiences, and continuous harmonisation; (point 4.7 para 158)
16. Recommendations concerning specific technical aspects of the special studies (paras 159-214 of MTE) report should be evaluated by special study teams and incorporated into their work plans as appropriate.
17. The project should target training towards the identified needs for the post-project phase; (point 4.7 para 216)
18. The project should target the equipment of national structures towards the needs of the monitoring post-project as well as against the intercalibration and exchange of data; (point 4.7 para 221)

### **Annex 3: Summary of the 4<sup>th</sup> SCM main Conclusions and Recommendations**

1. The meeting adopted the minutes of the third Steering Committee meeting with some modifications that will be added to the document by the PCU.
2. The summary of progress presented by the Project Co-ordinator was approved.
3. The meeting authorised the project to employ Ms Karen Zwick, currently based in Kigoma, as regional socio-economic facilitator.
4. The meeting approved the employment of counterparts to the regional facilitators. Counterparts will originate from one of the four countries and their bilingual capabilities will not constitute a prerequisite to their recruitment.
5. The meeting instructed the project to recruit a Regional Training, Education and Communications facilitator originating from within the region.
6. It was agreed that UNOPS and NRI should consult with each other and formulate a revised workplan and budget, incorporating remaining project funds currently held by UNOPS. The work plan and budget to be presented to an extraordinary meeting of the Steering Committee tentatively scheduled for September 1999.
7. The Training and Environmental Education strategies based on the Training Needs Assessment report was approved.
8. At the invitation of the Republic of Burundi, it was proposed that the next meeting of the Steering Committee should, take place in Bujumbura in September 1999. This was accepted by two of the other three delegations. DR Congo could not, however, commit themselves at this stage.