

Report of the

**THIRD TECHNICAL CONSULTATION ON DEVELOPMENT AND
MANAGEMENT OF THE FISHERIES OF LAKE KARIBA**

Siavonga, Zambia, 26–27 October 2006



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PREPARATION OF THIS REPORT

This is the final version of the report adopted on the 27 October 2006 in Siavonga, Zambia, by the third Technical Consultation on the Development and Management of the Fisheries of Lake Kariba.

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Participants in the Technical Consultation
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ABSTRACT

This document is the final report of the third Technical Consultation on the Development and Management of the Fisheries of Lake Kariba. The major topics discussed were: current status of the fisheries in the Lake Kariba national sectors; legislations, restrictions, monitoring, control and surveillance and co-management; and unified fisheries management strategies and options for the Lake.

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OPENING OF THE TECHNICAL CONSULTATION

1. On behalf of the Government of Zambia, Mr Charles Maguswi, Director of Fisheries, Ministry of Agriculture and Cooperatives, welcomed the participants to the third Technical Consultation in Siavonga. He highlighted the importance of the Consultation to the two riparian States.

2. The outgoing Chairperson Mrs Rachel Gwazani, Principal Planning Officer, Parks Wildlife Management Authority, Ministry of Environment and Tourism, welcomed the delegates from Zimbabwe and Zambia to the third Technical Consultation. She recalled and summarized the discussions, decisions and recommendations made during the second Technical Consultation, held in Kariba, Zimbabwe, in December 2004. She emphasized the need for the Consultation to come up with precise and concrete recommendations with realistic time frames. Finally she commended FAO for continuing to facilitate the two countries in coming together to discuss the common fishery management and development issues and also to pave the way forward.

3. The Technical Consultation was attended by delegates from Zambia, Zimbabwe, FAO, Representative of the Association of Kapenta Operators Zimbabwe, Representative of the Zambia Fishers and COMESA as observers. The list of participants is given in Appendix B.

4. The Assistant FAO Representative, Mr David Mfote conveyed to the delegates the warm greetings from the office of the FAO Subregional Representative for Southern and East Africa based in Harare and also from the FAO Representative in Lusaka, Zambia.

5. He noted that Lake Kariba is an important asset to the Republics of Zambia and Zimbabwe. It is a source of food security, employment for the riparian population and does contribute to foreign exchange earnings. The two countries have already met in 2002 and 2004 and stressed that, for this third Technical Consultation, there is need to implement the decision and recommendations made.

6. The Assistant FAO Representative highlighted the policy, legal and socio-economic issues which are affecting the development and management of the fisheries around Lake Kariba. Some of them are listed below:

- Lack of regional harmonized fisheries policies in the absence of up-to-date Fisheries Acts
- Lack of harmonized regulations
- Inadequate public awareness of fisheries policies
- Insufficient re-investing revenues generated (plough back)
- Need to strengthen co-management that involves stakeholders
- Use of illegal fishing gears and methods
- Weak monitoring and law enforcement (monitoring, control and surveillance [MCS]) and adherence to signed regional protocols
- Poor medical facilities
- Inadequate education and training amenities
- Increase in the spread of (human immunodeficiency virus [HIV]/acquired immunodeficiency syndrome [AIDS]), tuberculosis, malaria and waterborne disease cholera and typhoid

7. He concluded by wishing the delegates useful deliberations over the two days of the meeting. He reminded the workshop not to talk only, but to walk the talk.

8. The guest of Honour, Mr Siamuzulu, District Administrative Officer, representing offices of the District Commissioner and the Council Secretary for Siavonga also welcomed the participants to this Consultation and emphasized the importance of this Lake to Zambia and Zimbabwe.

9. He gave a comparison of the population of Zambia and Zimbabwe to a person who is in a pool of water and is dying of dehydration, which means that the people should utilize the Lake and its resources rationally in order to have sufficient food, economic earnings and employment. Lake Kariba asset should be used for present and future generations. He likened the collaboration among Zambia, Zimbabwe and FAO to a three-legged pot with the pot being Lake Kariba and the three legs as the partners who could not stand without anyone of the three legs.

10. He strongly pointed the need for follow-up action in implementing decisions and recommendations made from this Consultation, and emphasized time frames. He reminded the riparian governments that without the implementation of the recommendations would be difficult to convince development partners for further assistance on the management of the Lake. In conclusion, Mr Siamazulu wished all participants meaningful and successful deliberation and declared the meeting open.

ADMINISTRATIVE ARRANGEMENTS

11. The timetable and administrative arrangements for the session were presented and adopted as shown in Appendix A.

12. The Director of Fisheries Mr Maguswi was handed the Chairmanship and Ms Gwazani became the Vice Chairperson. Mr G. Moyo, Mr N. Siziba, Mr L. Lulemba and Ms J. Kasabila were nominated as Rapporteurs.

PRESENTATION AND DISCUSSION ON CURRENT STATUS OF LAKE KARIBA NATIONAL FISHERIES SECTOR BY ZAMBIA

13. The Zambian delegation presented a paper on the status of the fisheries management and development in the Zambia sector. Lake Kariba has continued to contribute 14-15 percent of the total annual fish production for Zambia. The Frame survey was conducted this year showing the number of villages, fisherfolk, boats, etc. There are 1 306 fishermen in 60 fishing villages and 11 of these were women. The kapenta fish production showed a slight increase but we do not know the exact biomass since the last survey was done over 10 years ago. There are four operational fish farming companies with 52 cages with a potential production of 300 tonnes per annum.

14. It was reported that the revised Fisheries Act incorporates section of the FAO Code of Conduct for Responsible Fisheries and on community participation in fisheries management and aquaculture. The implementation of the FAO Code of Conduct has been taken care of by the revised Fisheries Act.

15. The meeting was informed that interzonal committees have now been registered as an association in order to facilitate funding. There are fears that this might isolate the association from the activities of the Department of Fisheries. Co-management Committees are now viable.

16. It was reported that the low price of the Cahora Bassa kapenta are posing a threat to the marketing of the Lake Kariba kapenta.

17. In conclusion it was strongly recommended that a lake wide Hydro-acoustic Survey be carried out to establish the current kapenta biomass. In addition a Catch Assessment Survey to establish the status of the inshore fisheries, was recommended for both Zambia and Zimbabwe.

PRESENTATION AND DISCUSSION ON CURRENT STATUS OF LAKE KARIBA NATIONAL FISHERIES SECTOR BY ZIMBABWE

18. The status of the fisheries management and development in Lake Kariba for the Zimbabwe sector was presented to the Consultation. It was indicated that Zimbabwe had 295 kapenta rigs from 98 companies of which 30 are owned by the indigenous. Kapenta industry is providing employment for over 3 000 people.

19. It was noted that the 2005 kapenta production was approximately 7820 metric tonnes per year, which indicates more than 50 percent reduction in the kapenta catch from 1994. The presenter stressed the need for a biomass assessment. A new association of kapenta operators has been formed and is currently proposing to hire an Executive Officer who will be responsible for marketing and purchasing of equipment.

20. The meeting was informed that an Anti Poaching unit has been formed. In some instances Parks rangers monitor activities from the rigs. The Zimbabwe Republic Police has successfully managed to set up a neighbourhood watch unit and hence the same can be done to the fisherfolk by empowering them with arresting powers.

21. The challenges highlighted in the report included Illegal, Unreported and Unregulated (IUU) fishing, reduced catches, reduction of the market share due to the cheaper kapenta from Cahora Bassa, high staff turnover, fuel shortages, high operational costs, crocodile damages to the nets and lack of a proper research budget.

22. It was noted that a number of opportunities existed and these are a high demand of fishing the local and international market, existing collaboration with other organizations.

23. The artisanal fisheries have shown no significant changes in the number of fishing permits or fishing grounds. The average catch is 17 kg per fisherman per day, however, it increases during the rainy season. The shortages of fuel have resulted in poor submission of reports. Although the last Frame survey was held in 2002 there has been an increased number of fishermen going into farming and mining.

24. It was recommended that there is an urgent need for a Hydro-acoustic Survey for kapenta and Catch Assessment Survey for the artisanal fishery.

PRESENTATION AND DISCUSSION ON LEGISLATION, RESTRICTIONS AS WELL AS MONITORING, CONTROL AND SURVEILLANCE ON THE ZIMBABWEAN SECTOR

25. The meeting was informed that the Draft Zimbabwean national fisheries policy incorporates a number of international obligations, which are in response to the Southern African Development Community (SADC) Protocols on Fisheries (2001). It was reported that its International obligations are in response to SADC Protocols on Fisheries (2001), the FAO Code of Conduct for Responsible Fishing (1998), the FAO guidelines for Inland fisheries, the FAO Guidelines for Implementation of International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Convention on Biological Diversity (CBD), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as well as the Common Market for Eastern and Southern Africa (COMESA) when it comes to fish trade and fish quality assurance.

26. It was noted that the Zimbabwe Fisheries Sector is facing various challenges namely; depletion of biological diversity, siltation of water bodies by improper land use, eutrophication of water bodies, poaching, uncoordinated and compromised legislation towards fishery as a national resource.

27. Relevant legislature in Zimbabwe was noted to include: the Wildlife, the Forestry, the Environmental Management, the Inland Water Shipment, the Water, the Zambezi River Authority, the Communal Lands Acts, the Wildlife Policy and the Wildlife Based Land Reform Program.

28. Finally the delegates were informed that the relevance of the Draft Fisheries Policy on Lake Kariba is reflected in the following seven objectives:

- a) **Objective 1:** Quantify fishery resource and estimate production levels: utilization of the fishery resource and management based on scientific data;
- b) **Objective 2:** Sport fishing: Lake Kariba is surrounded by recreational park; promote recreation in Lake Kariba;
- c) **Objective 3:** Economics of fishery: fishing still need to gain its status towards poverty alleviation and food security;
- d) **Objective 4:** Research and Training: To enhance knowledge of the fisheries and improve capacity to handle challenges in Kariba fishery;
- e) **Objective 5:** Law enforcement: encourage protection and equal opportunity in the utilization of the resource;
- f) **Objective 6:** Develop aquaculture: enhancement of food security, reduce overexploitation of capture fishery and provide a legal framework for the implementation of aquaculture projects;
- g) **Objective 7:** Gender equity: improve the role of women in fishing;

29. It was recommended that the fisheries policies of both Zambia and Zimbabwe be finalized and subsequently harmonized.

PRESENTATION AND DISCUSSION OF VIEWS OF FISHERS ON THE BENEFITS AND PROBLEMS OF LAKE KARIBA BY A ZAMBIAN FISHER

30. The representative of the fishermen of the Lake Kariba Zambian Sector reported on the following problems they were facing on their daily operations:

- access to loans for purchase of right mesh sizes and proper fishing boats;
- lack of clean drinking water in fishing villlages;
- insufficient transport to deliver fish to the markets;
- lack of medical facilities in fishing villages;
- difficulty in the acquisitions of ice;
- segregation of women fishers during the granting of the loans;
- inadequate sensitization on HIV/AIDs in the fishing villages for both the fishermen and fish traders; and
- illegal fishing practices.

PRESENTATION AND DISCUSSION OF VIEWS OF FISHERS ON THE BENEFITS AND PROBLEMS OF LAKE KARIBA BY A ZIMBABWEAN FISHER

31. The representative of the Kapenta Operators Association reported on the Kapenta fishing in Zimbabwe that has resulted in a lot of benefits to the country and to the entire population of Zimbabwe.

32. He highlighted that the Kapenta industry in Zimbabwe, which is concentrated around Lake Kariba from Binga to Sanyati Basin, has 98 fishing companies with a total of about 295 fishing units. To the country, this is a major benefit as the industry has created employment of about 3 000 people directly and indirectly.

33. He noted that the kapenta industry employs a high proportion of the population in Kariba Town. The industry has led to the development of other industries such as those involved on Kapenta rig construction, net making hence increasing the employment levels. He highlighted that kapenta fishing was benefiting the country through foreign currency generation.

34. Among the problems faced by the fishers he emphasized on the following:

- declining fish catches over the years;
- a lot of illegal trading of fish going on in the Lake;
- non availability and cost of fuel;
- high cost of fishing gear/equipment;
- stiff competitive markets for Kapenta due to the cheap Kapenta coming from Cahora Bassa;
- lack of reliable transport;
- lack of policy on retrieving of rigs/boats that had been driven by natural disasters to either side of the borders;
- limited access to loans;
- inadequate development of the fishing villages/communities; and
- unavailability of educational facilities, medical facilities etc.

AN OVERVIEW ON THE MANAGEMENT AND DEVELOPMENT OF THE FISHERIES OF LAKE KARIBA

35. The FAO Secretariat presented an overview on the management and development of the fisheries of lake Kariba. It was pointed out that the Lake is a significant source of livelihoods to millions dwelling within and outside of its basin. The lake and its environs support a wide array of subsistence and commercial activities. The conservation value and rational utilization of the lake is thus also of great importance to Zambia, Zimbabwe and the international Community.

36. On threats concerning pollution and environmental degradation the following sources of pollution were highlighted:

- artisanal and industrial mining;
- urbanization;
- the discharge of domestic, animal and industrial waste;
- deforestation;
- erosion from the land, siltation, and sedimentation in the Lake;
- pesticides; and
- aquatic weed infestation

37. With regards to the control of water hyacinth and other invasive weeds, it is advisable for the scientists, Government policy makers and advisers like the Zambezi River Authority (ZRA) to first implement the following activities and measures:

- elaborate and execute a programme for continuous monitoring of the distribution and effects of water hyacinth and other weeds;
- initiate implementation of a programme for biological control;
- strengthen the implementation of a programme for mechanical and manual control;
- study the socio-economic impact of water hyacinth on the fishing communities, electric power supply, water transport and water supply; and also
- assess the impact of water hyacinth on water quality, biodiversity and various fisheries.

38. It was re-iterated that the problems of Lake Kariba should be addressed jointly by Zambia and Zimbabwe in collaboration with regional economic grouping: COMESA and SADC as well as

developing partners like FAO, African Development Bank (AfDB), European Union (EU), World Wide Fund for Nature (WWF), The World Conservation Union (IUCN) and the WorldFish Center.

39. It was confirmed that the two countries are implementing The FAO Code of Conduct for Responsible Fisheries (CCRF), which provides a framework of basic policy orientation through which these requirements may be accommodated in an integrated fashion.

40. On institutional framework, the principal deficiencies common to institutional frameworks have already been identified and can be summarized as follows:

- inadequate budgetary allocation to fisheries sectors by central governments;
- inadequate funding for research;
- lack of human resources and equipment;
- poor to non-existent enforcement of fisheries regulations;
- insufficient linkage between central administration and field agents at local level.

41. On Monitoring Control and Surveillance (MCS) the participants were informed that consideration should be given to the following:

- the cost of an appropriate and affordable MCS system; and
- the characteristics of national fisheries.

42. Concerning the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), it was suggested that Zambia and Zimbabwe should take the necessary measure to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU) around Lake Kariba. It was deemed necessary for the two countries to develop a Regional Plan of Action (RPOA-IUU) for Lake Kariba.

COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA (COMESA)

43. The meeting was informed that COMESA collaborates with member countries and a number of development partners in natural resources development. COMESA is developing a Web Based Food and Agriculture Marketing Information System (FAMIS) that would provide information on the agricultural commodity specific supply and demand situation

44. Focus is given to both local and international markets. In some instances assistance can be rendered to associations. In terms of fish trade, COMESA deals with value added quality, standards, and implementing sanitary measures and provide training. COMESA informed the Consultation that it also address the problems of fish farming by promoting the production of fish fingerlings in hatcheries.

45. The Technical Consultation noted that COMESA has close ties with the sub-committee on fish trade, the African Development Bank and the New Partnership for Africa's Development (NEPAD). The collaborative work between FAO, Lake Victoria Fisheries Organization (LVFO) and COMESA on Lake Victoria could be extended to Lake Kariba and other water bodies.

RECOMMENDATIONS

46. Recommendations from the third Technical Consultation on the Management and Development of Lake Kariba are listed below:

Resource base and fisheries statistics

(a) A joint lake-wide hydro-acoustic survey in order to establish kapenta biomass in the lake following the decline of the kapenta catches in Lake Kariba.

Justification

- Current status of kapenta biomass in Lake Kariba is not known
- Hydro acoustic survey last done in 1994
- Catch per unit effort and annual total catches are going down
- The records are indicating a lake wide 50 percent decline in total catches of kapenta
- There is need to determine the biomass of kapenta in the lake in order to ascertain the level of exploitation

Timeframe

- To be accomplished by June 2008.

(b) A joint statistical report on catch assessment survey for artisanal fishery on Lake Kariba was recommended.

Justification

- The current status of fish exploitation by the artisanal fishermen is not known
- Catch assessments by both countries was last done in 1998 and
- There is need to have an updated statistical report on the fishery

Timeframe

- To be accomplished by end of 2007.

Policy

47. Finalization and harmonization by Zambia and Zimbabwe of the components of policies related to Lake Kariba fisheries was recommended.

Justification

- Lack of existing, clear and documented policies by the two countries to manage the fisheries
- Lack of these policies hampers the development of the fisheries sector and
- Lack of harmonized fisheries policy by the two countries leads to incompatibility of the management efforts with respect to the fishery

Timeframe

- To be accomplished by June 2008.

Cage culture

48. Initiate a study to determine the appropriate cage types and sustainable production levels.

Justification

- To regulate cage numbers and sizes
- To enhance cage culture development
- To manage cage distribution patterns
- To avoid negative environmental and biological impacts for protection of biodiversity

Time frame

- As soon as it is feasible and applicable.

Improved fish processing and marketing

49. Capacity building in fish technology and post harvest handling

Justification

- To reduce post-harvest losses
- To add value to the fish product

Time frame

- On a continuous basis.

Socio-economic and political issues

50. The Technical Consultation recommended that the two riparian governments (Zambia and Zimbabwe) take the necessary measure to address on a continuous basis the challenges facing the fishing communities around the Lake and impacting on fish production. Some of the issues are listed below:

(a) Socio-economic issues

- Absence of a common bilateral Policy on social and economic issues affecting fishing communities
- Poor medical facilities
- Inadequate education and training amenities
- Insufficient re-investment of revenues collected from fisheries
- Poor sanitation,
- Increase in the spread of HIV/AIDS, tuberculosis, malaria and waterborne disease cholera and typhoid
- Population increase
- Safety of fishing operations
- Poverty eradication among fishers
- Inadequate funding of the fisheries sector

(b) Political issues

- Inadequate commitment to resolve fishers problems
- Inadequate public education of fishers
- Conflict of interest in resource use among different users
- Lack of alternative livelihoods for fishers and fish traders

51. The realization of these projects requires commitment, collaboration and cooperation as well as funding from the riparian Governments budgets.

52. Realizing that the budget may not be adequate from the two riparian Governments, additional funding should be sought from the developing partners like SADC, COMESA, AfDB, FAO, EU, WWF, IUCN, etc.

ANY OTHER MATTERS

53. There were no other matters raised.

ACKNOWLEDGEMENTS

54. The delegates commended FAO for the assistance in organizing the third Consultation and wished for similar support for the fourth Technical Consultation in the year 2008.

DATE AND VENUE OF THE FOURTH TECHNICAL CONSULTATION

55. It was agreed that the fourth Technical Fisheries Consultation be held in the year 2008 in Kariba, Zimbabwe. The exact date of the meeting will be determined by FAO after consulting the chairperson, Zambia and the host Government of the Republic of Zimbabwe

ADOPTION OF THE REPORT

56. This report with its recommendations was adopted at Siavonga, Zambia, on 27 October 2006.

APPENDIX A

Agenda

1. Opening ceremony
2. Administrative arrangements
3. Presentation and discussion of current status of Lake Kariba national fisheries sector by Zambia
4. Presentation and discussion of current status of Lake Kariba national fisheries sector by Zimbabwe
5. Presentation and discussion of paper on legislation, restrictions as well as monitoring, control and surveillance on the Zambian Sector of Lake Kariba
6. Presentation and discussion of paper on legislation, restrictions as well as monitoring, control and surveillance on the Zimbabwean sector of Lake Kariba
7. Presentation and discussion of views of fishers on the benefits and problems of Lake Kariba by a Zambian fisher
8. Presentation and discussion of an overview. Unified fisheries management strategies and options for Lake Kariba by FAO Secretariat
9. Framing of recommendation on the following topics:
 - Status of stock
 - Fisheries statistics and socio-economic data
 - Fish processing and marketing
 - The role of women on Lake Kariba Fisheries
 - Aquatic weed and pollution control programme
 - Legislation and harmonization
 - Co-management in fisheries
 - IUU-Fishing around Lake Kariba

APPENDIX B

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