

Aug-Sept 1996

**Pollution Control and Other Measures to Protect Biodiversity in Lake
Tanganyika (RAF/92/G32)**

Special Studies: Pollution of International Waters

Back to Office Report: Chris Foxall, University of East Anglia

1. Introduction

The principal task of the mission which took place between Friday 9 August and 3 September 1996 was to follow up the baseline review by making a detailed 'on-the-ground' assessment of presently available facilities and expertise for the measurement and continued monitoring of pollution in Lake Tanganyika.

More specifically, the mission involved the identification of the institutions that are in the best actual or potential position to undertake the studies in each country, the enlistment of their support in setting specific objectives, the development of terms of reference, and the planning of different elements of the pollution studies.

In order to make full use of the time available, the team split into groups and the visit undertaken by Chris Foxall was restricted to Tanzania and Zambia. This report details the individuals and institutions visited, and highlights particular issues that need immediate action. A joint report on the mission will be provided by 30 September 1996.

2. Institutions Visited/Discussions Held

Thursday 8 August: Fly to Dar es Salaam

Friday 9 August

a.m.: Preliminary meeting with AM, RD, TBW, GP at PCU Office, British Council on arrival in Dar from UK.

Saturday 10 August:

General mission planning meeting with AM and other members of mission team at PCU Office, British Council.

Sunday 11 August

a.m.: KB joined us from Kigoma for meeting to plan co-ordinated itineraries for CF, EA, GP, PP, RD and TBW.

Monday 12 August

a.m.: Fly to Kigoma with EA, GP, KB, PP, RD and TBW.

p.m.: Preliminary visit to LTR and TAFIRI to meeting staff and view facilities.

Tuesday 13 August

a.m.: Meeting with Mr M Baragwiha (Regional Water Engineer) and his senior staff at Kigoma Regional Water Office.

p.m.: Meeting with LTR and TAFIRI - detailed assessment of TAFIRI laboratory facilities and discussion with research staff.

Wednesday 14 August

a.m.: Meeting with Mrs Fatima Mashaka, Deputy Headmistress of Kigoma Secondary School and Mr Lunga, Head, Dept. of Biology. Useful discussion of possible links between pollution and other special studies and environmental education.

p.m.: Leave Kigoma with GP for Mpulungu, Zambia aboard RV Liemba. Meeting on board ferry with James Wakibara, Ecologist, Mahale National Park (with GP) during which opportunities for collaboration between the Project and the Park were discussed.

Thursday 15 August

a.m.: Writing up notes.

p.m.: Liemba stops in Kipili, a small natural bay also served by road. Buildings of now defunct Fisheries Department possibly suitable for sub-base in southern waters of lake? No time to check it out.

Friday 16 August

a.m.: Arrive Mpulungu. Meeting with Mr Mwape, Dept. of Fisheries (with GP) bringing him up-to-date with progress of Project.

p.m.: Meeting with Fisheries Dept. staff and Victor Landenberg and Petra Pfaffer (LTR staff). Discussion of Fisheries and LTR monitoring programmes.

Saturday 17 August

a.m.: Make arrangements for boat trip to Sumbu National Park.

p.m.: Visit to Mbala. Meeting with Mr E Nkole Sosala, Keeper of Pre-history, Motomoto Museum, Mbala - the second largest museum in Zambia. Discussions centred on environmental education aspects of the special studies programme and possible links with the museum.

Sunday 18 August

a.m.: Leave Mpulungu on Fisheries boat RV Silver Shoal for Sumbu National Park with GP and Mr Mwape.

p.m.: Paddle up Lufubu River and visit Sumbu National Park. Rangers Office located close to river outflow into lake. No Rangers present at time of visit.

p.m.: Cruise along shoreline of National Park noting potential sampling sites and local facilities. Arrive Sumbu early evening. Stay overnight in chalets belonging to National Parks.

Monday 19 August

a.m.: Meeting with Mr Thomas Miti, Head, Wildlife Service, Sumbu. Discussion of aquatic sector of Sumbu National Park, its protection and opportunities for collaboration between Project and National Parks.

a.m.: Visit to Fisheries Dept., Sumbu. Assessment of buildings/offices, etc.

p.m.: Return by boat to Mpulungu.

Tuesday 20 August

a.m.: Detailed assessment of laboratory, computer and library facilities at Fisheries Dept./LTR, Mpulungu.

p.m.: Discussion with Mr Douglas Kabakwe, Senior Fisheries Development Officer, Dept. Fisheries, Mbala, at Mpulungu.

Wednesday 21 August

a.m.: Meeting with Mr B J Kasonde, District Water Engineer, Mpulungu. Discussion of river water monitoring in catchment area and potential threats to lake from sewage, sediments, etc.

p.m.: Literature search in Fisheries/LTR library and writing up notes.

Thursday 22 August

a.m.: Drive from Mpulungu to Kasama, Zambia. Meeting with Mr S C Ngambi, Water Engineer, Provincial Water Department, Kasama. Discussion of potential collaborative activities in Northern Province with Mr Cosmos Chizango, Deputy Co-ordinator, Irish Aid Development Programme.

p.m.: Fly to Lusaka via Ndola using Eastern Air.

Friday 23 August

a.m.: Visit Dr Chipungu, Sustainable Development Director, UNDP, Lusaka. Overview of potential collaborating institutions and laboratories in Lusaka.

p.m.: Meeting with Mr James S Phiri, Project National Co-ordinator, Environmental Council of Zambia (ECZ). Detailed discussion on progress, co-ordination and implementation of Project activities.

Saturday 24/Sunday 25 August

Writing up notes/report preparation.

Monday 26 August

a.m.: Meeting with Mr Gordon Mudende, Director of Fisheries, Chilanga. Very useful insight into Fisheries activities in Zambia, limitations, training needs, and the significance of Lake Tanganyika fisheries in national context.

a.m.: Visit to Department of National Parks and Wildlife, Ministry of Tourism, Chilanga. All senior staff including the Director were at Seminar in Kafue however.

p.m.: Discussion with Mr Charles Mwamba, Acting Secretary-General, National Council for Scientific Research (NCSR) regarding role, structure and activities of NCSR. Viewing laboratories. Visit to Radioisotope Unit, NCSR headed by Dr Matongo Nomai.

Tuesday 27 August

a.m.: Meetings at University of Zambia (UNZA) with:

Professor Davidson D. Theo, Dean, School of Natural Sciences

Professor James Cernak, Department of Chemistry

Dr S M Mgwira, Head, Department of Physics

Professor P C R Jain, Manager, Environmental Resource Centre, Department of Physics

p.m.: Discussion with Dr Fred Kamona, Head, Department of Geology, School of Mines. Appointment with Dr Jere, Dean, School of Mines, but he was delayed, so further appointment made for Wednesday 28 August.

Wednesday 28 August

a.m.: Discussion with Bernadette Crawford, Senior Projects Office, Irish Aid Development Programme regarding scope of Northern Province Development Programme, particularly as it relates to Project activities around Lake Tangayika.

a.m.: Meeting with Dr Jere, School of Mines, UNZA. Useful overview of Departments of Geology, Mining Engineering and Metallurgy and Mineral Processing. Visit analytical laboratories in School accompanied by Dr S Simukanga, Head of Dept. of Metallurgy and Mineral Processing.

p.m.: Purchase maps of Lake Tanganyika and catchment area from Map Sales Office, Mulungushi House, Lusaka.

Thursday 29 August

a.m.: Further visit to NCSR Lusaka. Detailed discussions regarding x-ray analysis (XRF) and x-ray diffraction (XRD) facilities with Head of Unit, Dr M Nomai and other research staff. Met Ms Masinah Sibbuki, Research and Development Co-ordinator, NCSR. Discussion of possible collaboration and co-operation with NCSR.

a.m.: Meeting with Ms C M Msomi, Water Section, NCSR, Lusaka. Discussion with Mr Mutale i/c water analysis using atomic absorption spectroscopy.

a.m.: Visit to Food Drug and Control Laboratory (Ministry of Health), University Teaching Hospital, Lusaka. Meeting with Acting Head of Laboratory, Ms Margaret-Sakala. Assessment of laboratory facilities for heavy metal and pesticide analytical work.

p.m.: Visit to Ministry of Environment and Natural Sources to meet Mr Lubinda M Aongola, Planning Officer/Cabinet Liaison Officer, to obtain copies of Zambia National Environment Action Plan Mr Aongola was out of his office.

p.m.: Discussion with Mr Fred Njamu, Geologist, Prescribed Minerals and Materials Commission, Geological Survey Department, Mulungushi House, Lusaka. Arrangements made to obtain geological reports, soil and geological maps of Zambia catchment area of Lake Tanganyika.

Friday 30 August

a.m.: Meeting with Mr Kaposhe, Head, Livestock and Pest Centre, National Council of Scientific Research (NCSR), Chilanga, at Pamodzi Hotel, Lusaka. Discussion of facilities for heavy metal and pesticide analysis and possible involvement with Project.

p.m.: Visit to Zambia Environment Education Programme (ZEEP) to meet Mr Justin Lupere, Materials Development Officer. Discussion of potential links between ZEEP and Pollution Special Study Programme.

p.m.: Further meeting with Mr Fred Njamu, Geological Survey Department, at Pamodzi. Hotel to collect prepared geological maps and reports.

Saturday 31 August

Travel to Dar-es-Salaam. Exchange mission notes with AM, EA, GP, RD and TBW.

Sunday 1 September

a.m.: Mission report planning meeting with EA, RD and TBW.

a.m.: Writing up notes.

p.m.: Discussion of relevance of Lake Tanganyika Project to Ngombe National Park with Jane Goodall at British High Commission reception.

Monday 2 September

a.m.: Meeting with Dr Kapilima, Department of Geology, University of Dar-es-Salaam. Discussion of current departmental research and monitoring activities including the environmental impact of mining activities in the Malagarasi catchment area. Assessment of instrumental and laboratory facilities of Department.

a.m.: Discussion of Lake Tanganyika Project with Mr Mikaya and Mr Msuye at Ministry of Water, Das-es-Salaam. Issues raised included availability of sediment, rainfall and water quality data held at the Ministry and the present capability for laboratory analysis.

p.m.: Meeting at Department of Civil Engineering, University of Dar-es-Salaam. Discussion of Water Resource Engineering and Environmental Engineering Programmes run by Department and potential for collaborative activities with Lake Tanganyika Project.

Tuesday 3 September

a.m.: Meeting with Professor Mulokozi, Acting Head, Department of Chemistry. Explanation of scope and nature of Lake Tanganyika Project, identification of staff potentially interested in collaborating, evaluation of experience of technical staff, and assessment of laboratory facilities.

a.m.: General discussion with Prof. M H H Nkunya, Associate Dean (Academic), Faculty of Science, University of Das-es-Salaam of possible links between Lake Tanganyika Project and University.

p.m.: Meeting with Alice S Bhukali, Co-ordinator Wildlife Conservation Society of Tanzania (WCST). Potential links between WCST activities and environmental education aspects of pollution. Special studies programme explored.

p.m.: Return flight Dar-es-Salaam to UK.

3. Action Points

It is recommended that action on the following should be initiated as soon as possible:

- preparation of an attractive, illustrated leaflet which clearly explains the objectives, scope and expected outcome of the Lake Tanganyika Project NRI
- production of 'Project' business cards for technical advisers NRI
- issue of official documentation to help persuade Immigration, Customs and personnel of other Government Departments that we are really bona fide members of the Project NRI/PCU
- issue of UNDP passports to Project Technical Advisers or if this is not possible smooth out entry and re-entry visa formalities UNDP/NRI
- make arrangements for all Technical Advisers to be covered by effective travel and medical insurance including membership of the relevant in-country air rescue services for the duration of their visits NRI/PCU
- equipment, glassware, chemicals and consumables for laboratories need to be agreed with Project management as soon as possible and despatched to laboratories TBW/CF/GP
- erection of Project signboard outside SLO's house. At present no visible indication that Project office exists in Kigoma KB
- production of further copies of Special Studies Baseline Reviews. Complete sets were requested by the following: NRI/PCU/CF
 - Bernadette Crawford, Senior Programme Officer, Irish Aid, Embassy of Ireland, P O Box 34923, 10101 Lusaka
 - Professor D D Theo, Dean, Natural Sciences, University of Zambia, P O Box 32379, Lusaka
 - Professor M H H Nkunya, Dean, Faculty of Science, University of Das-es-Salaam

In order to raise profile of Project in Tanzania and Zambia and to provide some resource material on the Lake to relevant and interested NGO's, it is strongly recommended that a set of the baseline special study reports be also sent to the following: NRI/PCU/CF

- Ms Alice S Bhukali, Co-ordinator, Wildlife Conservation, Society of Tanzania, P O Box 70919, Das-es-Salaam
- Ms Juliana Chileshe, Zambia Environmental Education Project (ZEEP), P O Box 50551, Lusaka