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SOCIO-ECONOMIC SPECIAL STUDY

Report No. II

**Report of the first
Socio-Economic Special Study
Working Group Meeting**

Kigoma

9 – 12 November 1999

Dr Kate Meadows
Socio-Economics Co-ordinator

Karen Zwick
Socio-Economics Facilitator

**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)**

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.

Le Projet sur la Biodiversité 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 FEM (Fonds pour l'Environnement Mondial) par le biais du Programme des Nations Unies pour le Développement (PNUD)

Burundi: L'Institut National pour l'Environnement et la Conservation de la Nature

D R Congo: Le Ministère de l'Environnement et de la Conservation de la Nature

Tanzania: Vice President's Office, Division of Environment

Zambia: Environment Council of Zambia

Lake Tanganyika Biodiversity Project Socio-Economic Special Study Report Series

Series editors: Dr. K. Meadows, SESS Co-ordinator & K. Zwick, SESS Facilitator

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19	Chisanza (A): Socio-economic survey of Chisanza (A) village, Mbala District, Zambia	Chitalu, G.M., F. Ng'andu, & K. Zwick	1999
20	Nsumbu: Socio-economic survey of Lupiri town & Munshi village, Kaputa District, Zambia	Chitalu, G.M. & F. Ng'andu	2000
21	Kabyolwe & Kapoko: Socio-economic survey of Kabyolwe & Kapoko villages, Mpulungu District, Zambia	Chitalu, G.M.	2000
22 (En)	Zambia: Final National Report	Chitalu, G.M.	2000
22 (Fr)	Zambia: Rapport National Final	Chitalu, G.M.	2000

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1 Introduction

1.1 Background

The relationship between environmental conservation and sustainable socio-economic (SE) development is intrinsic to the implementation of a Lake Tanganyika management plan. In order to achieve sustainable SE development, after an assessment of activities between 1996-8, the aim of the Socio-Economic Special Study (SESS) was newly focused in April 1999. The aim of the current SESS is twofold. First to provide an understanding of current livelihood strategies and SE practices around the lake and its catchment areas and second to establish ways in which sustainable livelihood strategies can be supported while current practices, which may be detrimental to the biodiversity of the lake, changed. From this aim specific objectives and proposals for action can be developed for implementation by appropriate local, national or international institutions and organisations.

SE studies are currently being conducted in Lake Tanganyika's catchment and along its shoreline to identify the best ways in which the following can be achieved:

- Participation in sustainable fishing practices and wider natural resource management by local communities;
- Improved, more sustainable fish processing and resource utilisation practices, particularly the use of land for agriculture and the use of wood;
- Alternative livelihood and income earning opportunities, outside of fisheries, especially where lake biodiversity is threatened;
- Environmental awareness of the importance of the lake resource, especially amongst local people and local government institutions.

Teams from all four riparian countries are undertaking the studies following the production of workplans instigated at informal SESS group meetings held in Burundi in July 1999. Prior to this time only Tanzania had an effective SESS workplan. This, nevertheless, was uncoordinated and the Tanzanian team worked in isolation without adequate feedback and critical support. This SESS Working Group Meeting (WGM) was the first time that the SESS teams from all four countries had the opportunity to meet. For a list of participants and contact information see appendix 1.1.

1.2 Recommendations

It was suggested that progress reports and the results of work undertaken following the informal SESS meetings held in Burundi be presented at a WGM and subsequently critiqued. Consequently the first formal, transboundary SESS WGM was held in order to achieve the following aims and objectives.

1.3 Aims, objectives and methods of the SESS WGM

1.3a Aims

To achieve a co-ordinated understanding of the SESS work programme across the four riparian countries and to facilitate the exchange of ideas and information of the four, newly formed national SESS teams.

1.3b Objectives

- Share knowledge gained to date on current livelihood strategies and SE practices around the lake and its catchment area.
- Share knowledge to improve the survey work, particularly data collection, data analysis and report writing.
- Produce national workplans for the remainder of the SESS i.e. November 1999- March 2000.
- Identify directions for action regarding the SESS contribution to the Strategic Action Programme.

1.3c Methods

- Formal individual and team presentations.
- Group discussions.
- Informal exchange of knowledge, experiences and views.
- Constructive criticism and advice.
- Team/individual discussions with the SESS Co-ordinator and Facilitator.

1.3d Facilities

The WGM was held at the TAFIRI Centre, Kigoma where there were adequate facilities and equipment providing the weather held out. However, in one session the rain was so intense that it was difficult to hear some aspects of the presentation. This problem was compounded because the rain coincided with a loud procession at the close of the official mourning period. The Project's Kigoma Station provided stationary, printing and photocopying assistance and office space for note writing each evening. Although preparations had been completed prior to the workshop delegates requested that they leave the WGM with a draft of this report. Final Project reports can take 4-6 weeks before they are translated and distributed and, in the case of the SESS which has such limited time to set up and complete its survey, it was considered that 4-6 weeks for final report preparation could not be afforded. Station staff were extremely accommodating in allowing this special requirement to be met. Moreover they provided good refreshments twice daily. Sophie Kaczmarkiewicz, a Kigoma based French and English teacher, provided real time translations so that anglophone and francophone participants could discuss with one another and exchange views, which was an essential and valuable component of the WGM. However, arrangements for hotel accommodation at the Aqua Lodge were initially less satisfactory, with conditions so poor that several delegates had sleepless nights; complaints were made, and the situation improved.

2 Agenda

2.1 Formal timetable

To achieve the aims and objectives noted above a timetable was drafted in August 1999 by the SESS Co-ordinator. However, due to the participatory nature of the WGM, the timetable was reassessed following the discussion of the aims and objectives by the whole group at the opening session. Slight amendments were also made on a day-to-day basis according to progress and new items arising out of previous sessions' discussions, monitoring and evaluation. This flexible stance was adopted in order to ensure that ownership of the WGM was by the whole SESS team and not a top down directive from an overseas based co-ordinator. The result was that many team members volunteered to contribute extra presentations in addition to those drafted on the original timetable according to their experience of the project, local expertise, and requests from delegates. The overall outcome was that participants had maximum benefits of everyone's experiences and skills for drafting their workplans. Indeed, the majority of delegates progressed their workplans several hours after the formal close each evening. The final timetable is contained in appendix 2.1.

2.2 Extra curricular activities

Following the formal closure of the workshop on 12th November 1999, the SESS Co-ordinator and SESS Facilitator had individual working sessions with different country teams for three days. The Co-ordinator's activities focused on methods, theoretical directions of the surveys and report compilation instruction and training whilst the Facilitator focused on timetabling and movements for fieldwork, data analysis and dates for completion of tasks. Subsequently the SESS Facilitator's final workplan could be written during the last day of the Co-ordinator's extended stay in Kigoma.

3 SESS WGM content – preliminary sessions

3.1 Introduction, aims, objectives and SESS highlights

The SESS Co-ordinator, Dr Kate Meadows KM opened the WGM by introducing the perceived aims and objectives of the meeting. These were then discussed and revised by the whole group according to specific needs, concerns and recommendations. Particular requests were more training in participatory approaches and other methods, and help with data presentation and report writing. Highlights of the SESS since July 1999 were also included in this introductory session (see appendix 3.1). Over the past two months all four national teams have completed their preparations for fieldwork, and in Congo, Tanzania, and Zambia, detailed studies of lakeshore communities have commenced, with reports due in November.

3.2 Presentation of SESS review 1996-98

The SESS Facilitator Ms Karen Zwick (KZ) presented a summary report drafted during the last meeting between the SESS Co-ordinator and SESS Facilitator in July 1999 (see appendix 3.2). This summary comprised reports written largely by the Tanzanian NSEC, Dr Claude Mung'ong'o (CM). The SESS teams from the other three countries benefited from his experiences particularly in terms of construction of methodologies and realistic workplans. This session was particularly well received, and indeed this presentation produced so much interest that delegates requested copies of the Tanzanian reports, which were distributed later.

4 SESS WGM content – main sessions; presentation of progress and workplans

These sessions had several purposes:

- a) To share workplans and experiences amongst the different teams so that each knows the contents and methods of each others surveys and to learn from one another's experiences.
- b) To critically assess and advise one other on the proposed workplans and to formulate amended workplans in a participatory manner.
- c) To improve delivery and skills.
- d) To facilitate team, group and regional capacity building.¹

4.1 Presentation on the progress and plans of the Burundian SESS team

Dr Oda Sindayizeruka (OS) presented a progress report of the Burundian team between July – September 1999. Work in Burundi was suspended during October 1999. The first Burundian NSEC was appointed after links were established with CURDES (Centre Universitaire de Recherche pour le Développement Economique et Social) at the University of Burundi in July 1999. The SE surveys already conducted by this institution are of very high standard. However, SE surveys have not been conducted along the lakeshore. The Project's proposal to 'fill in these gaps of knowledge' and to conduct collaborative research was consequently well received, with the Burundi SESS programme implemented within weeks of initial contact. The new NSEC² has now prepared interview guidelines, selected and trained a fieldwork team, and made reconnaissance trips along the length of the Burundian lakeshore to identify study sites and to sensitise local authorities. The proposed workplan for November 1999-March 2000 was then presented. This workplan was then critiqued following the presentation of progress and plans of the Congolese SESS team. See appendix 4.1

4.2 Presentation on the progress and plans of the Congolese SESS team

Mr Gerard Kituganu (GK) presented a progress report of the Congolese team between July – October 1999. The NSEC has, with the SEF, trained the team selected in the methods to be used, and has undertaken reconnaissance trips in the area around Uvira to identify study sites and to sensitise local authorities³. A four-day pilot study was conducted in Kigongo village, south of Uvira. The data are currently being analysed and the report written. The proposed workplan for November 1999-March 2000 was then presented. This workplan was then critiqued by the whole SESS team along with the presentation of progress and plans of the Burundian team. See appendix 4.2.

¹ Before July 1999 capacity building was centred on the immediate needs of the Project. A more long term and sustainable outlook on capacity building is now being aimed for.

² The first appointee has been offered another appointment overseas; the current NSEC (OS) had been the Assistant NSEC, and had been involved with the team since the beginning.

³ It was noted that the rudimentary SE knowledge shown by the Congo team in Bujumbura in July 1999 had been increased considerably, with the SESS Facilitator having placed much emphasis on training and capacity building. The team were very appreciative of her efforts.

4.3 Presentation on the progress of the Tanzanian SESS team and summary of previous work

CM presented a summary of the main findings and conclusions from the Tanzanian survey team over the last three years. For the final part of the SESS in Tanzania the NSEC has selected and trained a fieldwork team and prepared interview guidelines. Using existing knowledge and experience, he has also stratified and identified study sites along the length of the Tanzanian lakeshore. In October a three-day pilot study was conducted in Mwamgongo village, north of Kigoma. The data are currently being analysed. The experiences of the Tanzanian survey proved extremely valuable to the other national teams that have much less time to complete their surveys. Reports of the Tanzanian surveys were photocopied and distributed to the other teams for reference. This session instigated much Q and A which curtailed the presentation of the Tanzanian workplan and critique that consequently was rescheduled for the final day. See appendix 4. 3.

4.4 Presentation on the progress and plans of the Zambian SESS team

Mr Munshimbwe Chitalu (GMC) presented a progress report of the Zambian team between July – October 1999. He contextualised this report within the broader framework of the SE/EE programme that was the original intended format of this SS. The NSEC and lakeshore based Survey Co-ordinator have selected and trained a team and prepared interview guidelines. They have identified study sites along the length of the Zambian lakeshore. A three-day pilot study was conducted in Chisanza village, near the border with Tanzania. Approximately forty detailed household interviews were conducted; these focussed on household composition and livelihood/survival strategies and provided quantitative SE data that are currently being analysed⁴. The proposed workplan for November 1999-March 2000 was then presented. This workplan was then critiqued by the whole group. See appendix 4.4.

5 SESS WGM content – final sessions

5.1 Workplan revision

Although this session was timetabled as ‘work plan revision’ the period served three purposes:

- a) For participants to incorporate the ideas and advice given during the critique sessions into their final workplans and to have access to computer and other office facilities in order to amend their plans.
- b) For participants to have individual discussions with the SESS Co-ordinator and Facilitator about their workplans and other concerns. This time slot, however, proved too restrictive and some return travel arrangements were amended in order to provide time for more individual attention.
- c) For participants to attend to final logistical arrangements regarding return travel and changes in accommodation etc. during office hours.

⁴ The Zambian team endorsed the Congolese appreciation of the SESS Facilitator’s commitment, stating that “nothing would have been done without Karen being there”. (F.Ng’andu, 10.11.1999)

5.2 The Strategic Action Programme

This session opened with a presentation by GMC that summarised the key aspects of the already drafted SAP. Concerns were raised that SE issues have not been adequately addressed in this, albeit draft, document. Moreover, SESS representatives have not been included at SAP planning meetings with the majority of participants from the Project being natural scientists. It was also noted that the SESS had been nearly three quarters suspended for over a year and only one country had an adequate SESS programme at the end of four years. It was felt that not enough commitment had been invested in addressing the SESS by the natural scientists dominating the project. It was agreed that since July 1999 the situation had improved but it was still felt that SESS was being 'tacked on' for the sake of appearances with not enough human or financial resources allocated to redress this imbalance⁵. It was proposed that communications with PCU were made to redress the current imbalance in SESS representation. See appendix 5.1.

During this session broader issues concerning the place of SESS in the Project were also discussed. It was the feeling of the WGM that the Project was designed by 'First World Theorists' who placed the biodiversity of the lake as a higher priority than the interests, needs, and concerns of the people of Burundi, Congo, Tanzania and Zambia. It was suggested that there should be a balance between environmental conservation and human development.

"The SESS must make the other SSs realise that the SESS is the umbrella under which environmental management can be sustainable"

GMC, Kigoma, 12.11. 1999

"How do we balance the integrity of the environment on the one hand and the well being and advancement of people and their access to services on the other? Development often has adverse impacts on the environment or biodiversity so some people, usually outsiders, believe industries should not be developed. Here on the other side of the world we want our livelihoods improved. But how do we balance this with environmental sustainability? It is difficult, but we as an SESS group must try to reinforce the message that it is the balance between man's activities and protecting the environment that is the important thing and not just protecting the biodiversity of the lake without improving opportunities."

CM, Kigoma, 12.11.1999

Global examples about the conflict of interest between first and third/developed and developing world interests broadened the debate after which it was voted unanimously to push for a greater consideration, support and commitment to SESS activities by the Project during November 1999-March 2000. Appendix 5.2 shows some areas for future research that it was proposed should be considered.

In order to familiarise the group with the SAP a questionnaire was presented and discussed (see appendix 5.3). For most of the national teams it is still too early in the SESS to draw firm conclusions, although the issue of the slow start and/or lack of resources for the SESS were discussed. The results were that the group very much wanted a final SESS meeting, and that Arusha or Kigoma were the preferred locations.

⁵ The group requested more time from the SESS Co-ordinator to address these issues and to attend planning meetings on behalf of the SESS. She explained that there were budget restrictions but the SESS group argued that since little has been achieved in the SESS for four years, resources should be focused on it in order to achieve meaningful results.

5.3 Evaluation and conclusions

For the final session the whole group returned to address the aims and objectives agreed upon during the first session. It was agreed that the aims of the WGM had been achieved, as had most of the objectives. Nevertheless, it was decided that more time was needed for the whole SESS group to formulate conclusions regarding the SESS contribution to the SAP (the first objective of the meeting). Due to the preliminary stage of the SESS in three of the four riparian nations, it was concluded that the SESS group needed another, final meeting in order to report and critique survey results and, following much discussion, to formulate the SESS strategy and recommendations for the SAP. The majority of the group agreed that March 2000 would be the best time for a second formal WGM of the SESS. KM was asked to raise this with AM and KW.

One of the greatest successes of the WGM was less tangible than the aims and objectives defined in the first session. This was the building of regional transboundary capacity as once disparate national teams, over the course of the four days, generously shared their knowledge and experiences, and developed an SESS team spirit. There is now a united SESS group with the common aim of ensuring 'the well being and advancement of people [in Burundi, Congo, Tanzania, and Zambia] and their access to resources'.

6 Acknowledgements

Foremost, the SESS Co-ordinator and Facilitator would like to thank the eight national participants for their valuable contributions and continued commitment, as well as their energy and enthusiasm, which served to make this WGM so successful. Thanks also go to Sophie Kaczmarkiewicz for facilitating the exchange of information and ideas across language barriers, and allowing the regional team spirit to develop.

On a day to day basis the assistance of Mr Bahati Barongo, the Kigoma Station Administrative Officer, and Mr Juma Abdallah, the Kigoma Station driver, was invaluable, and we are all indebted to them. Mr Toye provided much appreciated refreshments.

Many people also worked hard behind the scenes to make this WGM possible. Dr Kelly West, the SLO, provided critical support in the logistical and planning stages, and Mr Richard Paley, the BIOSSE Facilitator and Kigoma Station Head, graciously and efficiently accommodated our needs. Thanks also to Mr David Silverside and Dr Andy Menz acknowledging the need for an SESS WGM and for financial support. We are also grateful to all of the support staff who dealt with complicated travel and logistical arrangements: Mr Ritesh Bhandari at the PCU in Dar es Salaam, M. Mamert Maboneza at the Bujumbura Station, and Mr Clement Mwelwa at the Mpulungu Station.

APPENDIX 1.1 Participants and contact information

Dr Oda Sindayizeruka
Centre Universitaire de Recherche pour
le Développement Economique et Social
Université du Burundi (FSEA)
tel: 257 22 20 52
257 22 63 75
fax: 257 22 37 21
e-mail: fsea@cbinf.com

M Ferdinand Bararuzumza
Centre Universitaire de Recherche pour
le Développement Economique et Social
Université du Burundi (FSEA)
tel: 257 22 20 52
257 22 63 75
fax: 257 22 37 21
e-mail: fsea@cbinf.com

M Gérard Kitungano
Centre de Recherche en Hydrobiologie
BP 73, Uvira RD CONGO

M Muke Mukirania
Centre de Recherche en Hydrobiologie
BP 73, Uvira RD CONGO

alternative mailing address
BP 254, Bujumbura BURUNDI

alternative mailing address
BP 254, Bujumbura BURUNDI

or c/o LTBP Bujumbura Station
BP 1119, Bujumbura BURUNDI
tel: 257 21 99 60
fax: 257 21 99 61
e-mail: ltbpbuja@cbinf.com

or c/o LTBP Bujumbura Station
BP 1119, Bujumbura BURUNDI
tel: 257 21 99 60
fax: 257 21 99 61
e-mail: ltbpbuja@cbinf.com

Dr Claude Mung'ong'o
Institute of Resource Assessment
University of Dar es Salaam
PO Box 35097, Dar es Salaam TANZANIA tel:
tel: 255 (0) 51 410144
255 (0) 812 766354 (mobile)
fax: 255 (0) 51 410393
e-mail: ira@udsm.ac.tz
tanric@udsm.ac.tz

Mr Moshi Ali Sanze
The Jane Goodall Institute – TACARE Project
PO Box 1182, Kigoma TANZANIA
255 (0) 695 4447
fax: 255 (0) 695 4448
e-mail: jgi-tacare@twiga.com

Mr Munshimbwe Chitalu
National Environment Council of Zambia
PO Box 37457, Lusaka ZAMBIA
tel: 260 1 254130/1
e-mail: necz@zamnet.zm
fchitalu@zamnet.zm

Mr Frighton Ng'andu
Department of Fisheries
PO Box 55, Mpulungu ZAMBIA
tel: 260 4 455188/045
260 4 455123 (home)
fax: 260 4 455045
e-mail: ltbp@zamnet.zm

alternative mailing address:
PO Box 35131, Lusaka, ZAMBIA

Dr Kate Meadows
Natural Resources Institute
Medway University Campus
Central Avenue, Chatham Maritime
Kent ME4 4TB UNITED KINGDOM
tel: 44 (0) 1634 883046
fax: 44 (0) 1634 883706
e-mail: k.f.meadows@gre.ac.uk

Ms Karen Zwick
Lake Tanganyika Biodiversity Project
PO Box 90, Kigoma TANZANIA
tel: 255 (0) 695 2992
255 (0) 695 4314 (home)
fax: 255 (0) 695 2993
e-mail: ltbp@twiga.com
karen_zwick@email.com

APPENDIX 2.1 Timetable

Monday 8 November		
19:00	Welcome dinner	
Tuesday 9 November		
08:30 - 10:30	Introduction, aims and objectives and SESS highlights Brief update	KM KZ
11:00 - 13:00	Presentation of SESS review pre July 1999	KZ
14:00 - 16:30	Discussion – preparation of presentations	Whole Group
Wednesday 10 November		
08:30 - 10:30	Presentation of Burundian progress and plans	OS
11:00 - 13:00	Presentation of Congolese progress and plans	GK
14:00 – 17.00	Presentation of Tanzanian progress Presentation on palm oil production and its role in the region	CM MS
Thursday 11 November		
08:30 - 10:30	Presentation of Zambian SESS progress and plans	GMC
11:00 - 13:00	Discussion of Burundian and Congolese Programme Critical assessment – strengths, weaknesses, & recommendations for workplans	KM
14:00 - 16:30	Discussion of Zambian Programme Critical assessment – strengths, weaknesses, & recommendations for workplans	KM
Friday 12 November		
08:30 - 10:30	Presentation of Tanzanian progress Critical assessment – strengths, weaknesses, & recommendations for workplans	CM KM
11:00 - 13:00	Work plan revision for Nov 1999-March 2000	Whole Group
14:00 - 16:00	Strategic Action Programme Evaluation and conclusions	GMC KM
19:00	Final dinner	

APPENDIX 3.1 SESS highlights July – October 1999

Dr Kate Meadows
Social Sciences Department
Natural Resources Institute

Background

The relationship between environment conservation and sustainable SE development is intrinsic to the implementation of a Lake Tanganyika management plan. In order to achieve sustainable SE development, after an assessment of activities between 1996-8, the aim of the SESS was newly focused in April 1999. The aim of the current Socio-economic Special Study (SESS) is two fold. First to provide an understanding of current livelihood strategies and practices around the lake and its catchment areas and second to establish ways in which sustainable livelihood strategies can be supported with current practices, that may be detrimental to the biodiversity of the lake, changed. From this aim specific objectives and proposals for action were developed for implementation by appropriate local, national or international institutions and organisations.

Process

To realise the aims and objectives the first step was to appoint and train a Regional Facilitator in July 1999. Then SESS teams were identified and trained in each of the four riparian nations. The new national teams are made up of a total of 24 officials from relevant government departments, national universities and research institutions, and local NGOs. They are predominantly lakeshore based and have already produced SESS country strategies and workplans. Four thematic areas for investigation on a national basis are incorporated into these strategies:

- 1) Fisheries livelihoods and fishing practices
- 2) Agricultural land use and livestock
- 3) Deforestation and energy needs
- 4) Population settlement and economic development

Whilst these teams were being appointed and trained a review of the SESS contribution to the Project was compiled. This review includes material from the studies completed between 1996-8. Six studies were undertaken in Tanzania and three in Zambia. Then a report was drafted on the status of the situation of communities around Lake Tanganyika and its catchment area. This was determined by collating relevant information through published reports and networking with project workers, NGOs etc. This process included:

- 1) A review of the results of SESS surveys completed by those outside the project combined with the review of LTBP's 1996-8 SESS surveys
- 2) Actions required, as a result of the findings of the SESS review were then determined.
- 3) The collection of additional background information in order to facilitate capacity building exercises.

The standard of SE surveys conducted between 1996-8 is high with the 'socio-economic and environmental studies well informed'. However, during 1998 there was a lack of progress and co-ordination and consequently an ad hoc nature to the work undertaken. In July 1999 this situation was changed with a more co-ordinated and focussed strategy developed.

SESS Strategy July – December 1999

It is important to get the balance between research and action right and care has been taken to ensure that duplication of existing research does not happen. The review of surveys undertaken during 1996-8, for instance, showed that many of the baseline surveys had not picked up on all of the research undertaken by NGOs and other agencies. Participatory action which involves individuals from different institutions (government, NGOs and research institutions) is now being used to strengthen linkages between these institutions and to explore ways in which their activities might be better co-ordinated in the future. Consulting local partners and developing improved communications is now making better use of project resources. A particular success is the links formulated with institutions in Burundi and Congo with care taken to enhance capacity building. Before June 1999 capacity building was centred on the immediate needs of the project. A more long term and sustainable outlook on capacity building is now being aimed for, with fieldwork commencing in September 1999 for the first time in all four countries. The proposed fieldwork programme is expected to double the SESS outputs produced to date and is more co-ordinated and inclusive than previously.

Fieldwork September – October 1999

Over the past two months all four national teams have completed their preparations for fieldwork, and in Congo, Tanzania, and Zambia, detailed studies of lakeshore communities have commenced, with reports due in November. Fieldwork methods advocated include participatory community meetings, as well as smaller themed meetings with focus groups such as village elders and leaders, fishers, farmers, and women. To achieve the objectives of collaboration and capacity building participatory rural appraisal (PRA) tools such as mapping and transect walks and timelines and seasonal calendars are advocated to explore both spatial and temporal/historical aspects of communities, with respondents defining their own criteria for wealth and well being. These tools are supplemented with programmes of detailed household interviews.

Burundi

The NSEC was appointed after links were established with CURDES (Centre Universitaire de Recherche pour le Développement Economique et Social) at the University of Burundi. The surveys already conducted by this institution are of very high standard. However, surveys have not been conducted along the lakeshore. The Project's proposal to 'fill in these gaps of knowledge' and to conduct collaborative research was consequently well received with the Burundi SESS programme implemented within weeks of initial contact. The NSEC has now prepared interview guidelines and selected and trained a fieldwork team. Reconnaissance trips along the length of the Burundian lakeshore to identify study sites and to sensitise local authorities have also been made. Data collection will commence in Gatumba, near the border with Congo, as soon as security permits.

Congo

The NSEC has trained the team selected in the methods to be used, and has undertaken reconnaissance trips in the area around Uvira to identify study sites and to sensitise local authorities. A four-day pilot study was conducted in Kigongo village, south of Uvira. The data are currently being analysed and the report written.

Tanzania

The NSEC has selected and trained a fieldwork team for the final part of the Tanzanian survey and interview guidelines have been prepared. Using existing knowledge and experience, he has also stratified and identified study sites along the length of the Tanzanian lakeshore. A three-day pilot study was conducted in Mwamgongo village, north of Kigoma. The data are currently being analysed.

Zambia

The NSEC and lakeshore based Survey Co-ordinator have selected and trained a team and prepared interview guidelines. They have identified study sites along the length of the Zambian lakeshore. A three-day pilot study was conducted in Chisanza village, near the border with Tanzania. Approximately forty detailed household interviews were conducted; these focussed on household composition and livelihood/survival strategies and provided quantitative data that are currently being analysed. Preliminary results indicate that Chisanza is a diverse community primarily composed of cassava farmers and fishermen, but also includes prosperous cross border traders and landowners who use hired agricultural labour. Some of these are former fishing gear owners who have diversified as catches have declined locally in recent years. Poorer households include those composed of elderly couples or widows, many of whom are largely dependent on their children and grandchildren. Some households had complex economies, with members undertaking a variety of incomes generating activities, such as brewing traditional local beers, baking, or sewing. A few individuals also have full time paid employment, such as bricklaying, or as a chef in a nearby tourist lodge.

November 1999 to Project End and Final SESS Output Targets

In November the SESS team of SESS Co-ordinator, Regional Facilitator and four national co-ordinators, plus four national SESS team members will meet to report back on each country's progress and to share information and assess development of the regional programme. The Fishing Practices Regional Facilitator is also invited following meetings between the FPSS and SESS Co-ordinators, which resulted in aiming for closer collaboration between FPSS and SESS. It is envisaged that such cross country and interdisciplinary information sharing and collaboration will foster greater opportunity of sustaining linkages. The ultimate aim of the SESS WGM is to produce a regional SESS 'picture/map' and proposals for sustainable development. During the final months of the SESS the teams expect to have achieved:

- a) Twelve community surveys undertaken from September 1999 to the end of the fieldwork period. These added to the nine surveys conducted between 1996-8 should provide a broad understanding of the current livelihood strategies and SE practices that impact on the lake.
- b) A more specific assessment of the key livelihood strategies related to the four areas outlined above.

- c) Recommendations on how current livelihood strategies that do not adversely impact on the lake can be supported and how alternative livelihood strategies to replace practices proven to be detrimental to the sustainable management of the lake can be introduced.

It is hoped that a second phase of the Project will then implement these proposals.

APPENDIX 3.2 SESS Reports reviewed for the summary and critique (1996-8)

Geographical coverage of the lakeshore and catchment is good for Tanzania, but in Zambia there has been no work in the wider catchment (and there has been no work at all in Burundi and Congo). The following reports were available and included in the summary and critique, along with information from FPSS and EE documents as appropriate:

TANZANIA		
Fishing in the River Mungonya at Bubango, Kigoma Rural District, Tanzania	Walsh, M., L. Said, B. Marwa, & K. Banister	1996
Participatory Rural Appraisal in Mtanga village, Kigoma Rural District, Tanzania	Lwoga, C.M.F. (Ed.)	1997
Kirando: Participatory Rural Appraisal in Kirando Ward, Rukwa Region, Tanzania (draft)	Mung'ong'o, C.G. (Ed.)	1997
Buhingu: Participatory Rural Appraisal in Buhingu Ward, Kigoma Region, Tanzania (draft)	Mung'ong'o, C.G. (Ed.)	1997
Participatory Rural Appraisal in Buhingu Ward, Kigoma Region, Tanzania.	Tarimo, B.D.	1997
Socio-economic & institutional appraisal of the Mpanda-Sumbawanga catchment, Rukwa Region, Tanzania	Mung'ong'o, C.G.	1998
ZAMBIA		
Chituta Bay – Kapata village PRA report	Damaseke, M.	1997

APPENDIX 4.1 Presentation on the progress and plans of the Burundian SESS team

The Burundi survey started in August 1999. The tasks over the next months were:

- 1) Literature review of SE components of Burundi in general. – August
- 2) Selection of team of five fieldworkers and training sessions in sampling strategies and aims and objectives were then conducted in September. There are two fieldwork approaches – community participatory meetings to sensitise the local communities to the survey and to establish the key issues, needs and concerns, and secondly there will be household interviews using open-ended guidelines.
- 3) Preparation of household interview guidelines. Themes covered in these guidelines included:
 - a) General overview of community activities
 - b) SE activities (community and household level)
 - c) Household surveys
 - d) Environmental knowledge and what the community does to conserve the environment
- 4) Identification of survey areas. The Burundi coastline is more densely settled than other three countries. The Burundian team divided the coastline survey into three regions:
 - a) Bujumbura Province – 3 areas were chosen that are diverse in livelihood strategies – Gatumba, chosen because of in-migration of displaced people that may impact on the lake. Kibenga, chosen due to its mix of traditional activities such as fishing and agriculture. Kinnindo, chosen due to the predominance of livestock keeping as a livelihood. These were classified as peri-urban communities.
 - b) Bururi Province – two communities were chosen. One urban – Rumonge that has diverse SE activities and Karandu, a rural village in order to provide a good comparative survey.
 - c) Makamba Province – One community, Nyanza-Lac has been chosen but due to the adverse security situation the SE survey in this region might have to be suspended.

Work was suspended during October but in November the team attended the first SESS WGM in Kigoma and presented the following work plan:

November 1999	Surveys in Bujumbura Province
December 1999	Data analysis, report writing (1 report covering the 3 communities) and reassessment of strategy with SESS Facilitator and Co-ordinator.
January 2000	Bururi Province surveys and analysis of data and report writing (1 report)
February 2000	Possible Mukumba Province survey or start of final report writing
March 2000	Completion of final report.

Critique

by Anglophone Team	by Francophone Team
Strengths <ul style="list-style-type: none"> • The workplan is well worked out • The choice of study villages considers SE and geographical differentiation 	<ul style="list-style-type: none"> • Sites well chosen, reflecting the diversity of SE activities • Sampling strategy is very well defined
Weaknesses <ul style="list-style-type: none"> • Volume of proposed work is too big for the available staff and time • There are uncertainties in logistical support, e.g., transport, finances, and continued availability of research team members 	<ul style="list-style-type: none"> • Unclear which is the pilot site within the peri-urban zone
Recommendations <ul style="list-style-type: none"> • Reduce study sites to three, i.e., only one peri-urban and two rural villages • Leave out Makamba Province 	<ul style="list-style-type: none"> • Clarify which site will be the pilot within the peri-urban zone

Following this critique the proposed plan is to be amended.

APPENDIX 4.2 Presentation on the progress and plans of the Congolese SESS team

The aim of the SESS in DR Congo is to understand the characteristics of the riparian communities and the interaction between these communities and their environment. The following actions have been undertaken or planned to achieve this:

- 1) A literature review identified two previous studies which had been undertaken in Congo in recent years. The first was a survey of fishermen, with particular emphasis on owners of fishing gear, undertaken in 1992. The second was a survey of fishermen and fish processors and traders undertaken in 1997 by LTR.
- 2) A team of 5 enumerators was selected, in addition to the NSEC.
- 3) Although there are more than 400 villages and fishing camps along the Congolese coast, which includes parts of Uvira and Fizi Districts in Sud-Kivu Province as well as Kalemie and Moba Districts in Shaba Province, only the sector in the immediate vicinity of Uvira town can be surveyed under the current security conditions. Four sites were selected in the vicinity of Uvira town;
 - a) Kilomoni, which is near the border with Burundi, and home to a large number of internally displaced people and Burundian refugees and immigrants;
 - b) Mulongwe, a fish landing within the Uvira urban area, which has a diverse economy;
 - c) Kigongo, a fishing village located approximately 12km south of Uvira town which has suffered a great deal from the effects of war; and
 - d) Makobola, another fishing village located approximately 18km south of Uvira town.

From these, Kigongo was selected for a pilot study.

- 4) A set of four questionnaires was produced. Q1 covered general village infrastructure issues, and was intended for use with village leaders, Q2 was for use with households, Q3 was for use with fishermen encountered on the beach, and Q4 was for use with fish processors and traders encountered in and around the fish processing areas and markets.
- 5) Village leaders were sensitized and provided background information to the team.
- 6) A two-day training session was held to familiarise the enumerators with the questionnaires, and to present them with instructions for completing them, as well as to provide guidelines on how to behave during the survey. One enumerator was assigned to Q1 and to Q4, and two to each of Q2 and Q3, and each question of each questionnaire was discussed. The team provided helpful feedback and comments and the questionnaires were refined and modified following this. The SESS Facilitator also introduced the team to the overall aims and objectives to the Project, as well as the SESS.
- 7) The team visited Kigongo for data collection between 18 and 21 October 1999. For Q2, the village was stratified into six avenues. Within these, approximately ten percent of households were sampled systematically (i.e., every tenth household), although there were some difficulties at the edges of the village where households were not distributed neatly along the avenues. Seventy-five household interviews were conducted, giving a sample of approximately 8.3%. For Q3 and Q4, fishermen and fish processors and traders were encountered on the beach early in the morning. Fifty fishermen and forty-five fish processors and traders were interviewed. Analysis of these data and the preparation of a first draft of the report were underway at the time of the WGM, but some preliminary results were presented. Unfortunately limited time meant that even this was cut short.

The infrastructure of Kigongo is limited to a temporary market and ten kiosks, a health centre, three dispensaries, and 11 traditional birthing attendants, two primary schools and one secondary school, and one public toilet. People depend on Uvira town and the markets in the Ruzizi Plain, which are reached by road. The schools are not sufficient for the size of the community. There is no electricity or piped water, no grinding mill, no petrol station, and no fishing gear merchant.

Half of the homes are constructed from mud bricks with thatched roofs; 30% are constructed from mud bricks with corrugated metal roofs. Half have two bedrooms in addition to a main living room; 30% have just one bedroom in addition to the main living room. Forty percent have two other small annexes, such as a kitchen, latrine, or animal shelter.

The village is comprised of approximately 500 adult men, 700 adult women, and 1,700 children, living in over 900 households. Although figures are not available, village authorities feel that the village has decreased in population in recent years as a result of the war through both deaths and displacement. Households have three or four people on average. Monogamy is the norm (70%), and most households are nuclear families; high childhood mortality means that many families have only one or two surviving children.

The wealthiest households within the village are those that own more than one fishing unit such as a lift net and catamaran, and tend to live in houses with corrugated metal roofs. Below them is a group of households which own one fishing unit only, and below them a large group composed of farmers and fish processors and traders who do not own productive assets, and who tend to live in thatched houses. The poorest are the hired fishermen, who tend to be young men who do not own a home, but rent rooms or a just a bed or even sleep rough.

Cassava is the staple crop. Women and girls primarily undertake farming, although men cultivate some cash crops such as sugar cane, oranges, and oil palms. There are currently no cattle in the village, as they were stolen or killed during the war, but a few households are starting to keep goats, pigs, and chickens again, although numbers are still low.

Men and boys undertake fishing. The most popular method is with lift nets from catamarans, followed by beach seines. For the lift net fishery, the sharing of revenue is heavily in favour of the gear owner; after the operating expenses have been removed, the profit is divided in half. One half goes to the gear owner, while the other half is divided amongst the crews, who typically number six. Less than half of adult fishermen have completed primary school, but of their sons, 40% attend or have attended some secondary school.

Household incomes are highly variable, and subject to seasonal fluctuations, and thus difficult to analyse. The main areas of household expenditure are food, clothing, school fees, and health care.

The main health problems are malaria and fever. Sanitation is poor, and there are very few rubbish pits; people use the Kalumba River as a depository, as well as a source of drinking water. Just under half of the households have a latrine; those families without use their neighbour's, or none at all. People said that the stony soil makes it difficult to dig latrines. Where they do exist, women tend to be responsible for hygiene and maintenance, and in general are not happy about their neighbours using them. Natural resources used include firewood, timber, and thatching grass.

The work plan is to complete the data analysis and produce the report for Kigongo, and then to proceed to Kilomoni in November, followed by Makobola in December and Mulongwe in January. February will be spent undertaking an institutional appraisal in the Uvira area.

Critique

by Anglophone Team	by Francophone Team
Strengths <ul style="list-style-type: none"> • Research already identified • Choice of study villages is well thought out and covers the area where security is OK • Methodology adequately caters for quantitative analysis 	<ul style="list-style-type: none"> • Good presentation of the study zone (map) • Good choice of sampling strategy (systematic) • Data collection is exhaustive • A wide range of topics was covered • A lot of quantitative information was collected • Good presentation of data in tables
Weaknesses <ul style="list-style-type: none"> • Qualitative information has been compromised for quantitative information • Workload is too big to be completed in the remaining time • Too much concentration on fishing, or socio-economics of fishing 	<ul style="list-style-type: none"> • Criteria for choice of site in the other zones are not defined • No use of PRA tools • Confusing phrasing of some table titles • Poor choice of words in some instances
Recommendations <ul style="list-style-type: none"> • strike a balance between quantitative and qualitative data • drop institutional analysis; it would reduce work load 	<ul style="list-style-type: none"> • Present more clearly the criteria for site selection in the other zones • Try to include PRA tools in the data collection, e.g., group meetings

<ul style="list-style-type: none">• broaden research work to include other SE characteristics	<ul style="list-style-type: none">• Rephrase table titles• Chose appropriate words
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Following this critique the proposed plan was amended as follows:

19/11	submission of Kigongo report
22 - 26/11	planning and preparation for Kilomoni survey
29/11 – 3/12	fieldwork in Kilomoni (four days)
6 – 17/12	data analysis and production of first draft of Kilomoni report
20 – 23/12	revision of Kilomoni report
Jan 2000	Makobola
Feb 2000	Mulongwe
Mar 2000	national report, institutional appraisal, proposals for interventions

APPENDIX 4.3 Presentation on the progress of the Tanzanian SESS team

In-depth participatory action research has been undertaken at selected sites with the objectives of improving understanding of:

- Livelihood strategies of local communities, as a basis for informed intervention by interested partners in development;
- Patterns of natural resource utilisation, and the threats to natural resources and biodiversity;
- The make-up of lakeshore communities and the key stakeholder groups;
- Institutional mechanisms whereby improved resource management and local development initiatives might be introduced.

Four PRA investigations have been carried out in Mtanga village in the vicinity of Gombe National Park, in Kirando Ward of Nkansi District, Rukwa Region, in Buhingu Ward, Kigoma District, and in Mwamgongo village, Kigoma District.

Two social surveys were conducted in selected areas in the districts of Kigoma, Kasulu, Sumbawanga, Nkansi and Mpanda to collect data on the socio-economics of the catchment areas of the lake and the institutional set-up. Data were collected by the various teams using mapping, timeline drawing, wealth ranking, transect walks, seasonal calendars, daily timetables, and semi-structured interviews. Techniques used in the analysis of fishing practices included sampling of fish catches to evaluate catch composition and length frequencies, interviews with fishermen and other stakeholders to gauge the technical aspects of the local fishery, its history, catches and trends. Observation and reference to earlier studies supplemented some of the data elsewhere. The team observed the catches by the various gears to identify the ones susceptible to be destructive, concentrating its sampling and length frequency analysis on the beach seines catches.

Socio-economic characteristics

The dominant ethnic group in the Malagarasi Catchment is the Waha who are agropastoralists in the highland areas of Heru Juu and the agriculturists in the tsetse-infested miombo woodland along the Malagarasi and the other rivers. The coastal communities in the southern shoreline of the lake are very cosmopolitan - including such diverse ethnic groups as Arabs, Nyakyusa, and even the Zaramo from the Indian Ocean coast. The Fipa are in the majority, and inland areas of the region are exclusively Fipa.

The population distribution and land use patterns of the Malagarasi Catchment have also been impacted by refugees from Congo and Burundi. The four refugee camps in the catchment suffer from soil erosion, siltation and water pollution due to deforestation, poor land management and water use by refugees. The environmental impacts downstream and on the lakeshore may probably be increased sedimentation and water pollution, but these need to be investigated further.

The economy of the Lake Tanganyika catchment and along the lakeshore includes:

- Crop cultivation, mainly for subsistence growing crops like maize, bananas and beans. Commercial farming is limited to cotton and coffee production at a very small scale. Trade in beans and maize has increased in the last few years as a result of a growing market for these food crops in Burundi.
- Rukwa Region has a total of 311,626 hectares under cultivation. Of these 286,491 hectares are under small-scale agriculture while 25,135 hectares are under large-scale agriculture. Agricultural expansion has been based on clearing of land rather than intensification.
- Livestock kept in the Malagarasi Catchment are long-horned Ankole cattle and some small animals like goats, sheep and chicken. The number of livestock in Rukwa Region has increased from 469,218 cattle and 115,657 shoats in 1993 to 556,428 and 160,457 shoats in 1996.
- Fishing is done using beach seines, lift nets, gillnets and lines. The fish species regularly caught include *dagaa* (*Stolothrissa tanganicae*), *migebuka* (*Lates stapperssi*), *sangara* (*Lates maree*), and *malumbu* (*Limnothrissa tanganicae*). *Dagaa* and *migebuka* are dried and sold in Kigoma, Dar es Salaam and Rumonge in Burundi. Such varied sources of demand complicate attempts at regulating fishing activities. The beach seines destroy both fish habitats and breeding grounds by dredging. Nets with small holes catch both mature and juvenile fish.
- The major mining industry in the Malagarasi Catchment is salt production carried out by the Nyanza Salt Mines (Ltd) at Uvinza in Kigoma Rural District. Its main source of energy is wood. The residues from the burnt wood are deposited or dumped in the Malagarasi. Excess brine, chemicals and oil are also released into the river. The rate of water pollution by such dumping has not been established.

- Gold mining is done in Mpanda District using mercury in gold binding. Mercury residues could be potential pollutants of rivers used by the miners to process their gold. This is not an immediate problem to Lake Tanganyika, as all rivers passing through the mineral fields' discharge their waters into Lake Rukwa.

Apart from these economic activities people in the study area also depend on business as a source of livelihood. Businesses range from big shops, restaurants, guesthouses and hectic markets in villages like Kirando to fairly small businesses such as small shops and kiosks selling basic household items in all villages. A major business venture monopolised by women in all villages is the brewing of local beer. As the ingredients of local beer are basic foodstuffs such as maize, sorghum and cassava the proliferation of brewing may explain the occurrence of food shortages in some villages. Alcohol abuse is very high some villages.

Household labour is predominantly depended upon in both for agriculture and fishing. At peak times during the agricultural season hired labour is preferred to use of work parties. The cost of hiring labour is very high by rural standards. Households with some fishing gear normally use their youths as hands. Only when that labour force is not enough are outsiders hired to help. Hence during the fishing season many youths leave school and migrate temporarily to the fishing camps.

Some institutions have shown willingness to offer loans and various aid packages to the people of this region. The TANAPA has attempted to help the villages adjacent to its two national parks with building of classes, teachers' offices, dispensary wards, etc., in its Community Conservation Service. TACARE has also worked with people in some villages in tree seedling development and re/afforestation. The Rukwa Association of Non-Governmental Organisations (RANGO) offers small loans as seed money to various local economic groups. The International Fund for Agricultural Development (IFAD) has helped the local Department of Agriculture with transport facilities and technical know-how. Other institutions include GTZ and the World Food Programme, which give out small loans to help simple animal husbandry in some areas. There is also a revolving Women's Development Fund provided for by the Government of Tanzania. In Kigoma Region such institutions include international NGOs such as Care International, Africare, and others which, apart from servicing the refugees, also offer some financial resources for the development of local communities.

People's perception of fishing and the environment

People's perception on the long term sustainability of fishing practices in the each area ranges from those who believe that the fish is so plentiful that there is no need for restrictions in fishing, to people who think that some species of fish are indeed disappearing although they do not know why such fish are no longer available. These differences in opinion can be explained by two facts:

- many fishermen are interested only in *dagaa*, and so long as this is plentiful, they may not notice changes in the abundance of other species; and
- there may be fluctuations in the abundance of fish over time due to other factors than the degradation of the fishery.

Household characteristics

Dependence ratios range from as low as 1.0 in recently settled villages to 7.0 in older villages. On average the ratio of 2.0:1.0 is quite reasonable given the variety of natural resources available. Such an average is distorted by household differentiation in resource access qualifications.

A majority of the households in the study area are male headed. Many of the female-headed households belong to women who have not been married due to the population of women being greater than that of the males.

The educational level of most of the inhabitants of the coastal villages is low. Many have gone through primary school but a considerable number have not finished the required seven years of study. Many have left school at an early age; boys are employed in simple fishing operations while girls marry at an early age. Hence a negligible number go to secondary school. Educational levels for women are lower than those of men are, and those of the youth are higher than those of their parents.

The communities studied are aware of the necessity of having good sanitary conditions. At least every homestead has a pit latrine. Diarrhoea and worm infections are only second to malaria as the main health problem in the area due to the use of unboiled water. Many people in the area know about the need to boil their drinking water, but they do not do it because there is a shortage of fuelwood in many villages. Moreover people believe boiled water does not taste good.

Most coastal villages have at least a dispensary. Ward headquarters usually have health centres, which play a referral role for all the villages in the wards. Their services are far from satisfactory. They have too few staff, too little medicine, and no operating facilities. Health education is regularly provided to mothers who visit clinics. Such knowledge rarely reaches the men, as they do not accompany their spouses to the dispensaries or health centres. Special effort needs to be made by health and environmental educators to reach this group of people.

Gender relations

Women, among coastal communities, expend labour providing for the family, cooking, cleaning the house, etc. Much time is also spent outside the house doing agricultural work, informal business and attending to community development activities in the village. In some villages the workload of women is increased due to the out-migration of able-bodied males who go out of the villages from two months up to three years to seek economic advancement. Very few of these migrants remit home to help with the pressures of family provision.

In communities in the study area the man controls resources, including land and income generated within a household. Even where a woman buys a piece of land from the proceeds of her businesses that land falls under the control of her husband. A woman can only control land that she inherits from her family of origin. In principle the first child, regardless of sex, inherits the property of the deceased father - including land.

Village governments set aside 20% of leadership positions in the village government structure for women. Using these representative positions women participate in decision-making processes at community level. But the women elected to sit in these governments often can not play an effective representative role. No meetings are called to identify and discuss issues important to women.

Conclusions

The largest impacts on the environment originate from the following points:

- New shambas encroaching onto banks and the lake shore where the sandy soils are easily eroded and swept away during the rains;
- Low intensity agricultural practices without sufficient fallow periods leading to soil exhaustion and constant expansion into new areas. This is also linked to a lack of knowledge of alternatives;
- Agriculture taking second place to fishing to the extent that certain issues are not addressed despite the apparent possession of relevant knowledge;
- Heavy cattle pressure in some areas;
- Burning of vegetation to encourage fresh grass in the open grazing areas;
- Heavy deforestation on the hills surrounding the area for timber, fuelwood, and building poles;
- A lack of local by-laws and joint action.

The general level of environmental understanding is reasonable, though it varies substantially between individuals. The commitment to effect any change is far less for the following reasons:

- Change would affect current agricultural practices and may increase workload;
- There is no motivation to change since every one else is doing the same thing;
- Trees, whilst low in number are not seen as being particularly important;
- Soil erosion, whilst recognised, does not seem to have reached the point where people feel the need to do something about it; this may partly be because they can still get access to other land if they presently need it;
- Forest fires are started by many different people for a variety of reasons, all of which need to be addressed for effective control;
- Riverbank damage again, whilst recognised, is not fully appreciated and again needs to effect everyone.

A combination of education, local by-laws, local policing, local government commitment to improving the situation, and district level legislation, e.g. river and lakeshore protection can help overcome these issues.

Institutional appraisal

Government departments lack basic resources to perform their duties well. Recent retrenchments have reduced the manpower of some departments to their barest minimum. Departments such as Natural Resources and Agriculture and Livestock who have to constantly monitor and control natural resource use and help develop the agricultural system through extension services have had their field staff reduced by as much as 75%. They, moreover, have no transport to enable them to reach their areas of operation. Departments such as Health and

Water now depend on transport facilities provided by donor agencies and/or international NGOs working in the district. Nevertheless, some departments cannot even maintain such vehicles due to lack of funds.

Most of NGOs conceptualise environmental conservation as equivalent to re/afforestation. Other conservation measures are not en vogue possibly due to the dominance of foresters in these institutions. Management is a major problem in most of these NGOs. Many of them are run as one man's show, while others are groups of people with vested interests and ulterior motives. Shortage of funds, lack of knowledgeable and hence lack of effective leadership has resulted in poor response in joining the organisations. Bureaucratic inertia, which is characteristic of such umbrella organisations, and mismanagement in individual member organisations have led to acrimonious relationships between RANGO and some of its member organisations. Some new NGOs have, as a result, been wary of joining.

Despite these weaknesses some potential counterpart organisations can be identified, including TACARE, DWT in Kigoma and Kasulu and RECOSO, Wazee Millers Group (Kirando), Malihai Club, Tujaribu Vijana Group, and the Pentecostal Church in Sumbawanga. These groups need capacity building through training and resource investments.

CM later presented a workplan in logframe format, which included:

- comparison studies to assess the cultural factors, such as religion, which influence hygiene and sanitation in lakeshore villages
- a study of a community within the Malagarasi delta area
- a study of migration and trade in the southern part of the Tanzanian lakeshore, perhaps in conjunction with the Zambian team
- production of a national report, including strategic interventions

Critique

by Anglophone Team	by Francophone Team
Strengths <ul style="list-style-type: none"> • Presentation of workplan in logical framework format • Plan is realistic: sample size, experienced team, tested methods • Objectives can be traced to previous work • Continued use of participatory methods 	<ul style="list-style-type: none"> • Plan well presented; coherent, complete, and well thought out • Tested methods
Weaknesses <ol style="list-style-type: none"> 1) Methods for studying influence of religion/culture not yet defined 2) Not clear how strategic intervention proposals should be prepared 	<ol style="list-style-type: none"> a) The methodology for studying the influence of religion/culture not clear b) The methodology is orientated towards PRA, and it is not clear how quantitative data will be collected
Recommendations <ol style="list-style-type: none"> 1) The SESS Co-ordinator to assist in defining methodologies for studying the influence of religion/culture 2) Devise procedures for preparing strategic intervention proposals 3) The Project to clarify ideal origins of strategic intervention proposals (i.e., community, researcher, or a mix) 4) Bi/multi national studies in border regions 	<ol style="list-style-type: none"> a) Finalise the methodology for studying the influence of religion/culture b) Include in the methodology a quantitative approach, i.e., household interviews

The final workplan is as follows:

19/11	submission of Mwamgongo report
29/11 – 5/12	fieldwork in Kasanga village, Kigoma District
6-17/12	data analysis and report writing
20/12	submission of Kasanga report
3-9/1/2000	fieldwork in Malagarasi delta
10-21/1	data analysis and report writing
24/1	submission of Malagarasi report

31/1 – 6/2	fieldwork in Tanzanian/Zambian border area
7 – 18/2	data analysis and report writing
21/2	submission of border area report
March	production of a national report, including strategic interventions

APPENDIX 4.4 Presentation on the progress and plans of the Zambian SESS team

There are two districts - Mpulungu, primarily inhabited by Lungu people, and Kapata, primarily inhabited by the Tabwa - and 110 villages along the Zambian lakeshore. The natural resources in the region include waterfalls such as the Kalambo falls, the Zudzua Falls used for hydropower and the Izi falls in Mpulungu. Also there are several important heritage sites such as the Kalambo Falls and the Nyamukolo Church founded in 1895.

Economic activities include:

- a) subsistence agriculture
- b) trading
- c) fishing – Zambia has the only industrial fishery on the lake. Many commercial Burundian fishing boats now fish in Zambia because of the security problems in Burundi.

Survey Progress pre July 1999

Only one SE survey was done and the report from this is not available; the author has neither a hard copy nor a disk copy. The Zambian team has concentrated on EE activities rather than SE survey work.

EE activities

When the SE/EE survey began it was considered important to explain good practices to villagers. EE was targeted towards fishermen, traditional rulers, and government officers.

Sensitisation methods included round table discussions at both whole community and interest group levels, stakeholder workshops to produce action plans, and leadership workshops for traditional rulers.

These resulted in Village Conservation and Development Committees (60) and Stratum committees (5). However, there were problems with these committees because of conflict between headmen, committee chairs and neighbourhood watch security leaders. Due to these conflicts 2 activities were under taken:

- a) Leadership training to define roles and links with villages and government institutions
- b) Village tours by chiefs to explain Project conservation aims.

Harmonisation workshops were then held with facilitators drawn from several ministries. EE programmes in schools were also instigated. 18 Primary schools were targeted with WWF involved in the training and curriculum development. The resources are now ready to be printed.

SE Surveys

In October 1999 an SE survey was undertaken in Chisanza (A), one of the oldest villages on the lake, located close to Mpulungu. 38 households were surveyed. The data have yet to be analysed but the preliminary results show that there are diverse activities although fishing has declined. Women obtain fish for processing from their husbands. It is believed that declining catches are due to population growth and changes in use of fishing gear. Consequently there has been an increase in agricultural activities such as the growing of cassava, groundnuts, mangoes, paw paws and sorghum.

Critique

by Anglophone Team	by Francophone Team
Strengths <ul style="list-style-type: none"> Information on EE and formation of committees Involvement of a cross section of stakeholders Role conflict resolution using different methodologies – chief workshops, leadership training Detailed description of the sampling strategy Research team has been identified Methodology and approaches are well stated 	<ul style="list-style-type: none"> good presentation of the study zone (use of maps) lots of qualitative information was collected through the use of participatory tools
Weaknesses <ul style="list-style-type: none"> Treating SESS and EE together has the possibility of compromising one for the other Lack of scientific focus and planning of earlier activities 20% of all of the communities is not achievable, over ambitious Over stretching of abilities, i.e., aiming for EE/Ad hoc activities before establishing baseline 	<ul style="list-style-type: none"> the study did not emphasise quantitative aspects, as a result of the methods used the work is very much orientated towards EE, with SESS work second the presentation did not include a work plan
Recommendations <ul style="list-style-type: none"> Drop EE activities for the time remaining The Co-ordinator to assist in guiding common research methodologies Trim number of villages using stratum sampling frame, i.e., choose 5 villages (2 in Nsumbu, 3 in Mpulungu) 	<ul style="list-style-type: none"> Adopt a quantitative approach to complete the SE data Reorient the study more towards SE Clarify the workplan
Condition <ul style="list-style-type: none"> Transport, money, DSAs to be available on time 	

Following this, and discussions with the SEF, the following workplan was agreed upon:

26/11	submission of Chisanza report
29/11 – 3/12	review of Chisanza report, planning activities
6-12/12	fieldwork in the upper Lufubu area
13-31/12	data analysis and report writing
3/1/2000	submission of upper Lufubu report
10-16/1	field work in Nsumbu area
17-28/1	data analysis and report writing
31/1	submission of Nsumbu report
7-13/2	fieldwork in a “typical fishing village”, probably either Kasakalawe or Mbeté
14-25/2	data analysis and report writing
28/2	submission of report
March	production of national report (Lusaka) institutional appraisal (lakeshore) preparation of proposals for funding

Participation in a joint study with the Tanzanian team in the border area is also to be scheduled.

APPENDIX 5.1 Draft letter to the PCU from the SESS Group

The following text is a draft for discussion and comment by the members of the SESS group.

“The Socio-economic Special Study (SESS) group understands that contributions from the SESS have not been included in the first draft of the Strategic Action Programme (SAP) due to a lack of SESS staff and co-ordination. However, the SESS now has a full national, regional, and international staff complement, a comprehensive work programme, and a co-ordinated understanding of its direction.

“Therefore, the SESS group members present at the first SESS Working Group Meeting (WGM) held in Kigoma in November 1999 strongly urge that SESS members are in future invited to SAP planning meetings. It was suggested that a representative from both the Anglophone and the Francophone countries be invited, and the SESS WGM unanimously elected Dr Claude Mung’ong’o, the NSEC for Tanzania, and Dr Oda Sindayizeruka, the NSEC for Burundi, to represent the SESS group.⁶

“Furthermore, the SESS group feels that the current deadlines for SESS contributions to the SAP are unrealistic considering that SESS workplans will not be completed until March 2000. It is suggested that there be a two month extension to the proposed SAP schedule for the SESS. This would not only allow the national SESS teams to complete their workplans, but also permit them to review the conclusions of the other Special Studies, as per the Project’s original design, and thus to formulate recommendations which aim to solve the key problems.”

⁶ It was also suggested that KM be present but she again stressed the budget restrictions that impacted on her time allocation.

APPENDIX 5.2 Knowledge gaps and areas for future research based on conclusions from Tanzania

Impact of fishing practices on the lake biodiversity

The studies reviewed in Tanzania show that continued application of the banned beach seining is a major problem in lakeshore villages. With the ban some species thought to be extinct are said to have now been seen among the catches from lines, gillnets and lift nets. One problem is that there is no comprehensive species list for the fishery that would help in continued evaluation, monitoring and up-dating the status of biological integrity of the lake.⁷ Studies to establish indicator species for assessing ecological change due to over-fishing are especially important to guide resource management and allocation in Lake Tanganyika.

As already noted environmental problems related to fishing activities include deforestation due to fish processing. The problem is growing and needs immediate attention. However, the type of plant species most used in fish processing, their spread in the ecosystem, their biodiversity value and their alternative uses are yet to be properly documented.

People's perception and attitudes on biodiversity within the fishery of Lake Tanganyika

No research has been done on the values people put on different fish species and fisheries. The socio-cultural and economic values of different fish species are not properly documented. It would also be of interest to determine the extent to which the type of fish eaten by one social group is a indicator of the status of the families of that group.

Impact of agriculture and mining on the biodiversity of the Lake Tanganyika catchment

The poor red soils of Kasulu District necessitate the keeping of large herds of cattle not only as a means of accumulating wealth and insurance for bad times but as a complement to crop production through the use of farmyard manure. However, overstocking is a problem in the catchment area leading to visible soil compaction and/or erosion in all villages. No study has so far documented how much of the sediments generated in this catchment actually reach and affects the biodiversity of the lake.

In the Intermediate Zone of the Malagarasi Catchment the agricultural system is based on shifting cultivation in the natural miombo woodland. There is relatively little integration of livestock keeping and crop production in the zone as historically cattle mortality due to the tsetse fly has prohibited livestock keeping. Use of inorganic fertilisers is also very minimal due to their unaffordability after the removal of government subsidies. Furthermore, access to extension services is very limited. Consequently, more land is cleared farther into the miombo woodlands, effectively intensifying the deforestation of the woodlands.

The major environmental threats identified in Mpanda and Sumbawanga Districts were deforestation resulting from expansion of agricultural activities and overgrazing due to an influx of livestock from Sukumaland and growth of local livestock numbers. To date no study has, however, related these threats to the perceived degradation of biodiversity in the lake.

Status of protected areas and their role on biodiversity maintenance

The Forest Reserves are facing considerable pressure from deforestation due to timber production, fuelwood collection, and agricultural expansion, especially for flue-cured tobacco growing in Mpanda District. Poaching was also said to be rampant in the Game Reserves. Initially, FRs managed by the districts were established for the purpose of maintaining resources for sustainable production. However, the latter day objective of generating revenue has undermined sustainability. This is becoming more evident under the local government reform process. In general the District Councils, which are self-funding agencies, lack the capacity for managing and supervising extraction from local authority FRs and other public land. Shortage of manpower, lack of funds, transport and other equipment exacerbate the problem of natural resource use regulation and control. As a result the majority of such reserves are degraded and subject to encroachment by the local communities and commercial extractors of timber, charcoal and wildlife. Although rough estimates indicate that about 18% of the FRs has been destroyed actual rates of destruction and consequent loss of biodiversity are yet to be quantified.

⁷ The SESS Co-ordinator has subsequently (13.11.1999) discussed this shortfall with the new FPSS Facilitator who indeed agrees that such documentation is a priority.

APPENDIX 5.3 Strategic Action Programme questionnaire

1. INTRODUCTION

It is important that the SESS plays its part in providing information for the Strategic Action Programme. Annex 1 is a questionnaire. It requests you to summarise your work and assists you with the kind of information we need to arrive at consensus on the priorities for the SAP process.

The GEF published Operational Strategy guidelines which outlines the purpose of the SAP as follows:

“The SAP should establish clear priorities that are endorsed at the highest levels of government and widely disseminated. Priority transboundary concerns should be identified, as well as sectoral interventions (policy changes, programme development, regulatory reform, capacity-building investments, and so on) needed to resolve the transboundary problems as well as regional and national institutional mechanisms for implementing elements of the SAP.”

i.e. the Strategic Action Programme will summarise the threats to Biodiversity and suggest management objectives for the national and regional bodies as well as providing suggestions for future work and monitoring.

There are a number of activities we should participate in so that we can tie together the results of our work and summarise our conclusions in order to inform the Strategic Action Programme (SAP) of the Project.

A preliminary part of the development of this Strategic Action Programme was the Transboundary Diagnostic Analysis (TDA) meeting which was held in November 1998. From this meeting a regional consensus was reached which ranked the threats to the Biodiversity of Lake Tanganyika. This ranking not only depended on level of impact but also on whether there were appropriate management interventions which could modify the impact and whether there was any additional benefits from management interventions (for example an obvious additional benefit that relates to reducing downstream sedimentation is upstream soil conservation).

2. FINAL REPORTS

The aim of the questionnaire below is to summarise these final reports. These studies are not yet complete so please produce a ‘best guess’. There will be time for incorporating later findings into a later iteration of the SAP (i.e. we will do this again in February/March 2000.)

NOTE that the SAP recommendations will form the basis of any further funding for work in this field and it is important that your views and priorities are expressed in the SAP in order that it can be used as a blueprint for further funding.

3. A FINAL MEETING?

PLEASE COMMENT ON YOUR AVAILABILITY FOR FEBRUARY/MARCH 2000 AND YOUR THOUGHTS ON VENUE

Objective of the meeting - each group working on the SESS to introduce their findings. Based on these the groups should aim to formulate a combined paper (at the meeting) summarising the SESS activities, suggesting overall management priorities, future research and monitoring activities. This summary will be included in the final version of the SAP (due in July 2000) and that should be a summary that we can all feel comfortable putting our name to.

To inform this meeting as many of the final reports as are completed will be circulated. However the questionnaire below will prove an extremely useful method of summarising the findings for all, and will act as a temporary source of information for us (members of the SESS) as well as the SAP. We should spend 2 days on presentations and the remainder on trying to work up a summary document which will act as a collective recommendation from the SESS to the SAP .It will include our summary of the importance of the impact of SE activities on the lake, our suggestions as to management priorities and propositions /recommendations towards a monitoring programme and further studies for which funding could be sought. It is also hoped that we can summarise some of the key findings of the SESS which should be addressed in the longer reports of each of the consultant groups.

Reports anticipated from the difference consultant groups are (please fill in your names, location and working title of paper in the box below)

ANNEX 1 – The Questionnaire

How to complete the questionnaire

Fill in the boxes below. Use the boxes as a guide to how much information we need but do expand them if you feel it is necessary

IMPORTANT - Where possible the boxes could be filled with **bullet points** rather than text as these are easier to summarise

Background

What were the primary objectives of the work you undertook?

Results

What were the main findings of the work you undertook?

Future research

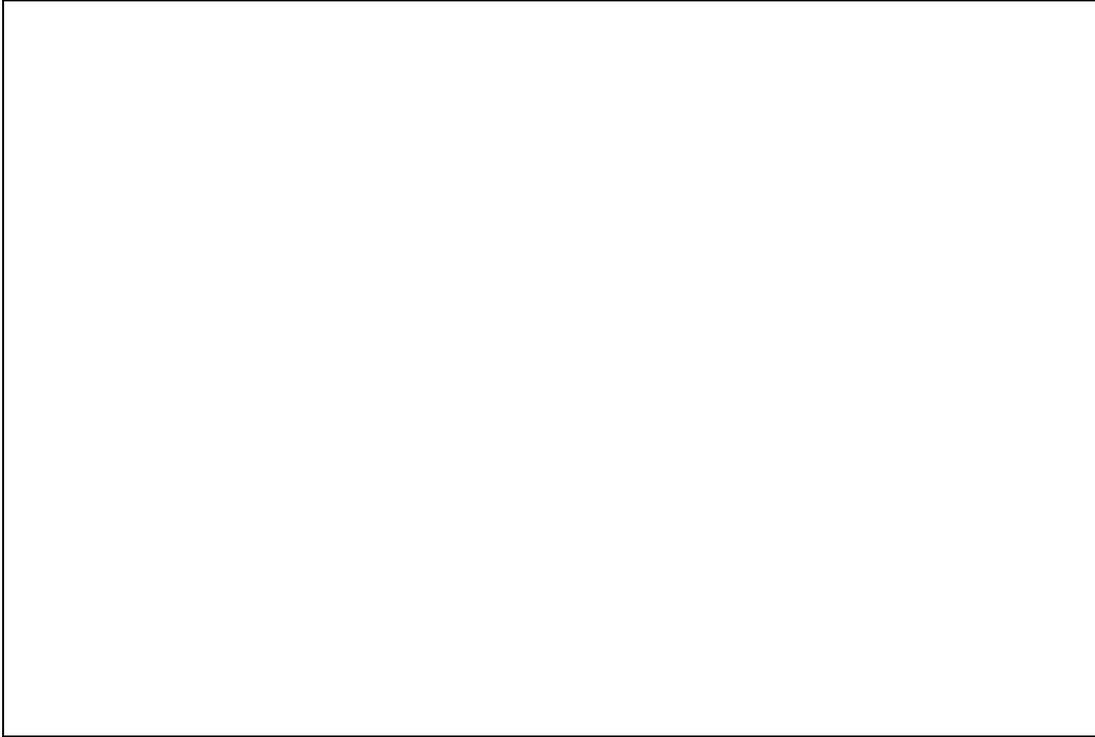
What does your work tell us are the priorities for future research. This section is split into high, medium and low priorities since to take account of the different levels of future funding that may be available. The low priority may be regarded as an important piece of work but imagine that it is something that should only be considered if the other work of higher priority is already in place.

You may feel it is better to split each box into 'monitoring' and 'research' if you feel these require to be dealt with separately.

High Priority

Medium Priority

Low Priority



Management actions

Please consider what outputs of your study can inform management actions



Other comments

Obviously tying you to the questionnaire format does not allow for freedom of expression! Use the last box to raise any points you feel should be raised at this point. You may also wish to go beyond your own study and draw on what you know of other elements of the SESS, the wider project or other work to consider linkages between your work and that of others. A further question relates to whether you believe that there are any specific points that are important for single location actions rather than have a lakewide implication. Feel free to think of anything else you consider ignored and include this here.

Name of contributor

Institution

Date

Many thanks