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Report of the

FIRST LAKE VICTORIA FISHERIES ORGANIZATION AND FAO REGIONAL TECHNICAL WORKSHOP ON FISHING EFFORT AND CAPACITY ON LAKE VICTORIA

Dar es Salaam, United Republic of Tanzania, 12–14 December 2005

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PREPARATION OF THIS DOCUMENT

With technical and financial support from the FAO Fisheries Department and the FAO Subregional Office for Southern and East Africa (SAFR) (Harare, Zimbabwe), the First Lake Victoria Fisheries Organization and FAO Regional Technical Workshop on Fishing Effort and Capacity on Lake Victoria was held at the Dar es Salaam Conference Centre in Dar es Salaam, United Republic of Tanzania, from 12 to 14 December 2005.

This document contains the report of the workshop and includes the key points, items of concern as well as the agreed actions and guidance provided by the participants on the components of a Regional Plan of Action for the Management of Fishing Capacity on Lake Victoria (RPOA–Capacity). The appendixes include the workshop agenda, the list of participants, the opening speech by Mr Salmon Odunga, Permanent Secretary for the Ministry of Natural Resources and Tourism, Tanzania, and the FAO International Plan of Action for the Management of Fishing Capacity. This document and, in particular, the actions for moving forward as well as the guidance on the development of a RPOA–Capacity for Lake Victoria not only create the platform for addressing the critical issue of capacity management, but also create the platform for the first international RPOA–Capacity.

The report and documentation was compiled by the team of Dr Oliva C. Mkumbo, Senior Scientist, Lake Victoria Fisheries Organization; Dr Fiona Nunan, Community Development Long Term Technical Assistance; Mr John Purvis, Fisheries Management Long Term Technical Assistance; Mrs Carol T. Kirema-Mukasa, Senior Economist, Lake Victoria Fisheries Organization (LVFO); Mrs Ferry K. Balirwa, Secretary, Lake Victoria Fisheries Organization; Mr George Ssentongo, FAO Fisheries Consultant, SAFR; Mrs Grace Chagonda, Programme Assistant, SAFR; and Dr Rebecca Metzner, Fishery Analyst, FAO Fisheries Department, Rome, Italy. The Chairman of the LVFO Executive Committee, Mrs Nancy Gitonga also assisted in the editing of the report.

This report and documentation was compiled by FAO in collaboration with the Secretariat of the LVFO. The contribution to this report by the Fisheries Project entitled “Implementation of a Fisheries Management Project”, funded by the European Union, is commended.

Distribution:

Participants in the Workshop
LVFO Secretariat
Member Countries of LVFO
FAO Fisheries Department
Fishery Officers in FAO Regional and Subregional Offices

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ABSTRACT

The First Lake Victoria Fisheries Organization (LVFO) and FAO Regional Technical Workshop on Fishing Effort and Capacity on Lake Victoria was held in Dar es Salaam, United Republic of Tanzania, from 12 to 14 December 2005.

The main objectives of the regional workshop were to raise the importance of managing fishing capacity and effort and discuss strategies that may be used to reduce capacity, where necessary, as part of taking measures for ensuring long-term sustainable utilization of the fishery resources of Lake Victoria; to develop and agree on mechanisms for assessing overall capacity on the entire lake; and to highlight the linkages between the management of fishing effort, capacity, and concomitant illegal, unreported and unregulated fishing.

The results of the workshop include actions for progressing work on the management of fishing capacity as well as guidance for the development of a Regional Plan of Action for the Management of Fishing Capacity on Lake Victoria.

This document contains the report of the workshop as well as information and inputs provided by the participants. This document, and in particular, the actions adopted by the workshop participants can serve as a basis for further work aimed at improving regional fisheries management and the management of fishing capacity.

CONTENTS

ACRONYMS

BMU	Beach Management Unit
CCRF	Code of conduct for Responsible Fisheries
CAS	Catch Assessment Surveys
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
IUU	Illegal, unreported and unregulated (fishing)
IPOA	International Plan of Action
IFMP	Implementation of Fisheries Management Plan
LTTA	Long Term Technical Assistance
LMO	Local Management Organization
LVFO	Lake Victoria Fisheries Organization
MSY	maximum sustainable yield
MCS	monitoring, control and surveillance
NWGs	National Working Groups
NPOA	National Plan of Action
RWGs	Regional Working Groups
RPOA	Regional Plan of Action
SAFR	Subregional office for Southern and East Africa
SOPs	standard operating procedures
TAC	total allowable catch
UFA	Uganda Fisheries Authority

INTRODUCTION

1. The First Lake Victoria Fisheries Organization (LVFO) and FAO Regional Technical Workshop on Fishing Effort and Capacity on Lake Victoria took place at the Dar es Salaam International Conference Centre, Dar es Salaam, United Republic of Tanzania from 12 to 14 December 2005. The first two days of the workshop were devoted to plenary sessions.

2. The Agenda for the Workshop is attached as Appendix A. A total of 42 participants took part in the Workshop, and the list of participants is attached as Appendix B. Appendix C contains the Opening Statement and Appendix D, the legal text of the FAO International Plan of Action for the Management of Fishing Capacity (IPOA–Capacity).

Objectives of the workshop

3. The main objectives of the regional workshop were to:
   - (a) raise the importance of managing fishing capacity and effort and discuss strategies that may be used to reduce capacity where necessary as part of taking measures for ensuring long-term sustainable utilization of the fishery resources of Lake Victoria;
   - (b) develop and agree on mechanisms for assessing overall capacity on the entire lake; and
   - (c) highlight the linkage between irresponsible managing of fishing effort and capacity with the concomitant illegal, unreported and unregulated (IUU) fishing.

OPENING REMARKS

Director of Fisheries Tanzania

4. The Director of Fisheries, Tanzania, Mr Geofrey Nanyaro, welcomed participants to Tanzania and thanked FAO for organizing the meeting. Mr Nanyaro urged participants to spend the opportunity to address the issues of the continuing declines of fish stocks and increases in fishing effort. He also advised participants to make use of the scientific information existing and to call upon managers to collaborate with researchers to find the best solutions on overcapacity in Lake Victoria. He wished participants successfully deliberations.

The Chairperson, Executive Committee of LVFO, and Director of Fisheries Kenya

5. The Chairperson of the LVFO Executive Committee, Mrs Nancy Gitonga, welcomed participants to the workshop and emphasized the need to work together for the sustainability of the Lake Victoria fisheries resources. She reminded participants that the three Partner States share the Lake and its resources and, therefore, they have to collectively face the realities about the state of the resources. She cited the decision to institute the slot size regulation by the Council of Minister in 2001 when signs of decline and harvesting of immature fish had become an apparent threat to the sustainability of Lake Victoria fisheries. She further informed participants that the effects of the implementation of the slot-size and other fishing capacity reducing efforts are encouraging and therefore, there was need for the scientists and managers to protect the increased numbers of juveniles. She urged for more effective management measures and need to take the right decisions.

6. The Chairperson acknowledged the efforts of different Development Partners, mentioning specifically the Implementation of the Fisheries Management Program (IFMP) project for Lake Victoria, funded by European Union (EU), to collaboratively manage the lake's resources. She

appreciated the progress of the project in establishing Regional Working Groups (RWGs) and developing Standard Operating Procedures (SOPs).

7. Mrs Gitonga requested Mr Odunga – Permanent Secretary for the Ministry of Natural Resources and Tourism, Vice-Chairman of the LVFO, Policy Steering Committee – to take note of the ongoing efforts in research and management and to convince other policy-makers on the importance of scientific finding for them to provide funds.

The Executive Secretary LVFO

8. The Executive Secretary of the LVFO, Mr Thomas W. Maembe, welcomed participants and emphasized the importance of Lake Victoria and the concerns, challenges and threats that the lake's fisheries resources and ecosystem have faced over time. He reiterated the shared desire for cooperation as the only way for the three countries sharing the lake to sustainably utilize the fish resources in the lake, noting that collaborative efforts are required to address a multitude of issues including biodiversity, habitat, and water quality; management issues such as the effects of increases in fishing pressure, destructive practices, and increasing effort on stocks, enforcement of fisheries regulations, the harvesting of immature fish, product quality; data issues of quality and coverage, including coverage of markets and trade; transboundary issues, including conflicts; societal issues including population growth, HIV/AIDS and other diseases such as malaria and bilharzias; and financial issues, including the need to strengthen a savings and investment culture amongst fish communities.

9. The Executive Secretary (ES) also presented the objectives of the organization and emphasized its role to ensure harmonized measures are coordinated and implemented regionally on fisheries matters in Lake Victoria. The ES listed the following achievements of the Organization in coordinating management of the fisheries resources in Lake Victoria:

- Developed and adopted Strategic Plan and developed a Fisheries Management Plan for Lake Victoria.
- Secured funds from EU to implement the Fisheries Management Plan.
- Adoption in 2004 of a Regional Plan of Action (RPOA)–IUU on Lake Victoria and its basin.
- Agreed and harmonized a number of management measures.
- Adopted the strategy to involve communities in management through the formation of Beach Management Units (BMUs) as a way of involving grassroots communities (stakeholders) in fisheries management.
- Developed Standard Operating Procedures (SOPs)for resource monitoring surveys and guidelines for the establishment of BMUs and conducting monitoring, control and surveillance (MCS) activities.
- Strengthening of the Institutional structure of the LVFO by establishing regional and national working groups (RWGs and NWGs) to address specific thematic issues.

10. The ES expressed his anticipation that the meeting would was to provide addition input on measures to be taken in addressing fishing effort and capacity. He urged every participant to take the issues very seriously and wished the workshop fruitful deliberations.

The FAO Representative in Tanzania

11. The FAO Representative Tanzania, Ms Louise Setshwaelo, welcomed all the participants, specially recognizing those coming from Kenya and Uganda. She reiterated the importance of fish to the community and for export in revenue and employment and as a source of protein within and abroad. She emphasized the need to take appropriate measure to ensure sustainable exploitation at any cost. She informed participants that the fish stocks appear to be fully exploited, with the exception of dagaa stocks, and thus the IPOA – Capacity needed to be observed.

12. Ms Setshwaelo reminded participants of the ongoing need for collaborative effort and noted that the political good will which existed even ten years ago when LVFO was formed should be exploited. She guaranteed participants of the FAO commitment to work together for the sustainability of the resources.

13. The FAO Representative also expressed her appreciation for the many and continuing efforts of the Fisheries Managers and Researchers for the implementation of fisheries management on the ground. She wished the workshop successful deliberations and expressed her expectations that recommendations for the way forward would be the output.

Official opening by the Permanent Secretary, Ministry of Natural Resources and Tourism, Tanzania

14. The Guest of Honor, the Permanent Secretary (PS), Ministry of Natural Resources and Tourism, Tanzania, Mr S. Odunga, welcomed participants to Dar es Salaam and to the workshop emphasizing the importance to address fishing effort on Lake Victoria. He thanked FAO for co-funding the workshop and its support in managing the fisheries resources of Lake Victoria.

15. The PS emphasized the need for sustainable utilization of the fisheries resources of Lake Victoria to ensure that it continues to be a source of food, employment and income at family and national levels and, in doing this, that the three countries continue their efforts to address the demands being put on Lake Victoria by increasing population, the need for foreign exchange, and increasing fishing pressure. In addition, he noted the development of aquaculture as an opportunity for generating income, alleviating poverty, and providing nutrition while potentially relieving some of the increasing effort on capture fisheries.

16. The Permanent Secretary urged the participants to determine optimum levels of catch and effort to produce optimal yields and economic benefits without affecting long-term production, and acknowledged the European Union (EU) funded implementation of the Fisheries Management Plan (IFMP) project for its support in gathering information on the resources and the development of management strategies for Lake Victoria.

17. In recognizing the extent of work done by the Riparian States and under the assistance of various development partners and donors such as FAO, the World Back and the EU to address environmental issues of Lake Victoria, the Permanent Secretary urged the Riparian States to redouble their efforts and actions to address environmental and pollution problems and to continue harmonizing and strengthening policies, legislation, and MCS activities.

18. The PS acknowledged the timely convening of the meeting and the participants' efforts to emphasize the sustainable utilization of renewable resources, increase food production to curb malnutrition, and promote income growth. He called upon the workshop to come up with proposals to be used by policy makers and planners to develop strategies and measures to sustainable utilize the fisheries resources of lake Victoria as way of leading to assured food supplies for future generations; improved food securing, hunger reduction and income growth; increased government revenue through taxes; and foreign exchange earning through fish exports. He re-emphasized the importance of encouraging cooperation, collaboration and partnerships between the countries to enable East Africans of both present and future generations to enjoy maximum socio-economic benefits. Wishing the participants fruitful deliberations, the PS officially opened the workshop.

Vote of thanks from the Commissioner for Fisheries, Uganda

19. The Commissioner for Fisheries Uganda, Mr Dick Nyeko, thanked the Permanent Secretary and assured him that the other Partner States were all enthusiastic to come up with a strategy to ensure sustainability of the fisheries resources on Lake Victoria. He also described the complexity of Lake

Victoria, a large lake with multiple fishery species and multiple micro habitats, and how these elements impact the lake in different ways. He reminded participants that the three States, as members of FAO, endorsed the FAO Code of Conduct for Responsible Fisheries and, thus, had an obligation to observe the code.

20. Mr Nyeko also talked about the complexity of externalities affecting fisheries, the differences in crafts/gears sizes and efficiency, and the complex governing system with different interests and objectives. The issues of property rights, who owns the fish, and how benefits should be shared were also raised. He urged that, for stocks that are distributed across the entire lake and that are migratory and straddle borders, lakewide optimum capacity and catches be determined so that the partner states could then apportion the catches amongst themselves and, subsequently, amongst local governments.

21. He emphasized the need to explore for alternative livelihoods such as aquaculture and cautioned about the need to have a human face when reducing or controlling effort because some fishers totally depend of fishing. In closing, he thanked FAO, the Permanent Secretary and the Government of Tanzania for warm welcome and looked forward to the successful deliberations of the workshop.

PLENARY PRESENTATIONS AND DISCUSSIONS

22. The plenary presentations and discussions that occurred on first day of the workshop are as follows:

Evolution of fishing effort and capacity around Lake Victoria: historical perspective

23. Mr Ssentongo, Fisheries Consultant, FAO Subregional Office for Southern and East Africa, presented a paper entitled *Evolution of fishing effort and capacity around Lake Victoria: historical perspective*. The paper highlighted fishing trends in early 1900s to 2005. The workshop was informed that there have been vital environmental changes which have affected fish distribution and magnitudes of catches. The rainfall and water level patterns have also undergone changes.

24. The paper covered the following areas:

(a) Criteria for regulation – Five broadly defined criteria were identified, as conservation, economic performance; social value (particularly equity); administrative feasibility and political acceptability.

(b) Conservation of fish stocks – It was emphasized that the most commonly recognized reason for the regulation of fishing effort is the need for conservation of fish stocks.

(c) Administrative feasibility and enforcement costs – The paper emphasized the need for regulating effort to ensure it is feasible and affordable.

(d) Political acceptability – It was noted that each riparian Government of Lake Victoria should address the issue of “can we afford it? In addition to financial means, consideration should be given to the erosion for a limited political base.

(e) Techniques for regulating fishing effort – The paper highlighted some of the options available for fisheries management and indirect methods of controlling fishing effort.

25. Mr Ssentongo noted several key elements of managing capacity, including the means to assess current levels of fishing effort and capacity; the means to identify desired level of capacity (the target capacity); and the types of mechanisms to move from the current fishing effort situation to the desired situation – and that these should be carried out by exploited stock and the type of fishery, like Nile perch and Rastrineobola.

26. After the presentation, the paper was discussed. It was noted that there is urgent need to update the information on the current status of Nile perch.

Kenya presentation: Management of fishing effort and capacity in the Kenyan sector of Lake Victoria

27. Mrs Nancy Gitonga, Director of Fisheries Department Kenya, presented a paper on "*Management of fishing effort and capacity in the Kenyan sector of Lake Victoria*" and pointed out that the fish stocks in Lake Victoria had been showing worrying declining trends as evidenced by the reduced catch per unit effort and increase in the landings of immature fish. The paper noted that increases in capacity do not necessarily increase production, citing the example when fish production in 2002 declined despite a 41 percent increase in number of fishers during the same year.

28. The paper showed that the transformation of the fishery from subsistence to commercial entrepreneurship came with challenges which include: conflicts over resource uses, unsustainable resource utilization; HIV/AIDS, increase in fishers' incomes not commensurate with improved livelihood; and the continued prevalence of poverty amongst the fisher communities.

29. The Kenya paper highlighted the factors contributing to increase in fishing effort, viz:
- (a) high demand for fish due to: growing population, export marketing demand health awareness in fish nutrition and fish as trade commodity;
- (b) open access fishing regime;
- (c) unsustainable fishing methods;
- (d) HIV/AIDS;
- (e) lack of alternative livelihoods;
- (f) tragedy of commons; and
- (g) fishing subsidies.

30. The paper pointed out the impact of increased fishing pressure on Lake Victoria fisheries and Kenya's effort to manage fishing capacity through new and participatory approach to fisheries management. The new approach include stakeholder involvement, increased effort in enforcement, implementation of slot size for harvesting and processing Nile perch, enactment of subsidiary legislation and promotion of fish farming for bait for the longline fishery. The results of these efforts are demonstrable by the apparent reduction of illegal fishing gears and methods and the increase in legal gears and methods.

31. The paper also pointed out the strengths, the weaknesses and the risks of the interventions to reduce the fishing capacity. Some of the strengths include the ongoing involvement of community through Beach Management Units (BMUs) in fisheries management and the signs of recovery as confirmed by the notable upsurge of Nile perch juveniles. The weaknesses and risks include the strategy to manage the increase in fishing capacity due to increasing number of motorized boats as fishers become empowered and also to manage the stocks recovery to avoid the juveniles becoming targeted for harvest.

32. The paper made recommendations on way forward towards reduction of capacity in Lake Victoria through a collaborative approach and suggested ways of sustaining the gains made through these efforts.

33. During discussions, the following points were emphasized:
- (a) There was need to determine the current capacity with the view to reducing it to sustainable levels.
- (b) The gains achieved by the reduction of capacity effort in Kenya notwithstanding, the meeting emphasized on the importance of putting in place strategies that would ensure sustainable utilization of the lake fisheries, taking cognizance of the continued increase in demand for fish.

Uganda presentation: Management of fishing capacity in Lake Victoria, Uganda

34. Mr Dick Nyeko, the Commissioner for Fisheries Uganda, presented a paper on *Management of fishing capacity in Lake Victoria, Uganda.* The paper showed the need to come up with an objective capacity measurement and formula for determining fishing effort. The need to balance sustainability with the objectives of maximum economic rent and maximum employment was also identified. It was suggested that that survey information should disaggregate fishing factors by a particular fishery and that bio-economic modelling for Nile perch fishery be done to support plans to manage capacity.

35. It was pointed out that the issue of optimum fishing in Lake Victoria (Uganda) is a perceived concern and that the International Plan of Action (IPOA) Capacity is being implemented voluntarily to meet the overall national objective of sustainable fisheries through precautionary approaches. It is recognized that the CCRF provides that Uganda should take measures to prevent or eliminate excess fishing capacity and ensure that the level of fishing effort are commensurate with sustainable use of fisheries resources.

36. The Workshop was informed that Uganda is committed to implementation of the CCRF within the context of wider national interest. The IPOA Capacity, *inter alia*, requires that where overcapacity is determined to undermine achievement of long-term sustainability outcomes, parties should endeavor initially to limit at present levels and progressively reduce the fishing capacity.

37. The participants were also informed that the available objective assessment of stocks for *Rastrineobola* indicates under capacity in the fishery and, thus, expansion of Ugandan capacity is feasible as part of achieving a long-term sustainable outcome and ensuring regional equity in the exploitation of *Rastrineobola.*

38. It was also pointed out that Uganda is yet to conduct a comprehensive national assessment of capacity and has no systematic system to monitor fishing capacity. Consequently, a National Action Plan to effectively manage fishing capacity is yet to be developed and implemented. In lieu of the fore-mentioned, precautionary approach is currently the guiding policy in ensuring sustainability objectives.

39. During the subsequent discussion, the following points were made:

(a) Fishing capacity in Uganda in relation to the area appeared to be less than in the other countries due to using low capacity fishing methods which limit exploitation to water of less than 20 metres deep.

(b) The drive for modernization of fishing fleets being pursued by Uganda to exploit offshore stocks, currently, not being utilized, in order to catch up with other countries raised concern as it might lead to further increase in overcapacity.

(c) The percentage of outboard engines in Uganda and Tanzania from Frame Survey results were noted to be higher than those of Kenya and Uganda.

(d) The controversies regarding the availability of food for Nile perch as reported by LVEMP international consultants were raised. The participants felt that the models used were not very appropriate as they assumed a steady state.

Tanzania presentation: Management of fishing effort and capacity in the Tanzanian sector of Lake Victoria

40. Mr Geofrey F Nanyaro, the Director of Fisheries Division, Tanzania noted in his presentation that most capture fisheries the world over including those of Lake Victoria were declining whereas the demand for fish was increasing as a result of growing populations and export trade. The paper suggested that fishery economics and biological fisheries monitoring should be integrated.

41. The presentation emphasized that responsible fisheries management requires that the evaluation of fishing capacity and analysis of fisheries information should be known and continuously

monitored. One of the major challenges of the Tanzania fisheries is to determine optimum levels of effort. The Tanzania fisheries sector has a number of constraints that hinder the analysis and evaluation of the fishing capacity in Lake Victoria. Some of the major constraints are the following.

(a) inadequate and untimely information on the Lake Victoria fish resource base;
(b) weak linkage between the Fisheries Department and Local Governments;
(c) inadequate capacity to carry out fisheries related responsibilities;
(d) inadequate fisheries data;
(e) lack of capital / financial resources;
(f) inadequate human resource for date collection; and
(g) lack of integration of various diverse social-economic, biological and ecological and environment.

42. The presenter identified the following issues:

(a) increased capacity which does not correspond to increased harvests;
(b) cross boarder issues;
(c) harmonization is not that good;
(d) (insufficient) recognition of communities in management of the fisheries;
(e) management taking precautionary approach due to inadequate data and information on the improved fishing methods;
(f) alternative livelihoods to release pressure;
(g) aquaculture to increase fish production and reduce effort on the lake;
(h) research to get the optimum allowable effort and catch;
(i) cross-boarder trades and issues relating to subsidies.

43. During the ensuing discussions the following issues emerged:

(a) The major constraints to availability of data are shortage of trained data collectors, shortage of qualified staff at local government level, conflict of interest for revenue collection and the Fisheries Division having no direct control or supervision.
(b) Lack of long term consistence series data for stock assessment to establish status.
(c) Integrating comprehensive CAS surveys and other stock assessment studies to establish the trends.
(d) Determining effect on recruitment due to fishing of juveniles and implementation of slot-size for Nile perch.
(e) Speeding up harmonization of sectoral and intersectoral policies legislations strategies.
(f) Development of alternative livelihoods in Lake Victoria basin including aquaculture production.

LVFO Presentation: Management of fishing effort and capacity on Lake Victoria

44. Dr Richard Ogutu-Ohwayo, Deputy Executive Secretary of LVFO, presented a regional perspective on the *Management of Fishing Effort and Capacity on Lake Victoria.* He provided information on the evolution of the fisheries and the trends in the catches of Nile perch and Dagaa fishery. He proposed that managing capacity is species specific and defined it as a combination of increase in inputs, capacity and yields. The paper also presented status and values of the fishing effort, summarized the current effort undertaken by the three riparian States and offered options for management of fishing effort and capacity on Lake Victoria. component of fishing effort. Options for management of fishing effort and capacity on Lake Victoria were also presented and the current efforts undertaken by the three riparian states summarized. The following observations were made:

(a) The major challenges on the lake are a relatively open access and the “Tragedy of Commons” where there is no spirit of ownership among those who exploit it. However, the involvement of communities through Beach Management Units (BMUs) is likely to help overcome this.
(b) The declines in catches are very clear and warrant raising an alarm and making a concerted effort to help prevent the collapse of fisheries because such resource collapses can occur very easily. There is a desire to protect that from happening, and

there is a need to find a collaborative strategy with actions to ensure these shared fisheries are sustainable and provide maximum benefits.

(c) The management of fisheries based solely on TACs should be discouraged and taken with caution as all the fisheries managed based simply on TACs and MSY have not been sustainable.

(d) Determining MSY for multispecies, multigear fisheries is not a simple task, and more availability of data has to be taken into account, as there are no data to come up with the appropriate models to guide decision making. In addition, scientists need to be assigned to synthesize the data and provide results that support management, and this would be facilitated if there were forums for researchers and managers to freely share information. Along these lines, it was noted that a team of experts from MRAG would review the data available for stock assessment and capacity measurement, and managers were requested to clearly define the objectives for such a study and the information required.

(e) A variety of externalities do have an impact on the fisheries and environmental factors likely play a key role in the sustainability of the fisheries. Thus multivariant analysis, including water levels, climatic changes, etc., is very important.

(f) The quantitative effects of joining nets – and the extent of the impact that this has on increasing effort – still has to be established.

(g) There was a general agreement that removing illegal gears should be part of the first step in controlling effort. Concurrently, managers should be aware of the socio-economic impacts of such management actions to ensure that gear regulations are successfully implemented and supported.

(h) The Workshop participants raised their concerns as to why investors might be trying to expand their output markets, their processing capacity, and putting up new factories when there are clear signs that the stocks are under pressure. To this end, there was a call to get data on the amount of fish be processed and the factors driving processors to invest in the industry.

IFMP Project presentation: Experience and lesson learning from a controlled lake in the EAC

45. Dr Jim Scullion, Project Manager, Implementation of a Fisheries Management Plan (IFMP) Project, made a presentation about the controlled access regime on Lake George in Uganda which is currently implemented by three districts involving communities using a co-management approach.

46. The presentation followed the historic trends in the fishing of the main fish stock, Nile tilapia, including that of overfishing and the progression of illegal and legal measures taken by fishermen to compensate for the declining stock – the use of more nets per boat (illegal), more boats (illegal), smaller meshed gillnets (illegal), the doubling the depth of nets (illegal), the pursuit of active not passive fishing (illegal), and targeting other species (e.g. lungfish and catfish by gillnets and longlines [illegal]). Dr Scullion noted that such illegal fishing was rarely driven by poverty, per se; instead, it was generally more profitable, could provide a source of income for local leaders in communities, and could provide a source of income for government officers by means of bribery and corruption.

47. The presentation also described the historic management responses on Lake George which were based on a top-down, command-and-control approach (with little involvement of communities) with centrally made complex rules (The Fish Act and Fisheries Regulations) that were imposed on fishers and enforced by centrally controlled officers who had little accountability. Notably, there were no local fisheries management institutions, no fisheries management plan(s), little involvement or interest by local governments, and the fisheries information collected was poor and based on sporadic project inputs.

48. The presentation emphasized how this has changed with the adoption and implementation of a participatory co-management approach involving local communities. The decentralized governments have gained increasing power and autonomy, a national fisheries policy and sector plan developed,

and there has been institutional reform with macro-meso-micro linkages between the Uganda Fisheries Authority (UFA), Local Management Organizations (LMOs), and Beach Management Units (BMUs). In addition, fiscal reform has been initiated which allows for ploughing fisheries revenue back into fisheries management and development and thereby ensuring financial sustainability to management institutions, community-based fisheries information has been set up without any payment made to data collectors with BMUs' support, and participatory access control has been introduced through licensing.

49. All this was supported by a revised and updated Fish Act – the Fisheries Bill – empowering co-management; regulations and guidelines empowering communities (BMUs) as partners to government in co-management and delegating licensing authority to districts, and – after consultations – amendments to various regulations regarding fishing effort, size/age at capture, and the size of fishing vessels.

50. Whilst noting that there were key differences between Lake George and Lake Victoria – notably, the size of lakes, the number of dependent people, value of fisheries, the international nature of shared stocks, the existence of exotic commercial species, Nile perch, as a foreign exchange fishery with private industry as a strong stakeholder – there were similarities in national policies, laws, regulations, co-management; the current institutional framework, including BMUs and LMO; threats to, and impacts on, fish stocks; and poor governance issues.

51. He concluded with the following "Lessons for Lake Victoria":

(a) Controlling access and effort is multidimensional task involving strategic policy, legislative and institutional changes and needing improved governance.
(b) Development support: Donor support is required to drive the change process until sustainability of management institutions attained, and it takes time to achieve, e.g. LAGBIMO.
(c) Need an ecosystem approach to management – this requires national LMOs as part of LFVO – actions needed on this in 2006.
(d) Need effective management institutions at local levels to help put into practice laws and licensing systems; the latter alone do not guarantee sustainable resource use - actions needed on this with BMUs in 2006.
(e) Policy decisions needed on key management aims relating to distribution of access rights and share of benefits, e.g. foreign exchange, poverty reduction, employment and livelihoods.
(f) Need to update Fisheries Management Plan to include clear management objectives and set out roles and mandates of management institutions at all levels.
(g) Need to update LVFO Strategic Vision to incorporate access and effort issues.
(h) Need to apply the Precautionary Principle to take action now based on best available information to protect threatened fish resources e.g. Nile perch; refine management decisions as more information obtained.
(i) Need to identify and agree what information should be delivered to managers to show there is problem of too much effort (illegal and legal).
(j) Use licensing as a management tool; amend and harmonize national licensing regulations.
(k) Use fisheries licensing (boats and crew) a management tool to regulate access in a participatory manner involving BMUs.
(l) Use licensing as a means to reduce poverty and empower women – introduce vessel license allocations for fishing crew and women.
(m) Develop a harmonized transparent licensing system based on application forms, selection criteria and clear procedures.
(n) Use the 2006 Frame Survey and BMU registers to provide a starting point to fleet licensing.
(o) Consider licensing systems for target species.
(p) Develop incentives for positive change in controlling or reducing illegal effort, e.g. reward high performing BMUs.

52. The plenary was also presented with lessons learned from Lake Naivasha in Kenya, where similar trends as those of Lake George, with regard to overexploitation had occurred and where subsequent participatory management decisions had turned the fishery around. In the case of Lake Naivasha, the overfishing caused by both legal and illegal fishers, led to depletion of stocks. This occurred despite presence of the Department of Fisheries enforcement officers due to management of the fishery through command and control with no resource user participation, in the decisions, surveillance, enforcement or licensing. Due to lack ownership by the fishing community, the scarcity of fish stocks led to excessive use of illegal undersize nets, even by licensed fishers. By 2000, the stocks had been depleted so much that many fishers voluntarily stopped fishing in Lake Naivasha and left as they were unable to make a living out of the fishing activity. Overfishing on the scanty available resources still continued.

53. This state of unsustainable fishing was ultimately addressed through initiation of stakeholder participation in the management of the lake fishery, before it caused total collapse of the Lake Naivasha fishery. Criteria to reduce the number of fishers operating in Lake Naivasha was thus developed through a participatory approach and consequently only fishers who demonstrated that they were full time fishers were allowed, to continue fishing after 6 months closure of the lake to allow recovery. Only 43 out of 130 boats were allowed back into fishing using criteria so developed and because the stakeholders were involved in the process, controlled access was achieved and overcapacity was successfully addressed, though challenges still remain. The stakeholders adopted a four months closure of the lake every year, which they have implemented since 2001, and the government assisted with legal framework to enforce their decision.

FAO presentation: People and managing fishing capacity, a global overview

54. Dr Rebecca Metzner, Fisheries Analyst, FAO, Rome, presented the paper *A global overview of capacity management*. The presentation described the three categories of tools available to manage fishing capacity; namely, those that alter, indirectly affect or directly impact capacity.

55. Tools that only indirectly alter capacity include closures (including protected areas) and buyouts. These cause displacement, efficiency changes and force fishers to be "innovative". Command and control management measures ultimately cause capacity to increase, whereas incentive adjusting measures such as territorial user rights, community development quotas, individual fishing quotas and individual transferable quotas have the potential to inspire stewardship through the proprietorship they offer to communities and fishers. Because all fisheries are different, a combination of measures packaged for the fishery or fisheries in question is typically needed to manage capacity.

56. Dr Metzner noted that it is important to be proactive to address fishing capacity issues before they become critical in terms of sustainability, politically unpalatable, and conflict-laden, and that managing capacity is about understanding and managing people. Hence, it is important to address the matter of capacity management using a combination of community-based, user rights based, and co-management approaches.

57. The ensuing plenary discussion noted that the experiences in Lake George regarding controlled access almost turned the fisheries into family/clan or sole ownership sort of fishery. Nonetheless, it was encouraging to learn from other water bodies that it is possible to control effort, and thus this emphasizes the importance of starting dialogues about capacity and effort in Lake Victoria. Participants also recognized the importance of making decisions with less than perfect information instead of waiting to have extensive research programs generating information. There was also a brief discussion about poverty, the differences between maximizing catch (which does not necessarily maximize economic benefits) and maximizing profits, but in doing so, the social, compliance, and stock impacts of capacity and other management measures do have to be evaluated.

FACILITATED PLENARY DISCUSSIONS

58. The FAO facilitator wanted to gauge the expectations of the workshop from the participants. During the ensuing discussions and interventions, the following points emerged:

(a) It is important to have agreed objectives for the fisheries management of Lake Victoria.

(b) There is clear recognition that capacity is critical issue and, indeed, that Lake Victoria has sufficient capacity; that it would be good to have a vision of what the participants want to achieve with regard to capacity management; and, that there is a strong desire to develop a Regional Plan of Action (RPOA)–Capacity for Lake Victoria.

(c) There should be a clear process to develop capacity management plan for Lake Victoria, with a single definition of capacity to use for Lake Victoria, criteria for solving problems of fishing and capacity, specific guidance to address species-specific capacity levels as well as a global capacity level for Lake Victoria fisheries, and a path for assessing capacity that includes a strategy and timelines.

59. The Chairperson, Mrs Nancy Gitonga, reiterated the key issues from the speech of the Permanent Secretary and also from the discussions of the various papers presented. The key issues included, need for data, structured human resources management program, fishing community empowerment.

Key issue of concern and agreed action

60. On the basis of presentation and discussions made at the Workshop, the participants identified key items and issues of concern as well as actions to address them. These are outlined in paragraphs 61 to 72 which follow.

61. There is agreement on the need for fishing capacity management for the different species especially for *Lates, Rastrineobola* and Tilapias.

Action: LVFO qualitatively and/or quantitatively determine the existing capacity for these species *with a priority on Lates*.

62. MCS is ongoing around Lake Victoria.

Action: LVFO to determine and improve additional objective verifiable indicators (OVIS) for measuring the success of the MCS programme. LVFO to develop terms of reference for impact assessment studies of MCS activities and compliance.

63. Different subsidies exist and need to be addressed.

Action: LVFO with the assistance of FAO to identify categories of subsidies related to fisheries and their impacts on capacity.

64. Cross border issues exist.

Action: LVFO to continue working with riparian countries to enhance and follow-up on this issue.

65. The involvement of the resource users including BMUs is critical for successful programs and especially for the capacity management.

Action: LVFO to continue and expedite programmes in place for the formation, empowerment and licensing activities of BMUs; and LVFO to evaluate the impacts of BMUs on fishing capacity.

66. Alternative livelihoods are needed as part of the management package.

Action: LVFO to expedite work on existing alternative livelihoods programs and to assess potential to move to alternative forms of fishery livelihoods.

67. Research should be demand-driven and should guide management in a timely manner.
Action: LVFO to coordinate information exchange and timeliness of research delivery to management for decision making.

68. Data collation, synthesis and analysis are needed to identify and address current gaps and to determine data usable for management and decision making.
Action: LVFO to put together a team to look at available data and to determine a practical package of data and indicators for decision makers and fisheries managers.

69. Empowerment in better fishing facilities is essential, but will it affect capacity?
Action: LVFO to evaluate the impacts of empowerment.

70. Need to address the fisheries industry supply side and externalities
Action: LVFO to strength linkage with Partner States and respective Ministries to support this.

71. Expedite implementation of harmonized legislation.
Action: LVFO to examine legislation on licensing, licensing system royalties, to determine adequacy in terms of incorporating BMUs in such systems. Also, to establish national and regional databases using information derived from BMUs and Local Governments on the numbers of licensed fishing vessels, fishermen, fish traders and fish processors.

72. Develop a framework of action for Lake Victoria.
Action: LVFO to fine-tune the elements of a draft RPOA–Capacity.
Action: LVFO, in consultation with FAO, to determine a timetable for producing a report for the RPOA–Capacity; Task Force to be established in January and meet at monthly intervals, with IFMP support, to develop a draft RPOA–Capacity; hold a Regional Workshop to review the draft RPOA–Capacity in April in time for adoption by the Council of Ministers in May 2006.

DISCUSSION ON THE DEVELOPMENT OF A RPOA–CAPACITY

73. It was agreed that a Regional Plan of Action (RPOA) for capacity management should be developed for the fisheries of Lake Victoria, based on the International Plan of Action for the Management of Fishing Capacity.

74. It was suggested that simpler issues should be focused on, such as "Why Lake Victoria fisheries need to be managed?" and "How do we consider whether there is overcapacity?" because once there is clarity on management objectives, the issues of capacity and effort can be more readily examined. There was much discussion on whether the management objectives in the Lake Victoria Fisheries Management Plan are clear. It was agreed that the three States have their respective policies, with objectives, but that these need to be brought together, harmonized and clarified for capacity management.

75. It was noted that it had already been agreed that capacity is an issue that needs to be addressed, and it was agreed that a framework for a RPOA would be developed by the participants.

Regional Plan of Action (RPOA)–Capacity

76. The following categories of components of a potential RPOA–Capacity were identified from contributions by the participants:

(a) RPOA–Capacity vision: Clear vision and strategies needed; guidance on the contents of NPOAs to be developed.

(b) RPOA–Capacity objectives: Clear, specific management objectives needed, which may include sustainability, conservation, prevention of overfishing and regeneration of stocks.
(c) Approach to management: co-management and empowering local communities through BMUs.
(d) Roles and responsibilities of stakeholders/institutions: need to be clearly stated.
(e) Management tools: limited access, controlling capacity and fishing effort, and consolidation of fish factories.
(f) Schedule: Implementation plan needed with time frame.
(g) Externalities to consider: for example, decreasing water levels.
(h) Financing: budget needs to be developed for plan, with identification of funds.
(i) Support – legal: harmonization of policy, compliance with legislation.
(j) Support – data: assessment/modelling of capacity – species specific; scientific and socio-economic information needed.

Development of the RPOA–Capacity Vision

77. Expanding on one of the priority areas for action, workshop participants developed guidance regarding the key elements and components of the framework Vision, Mission, Strategy and Principles of a RPOA–Capacity for Lake Victoria. The components were summarized as:

(a) **Sustainable productivity** that is poverty focused, supports community empowerment, and provides equitable socio-economic benefits.
(b) **Sustainable capacity** which optimizes benefits and effort.
(c) **Optimum fishing capacity** to ensure sustainable yields that are equitably utilized and distributed.

78. The **Vision** for the RPOA–Capacity is: *A sustainably exploited fishery accruing sustainable benefits for wealthy and healthy communities enjoying better standards of living through equitable resource utilization, poverty-focused capacity management and empowered stakeholders.*

79. The key elements of the **Mission** entail: *Managing fishing capacity to prevent, deter, and eliminate overfishing and over capitalization for the sustainable exploitation of the fisheries of Lake Victoria.*

80. The **Strategy** for effecting this vision and mission is that: *This will be achieved by determining and setting quantifiable monitorable optimal capacity levels that are sustainable to optimize benefits without depleting resources and species-specific for the three major commercial species.*

81. These endeavours will be based on the **Principles** that: *The setting of optimum fishing capacity that is sustainable will be commensurate with the resource base and ability to reproduce, based on the state of the available resources, allow for maximum/optimum capacity, and equitably distributed amongst the Partner States.*

82. The development of the RPOA–Capacity entails **Action** whereby *the vision will be supported by an Implementation Plan–Capacity and NPOAs–Capacity for the Lake Victoria resources of the respective Partner States.*

Development of the RPOA–Capacity framework

83. The workshop participants developed management objectives for the RPOA–Capacity framework. These were categorized as:

(a) major objective – sustainable fisheries under co-management and empowerment of communities to manage capacity; and
(b) specific *objectives* – determination of capacity levels for the different fisheries.

84. These objectives coincided favourably with the LVFO Fisheries Management Plan objectives, which are: food security for riparian communities, foreign exchange earnings for the three countries, improved standard of living in fisheries communities, and employment opportunities in riparian countries.

85. For managing capacity, the participants suggested using approaches and tools such as:
(a) community based fisheries management which establishes user rights through BMUs and licence limits on boats and fishers as well as utilizes territorial user right systems (TURFS) at the district or BMU level;
(b) effective collaborative resource management capitalizing on incentive frameworks that encourage BMUs to reduce IUU fishing;
(c) limited entry determined via participatory processes as well as limits on gear, fishing times, and areas; size limits; and the regulation of processing factories;
(d) individual "effort quotas" and "catch quotas" for processing plants; and
(e) consideration of alternative livelihoods and external risks.

THE WAY FORWARD

86. The participants iterated the next steps they wished to see in the development of a RPOA–Capacity, and the Partner States requested the LVFO Secretariat and FAO to assist Riparian States to chart the way forward.

87. Uganda reiterated concerns about capacity on Lake Victoria and commented that a RPOA–Capacity would provide a plan and means to manage capacity – first for Nile perch and then, subsequently, for other species. Uganda agreed that a small technical group should be formed to work on the RPOA–Capacity and noted that some inputs on the Vision, Mission, Strategy, Principles and Actions should be made to guide the working group in drafting the RPOA. Uganda believes that IPOA states the roles and responsibilities of Parties, including FAO, and that FAO should provide technical guidance and support in the development of the RPOA–Capacity.

88. Kenya noted that there is need to tackle issues of capacity and taskforce should be formed and should have members from the three Partner States. Kenya also noted that we need to use models on capacity which we can apply to Lake Victoria. It is hoped that timelines should be set with regard to the development of the RPOA.

89. Tanzania suggested that it was the right time to form the task force to crystallize the issues and bring them together and, so, the LVFO should constitute a taskforce composed of members of the Partner States. A request was made to LVFO and FAO to provide guidance on the processes and next steps, and that the Riparian States should be kept appraised on the work done by the Task Force. It was also proposed that timelines with regard to the development of the RPOA–Capacity be set and adhered to.

90. The LVFO Secretariat expressed that it should be possible to have a RPOA–Capacity for adoption by the LVFO Council of Ministers' meeting in May 2006, and the Partner States were in agreement with the LVFO suggestion that the opportunity to adopt the RPOA–Capacity in May 2006 should not be missed because Council of Ministers meets once in every two years. LVFO will consult with Member Countries and FAO on the path and timetable to develop the RPOA–Capacity before the LVFO Council of Ministers meeting.

ANY OTHER MATTERS

91. No other matters were raised.

DATE AND PLACE OF THE SECOND REGIONAL TECHNICAL WORKSHOP

92. It was agreed that a Regional Workshop to review the draft RPOA–Capacity be held in April 2006 in good time for its adoption by the Council of Ministers in May 2006.

93. The exact venue and date will be determined by LVFO in consultation with the FAO of the United Nations.

ADOPTION OF THE REPORT OF THE WORKSHOP

94. This report was adopted on 14 December 2005 at the Dar es Salaam International Conference Centre, Dar es Salaam, Tanzania.

APPENDIX A. WORKSHOP AGENDA

Monday, 12 December 2005

<u>Morning, 08.30 hours</u>

Registration

<u>Morning, 09.30 hours</u>

1. Opening of the Session

10.30 hours Coffee break

2. Election of Chairperson and Vice-Chairperson
3. Adoption of the Agenda and Arrangements for the Session
4. Evolution of Fishing Effort and Capacity around Lake Victoria, a Historical Perspective (FAO, Harare)
5. Management of Fishing Effort and Capacity in the Kenya Sector of Lake Victoria (Kenya)
6. Management of Fishing Effort and Capacity in the Tanzania Sector of Lake Victoria (Tanzania)

12.30 hours Lunch break

<u>Afternoon, 14.00 hours</u>

7. Management of Fishing Effort and Capacity in the Uganda Sector of Lake Victoria (Uganda)
8. Management of Fishing Effort and Capacity around Lake Victoria (LVFO)

15.30 hours Coffee break

9. Lessons Learned from a Lake with controlled effort and Access within the East African Community (EAC) Region (IFMP/ LVFO)
10. Management of Fishing Effort and Capacity, a Global Overview (FAO, Rome)

Tuesday, 13 December 2005

<u>Morning, 08.30 hours</u>

11. Working Groups and Discussions in the Plenary

1030 hours Coffee break

Discussions in the plenary continuing

12.30 Lunch break

<u>Afternoon, 14.00 hours</u>

12. Formulation of Recommendation on the Way Forward
13. Any other matters for Future Action
14. Date and Place of the Second Regional Technical Workshop

15.30 hours Coffee break

15 Drafting of the Workshop Report (Secretariat)

Wednesday, 14 December 2005

<u>Morning, 08.30 hours</u>

16. Preparation and Finalization of the Workshop Report

12:30 hours Lunch break

<u>Afternoon, 14.00 hours</u>

17. Adoption of the Report

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APPENDIX C. OPENING STATEMENT

Opening speech by Mr Salmon Odunga, Permanent Secretary for the Ministry of Natural Resources and Tourism, Tanzania

The FAO Country Representative; Directors of Fisheries Kenya and Tanzania; the Commissioner for Fisheries Uganda; the Directors General for Fisheries Research Institutes of Kenya, Tanzania and Uganda; the Executive Secretary for Lake Victoria Fisheries Organization; FAO Technical Team, Dr Rebecca Metzner and George Ssentongo; Members of the Executive Committee of Lake Victoria Fisheries Organization; Fisheries Experts; Invited guests; Ladies and Gentlemen.

I am greatly honoured to welcome you to this important event in our Region; the Regional Technical Workshop for Lake Victoria aimed at addressing the fishing effort and capacity on Lake Victoria. I say KARIBUNI SANA.

Indeed, it gives me great pleasure to officiate the opening of this important technical workshop on the sustainability of the fisheries resources of Lake Victoria. May I also on behalf of the Government, people of Tanzania and the Ministry of Natural Resources and Tourism, take this opportunity to express our sincere appreciation to all the participants for sacrificing your valuable time to participate in this very valuable occasion. It is indeed an honour and privilege for us to host you.

At the outset, I wish to express my profound gratitude to FAO for co-financing this regional workshop. This is a clear indication of the commitment of the organization towards the development of sustainable utilization of the fisheries resource of Lake Victoria, which is a source of food, employment, and income at family and national levels.

Chairperson and distinguished delegates

We are all gathered here to discuss issues that affect the life and the environment of Lake Victoria. It is worth noting that Lake Victoria is an endowment to East Africa that boasts as the largest freshwater lake in Africa, second largest on earth and offers the highest freshwater fish production in the continent. The Lake supports livelihoods of more than 30 million people living in its catchment, rich biodiversity, water resource and modulates the regional climate. Also the lake boasts of fish estimated to be around 500 000 metric tonnes annually, valued at about US$600 million locally and exports estimated at US$270 million in 2004. I must hasten to say that the fish stock figure is disputed. Please validate it.

Chairperson and distinguished delegates

Available information indicates that human population the world over has been on the increase. This has necessitated a corresponding increase in demand for fish as food worldwide. As a result of this plus the demand for foreign exchange, fishing pressure on the capture fisheries of the whole world has ever been on the increase and this is particularly significant in Lake Victoria.

Chairperson and distinguished delegates

As regards livelihoods, and from statistics available, the number of fishers in Tanzania has more than doubled in less than 15 years from 29 095 (1990) to 77 997 (2004). Over the same period, the number of fishing vessels did increase about 3 times from 7 797 to 22 653. The weight of fish caught in the same period however, has remained almost constant. This indicates a decline in the fish stocks of the lake. Indeed catch per unit effort specifically in Nile perch has gone down drastically in Tanzania both in quantity and in size. I attended the Regional Stake holders Conference on the State of the Fisheries of Lake Victoria held in Entebbe, Uganda, on 24-25 February this year. In this meeting it was very clearly stated by various speakers from the three countries that globally, over the last decade there has been uncontrolled increase in fishing with no commensurate increase in catch for Nile perch. This is a clear indication that there is need for a joint effort to deliberately come out with joint strategies that will address this situation. This is the reason why we are all here today to address the issue as "Lake Victoria fisheries, *three managers in one"*.

Chairperson and distinguished delegates

Based on the evidence of increased fishing pressure in many parts of the Lake, it is inevitable to develop other ways of earning life through alternative means other than fishing in Lake Victoria basin. Whereas various livelihoods can be applicable in the Lake Victoria basin community, high hopes are placed on aquaculture as a solution to address the shortfall in the harvests from capture fisheries relative to the expanding human population. The development of aquaculture could offer an opportunity for income generation through employment in fishing, fish processing and fish trade. In addition, it can contribute to reducing poverty, as well as the improvement of the nutritional status of the people, especially in rural areas, by providing affordable protein food.

Chairperson and distinguished delegates

Besides aquaculture as an alternative livelihood to the lake community, crop production, animal husbandry, small scale industries, agroforestry, handcrafting, only to mention a few, are all alternative livelihoods that can be developed in the basin.

Chairperson and distinguished delegates

We are all aware that "information is power". For fish resource, we need to be able to determine the optimum level of effort that produces the maximum yield that can be sustained without affecting the long-term production. To achieve this goal, the fisheries experts should have all the necessary inputs to enable them to collect data, process them, and above all be able to timely disseminate the information to the consumers. I am aware that the EU has been supportive in this area and I wish to applaud their contribution. More support is however needed to build capacity for proper management of the fishery resource of the Lake.

Chairperson and distinguished delegates

The life of a fishing industry starts from the egg of the fish. This egg needs a conducive environment to grow and reproduce, I am told, up to millions of fish, which then make the industry. That conducive environment means a "fish world" that has minimum tolerable levels of pollutants, and other externalities that are threats to the fish life. Lake Victoria is faced with pollution problems resulting from human activities including dumping of untreated waste water from the industries around the Lake's catchment. It is our duty as riparian states to take appropriate actions to address this situation. I realize much has been done to address the environment of the Lake Victoria by the Riparian States themselves and also under the assistance of various development partners and donors such as FAO, World Bank, European Union. However, more efforts and measures to address the situation are required.

Chairperson and distinguished delegates

We have realized that for success, we need to have in place appropriate legislation and sound law enforcement. The Lake Victoria fishery is lucrative not only to the region but also the export market outside the region. This makes the resource susceptible to overutilization. To deal with the situation, the riparian Governments have to come out with a joint effort to protect this resource by designing harmonized policies and legislation.

Chairperson and distinguished delegates

Tanzania like other partner states, in the region faces increase of illegal fishing and fish trade in the region. Following this situation, the Government has strengthen measures to curb illegal fishing and fish trade through various ways including strengthening of surveillance in Lake Victoria by establishing surveillance units in all the three regions namely Mwanza, Kagera and Mara. I believe that our partners are doing the same. However, the current efforts towards a sustainable management of the Lake will bring quick results if we, the Riparian States stand together firmly to implement them while cooperating with the other development partners as well as the communities around the lake.

Chairperson and distinguished delegates

This workshop has come at the right time when countries are taking measures to emphasize the sustainable utilization of renewable natural resources, increase food production to curb malnutrition and promote income growth. I count on this workshop to come up with proposals to be used by policy makers and subsequently planners to develop strategies on measures that will lead to sustainable utilization of the fisheries resource of Lake Victoria. The sustainable utilization will lead to:

- assured food supply through generations;
- improved food security, hunger reduction, and income growth;
- increased government revenue through taxes;
- supply of foreign currency through fish export.

Chairperson and distinguished delegates

In conclusion, may I reiterate that in order to achieve sustainable development of Lake Victoria fisheries, the experts gathered here to day should as usual act as the nucleus for encouraging cooperation and collaboration between our countries to enable East Africans derive maximum benefit for both present and future generations. I urge that the final product of this workshop should enhance our socio economic well being and political partner ship and therefore with the workshop fruitful deliberations.

Chairperson and distinguished delegates

With these few remarks it is my pleasure to declare the workshop officially opened.

KARISUNI SANA
Thank you for your attention.

APPENDIX D. FAO INTERNATIONAL PLAN OF ACTION FOR THE MANAGEMENT OF FISHING CAPACITY

Introduction

1. In the context of the Code of Conduct for Responsible Fisheries and its overall objective of sustainable fisheries, the issues of excess fishing capacity in world fisheries is an increasing concern. Excessive fishing capacity is a problem that, among others, contributes substantially to overfishing, the degradation of marine fisheries resources, the decline of food production potential, and significant economic waste.

2. The Code of Conduct provides that States should take measures to prevent or eliminate excess fishing capacity and should ensure that levels of fishing effort are commensurate with sustainable use of fishery resources.

3. At its last Session in 1997, the Committee on Fisheries (COFI), requested FAO to address the issue of fishing capacity. FAO organized a Technical Working Group on the Management of Fishing Capacity in La Jolla, USA, from 15 to 18 April 1998. A subsequent FAO consultation was held in Rome from 26 to 30 October 1998, preceded by a preparatory meeting from 22 to 24 July 1998.

PART I - NATURE AND SCOPE OF THE INTERNATIONAL PLAN OF ACTION

4. The International Plan of Action is voluntary. It has been elaborated within the framework of the Code of Conduct for Responsible Fisheries as envisaged by Article 2 (d). The provisions of Article 3 of the Code apply to the interpretation and application of this International Plan of Action and its relationship with other international instruments.

5. This document is in furtherance of the commitment of all States[1] to implement the Code of Conduct. States and regional[2] fisheries organizations should apply this document consistently with international law and within the framework of the respective competencies of the organizations concerned.

6. The International Plan of Action constitutes an element of fishery conservation and sustainable management.

PART II - OBJECTIVE AND PRINCIPLES

7. The immediate objective of the International Plan of Action is for States and regional fisheries organizations, to achieve worldwide preferably by 2003, but not later than 2005, an efficient, equitable and transparent management of fishing capacity. *Inter alia*, States and regional fisheries organizations confronted with an overcapacity problem, where capacity is undermining achievement of long-term sustainability outcomes, should endeavour initially to limit at present level and progressively reduce the fishing capacity applied to affected fisheries. Where long-term sustainability outcomes are being achieved, States and regional fisheries organizations nevertheless need to exercise caution to avoid growth in capacity undermining long-term sustainability objectives.

8. The above objective may be achieved through a series of actions related to four major strategies:

> i. the conduct of national, regional and global assessments of capacity and improvement of the capability for monitoring fishing capacity;

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[1] In this document, the term “State” includes Members and non-members of FAO and applies *mutatis mutandis* also to “fishing entities” other than States.
[2] In this document, the term “regional” includes sub-regional, as appropriate.

ii. the preparation and implementation of national plans to effectively manage fishing capacity and of immediate actions for coastal fisheries requiring urgent measures;
iii. the strengthening of regional fisheries organizations and related mechanisms for improved management of fishing capacity at regional and global levels;
iv. immediate actions for major transboundary, straddling, highly migratory and high seas fisheries requiring urgent measures.

These strategies may be implemented through complementary mechanisms to promote implementation of this international Plan of Action: awareness building and education, technical cooperation at the international level, and coordination.

9. The management of fishing capacity should be based on the Code of Conduct for Responsible Fisheries and take into consideration the following major principles and approaches:

i. *Participation*: The International Plan of Action should be implemented by States either directly, in cooperation with other States, or through FAO in cooperation with other appropriate intergovernmental organizations, including regional fisheries organizations. States and regional fisheries organizations, as appropriate, are encouraged to give effect to it and to inform FAO of actions taken to implement it. FAO will regularly provide information about its implementation.

ii. *Phased implementation:* The management of fishing capacity on the basis of national and regional plans should be achieved through the following three phases: assessment and diagnosis (preliminary analysis to be completed by the end of 2000), adoption of management measures (preliminary steps to be adopted by the end of 2002) and periodic adjustment of such assessment and diagnosed measures, as appropriate. States and regional fisheries organizations should complete these steps and progressively implement by 2005 the complementary measures specified in the International Plan of Action.

iii. *Holistic approach:* The management of fishing capacity should consider all factors affecting capacity in both national and international waters;

iv. *Conservation:* The management of fishing capacity should be designed to achieve the conservation and sustainable use of fish stocks and the protection of the marine environment consistent with the precautionary approach, the need to minimize bycatch, waste and discard and ensure selective and environmentally safe fishing practices, the protection of biodiversity in the marine environment, and the protection of habitat, in particular habitats of special concern.

v. *Priority:* Priority should be given to managing the fishing capacity in those fisheries in which there already unequivocally exists overfishing;

vi. *New technologies:* The management of fishing capacity should be designed so that it takes into account the incorporation of environmentally sound and evolving technology in all areas of capture fisheries.

vii. *Mobility:* The management of fishing capacity should encourage efficient use of fishing capacity and discourage mobility when it negatively affects sustainability and take due account of socio-economic performances in other fisheries;

viii. *Transparency*: The International Plan of Action should be implemented in a transparent manner in accordance with Article 6.13 of the Code of Conduct.

10. The implementation of the International Plan of Action should be based on the Code of Conduct, particularly Article 5, in relation to enhancing the ability of developing countries, to develop their own

fisheries as well as to participate in high seas fisheries, including access to such fisheries, in accordance with their legitimate rights and their obligations under international law.

PART III - URGENT ACTIONS

Section I: Assessment and monitoring of fishing capacity
Measurement of fishing capacity

11. States should support coordinated efforts and research at national, regional and global levels to better understand the fundamental aspects of issues related to the measurement and monitoring of fishing capacity.

12. States should support the organization by FAO of a technical consultation to be held as early as possible in 1999 on the definition and measurement of fishing capacity and the subsequent preparation of technical guidelines for data collection and analysis, noting that the result of this consultation should provide specific guidance for preliminary assessments of fishing capacity and excess fishing capacity at national, regional and global levels.

Diagnosis and identification of fisheries and fleets requiring urgent measures

13. States should proceed, by the end of 2000, with a preliminary assessment of the fishing capacity deployed at the national level in relation to all the fleets of principal fisheries and update this assessment periodically.

14. States should proceed, by the end of 2001, with the systematic identification of national fisheries and fleets requiring urgent measures and update this analysis periodically.

15. States should cooperate, within the same time frame, in the organization of similar preliminary assessments of fishing capacity at the regional level (within the relevant regional fisheries organizations or in collaboration with them, as appropriate) and at the global level (in collaboration with FAO) for transboundary, straddling, highly migratory and high seas fisheries, as well as in the identification of regional or global fisheries and fleets requiring urgent measures.

Establishment of records of fishing vessels

16. States should support FAO in the development of appropriate and compatible standards for records of fishing vessels.

17. States should develop and maintain appropriate and compatible national records of fishing vessels, further specifying conditions for access to information.

18. While awaiting the entry into force of the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement), States should support the establishment by FAO by the end of 2000 of an international record of fishing vessels operating in the high seas, following the model indicated in the Compliance Agreement.

Section II: Preparation and implementation of national plans
Development of national plans and policies

19. States should develop, implement and monitor national plans of action for managing fishing capacity, taking into account, *inter alia,* the effect of different resource management systems on fishing capacity.

20. States should develop the means to monitor fishing capacity systematically and accurately, and to regularly assess any imbalance with available fishery resources and management objectives.

21. States should develop, adopt and make public, by the end of 2002, national plans for the management of fishing capacity and, if required, reduce fishing capacity in order to balance fishing capacity with available resources on a sustainable basis. These should be based on an assessment of fish stocks and giving particular attention to cases requiring urgent measures and taking immediate steps to address the management of fishing capacity for stocks recognized as significantly overfished.

22. States should give due consideration, in the development of national plans, to socio-economic requirements, including the consideration of alternative sources of employment and livelihood to fishing communities which must bear the burden of reductions in fishing capacity.

23. When it has been found that a national plan to manage capacity is not necessary, States should ensure that the matter of fishing capacity is addressed in an ongoing manner in fishery management.

24. At least every four years, States should review the implementation of their national plans to manage capacity for the purpose of identifying cost effective strategies for increasing effectiveness.

Subsidies and economic incentives

25. When developing their national plans for the management of fishing capacity, States should assess the possible impact of all factors, including subsidies, contributing to overcapacity on the sustainable management of their fisheries, distinguishing between factors, including subsidies, which contribute to overcapacity and unsustainability and those which produce a positive effect or are neutral.

26. States should reduce and progressively eliminate all factors, including subsidies and economic incentives and other factors which contribute, directly or indirectly, to the buildup of excessive fishing capacity thereby undermining the sustainability of marine living resources, giving due regard to the needs of artisanal fisheries.

Regional considerations

27. States should cooperate, where appropriate, through regional fisheries organizations or arrangements and other forms of cooperation, with a view to ensuring the effective management of fishing capacity.

28. States should strive to collaborate through FAO and through international arrangements in research, training and the production of information and educational material aiming to promote effective management of fishing capacity.

Section III: International considerations

29. States should consider participating in international agreements which relate to the management of fishing capacity, and in particular, the Compliance Agreement and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

30. States should support cooperation and the exchange of information among all regional fisheries organizations in accordance with their procedures.

31. States should take steps to manage the fishing capacity of their vessels involved in high seas fisheries and cooperate, as appropriate with other States, in reducing the fishing capacity applied to overfished high seas stocks.

32. States should improve, through regional fisheries organizations where appropriate, and in collaboration with FAO, the collection of data on catches on the high seas as well as in the coastal area by their fleet.

33. States should recognize the need to deal with the problem of those States which do not fulfil their responsibilities under international law as flag States with respect to their fishing vessels, and in particular those which do not exercise effectively their jurisdiction and control over their vessels which may operate in a manner that contravenes or undermines the relevant rules of international law and international conservation and management measures. States should also support multilateral cooperation to ensure that such flag States contribute to regional efforts to manage fishing capacity.

34. States should be encouraged to become members of regional fisheries organizations or arrangements, or agree to apply the conservation and management measures established by such organizations or arrangements to their vessels.

35. States should promote, with the assistance of FAO, the exchange of information about the fishing activity of vessels which do not comply with conservation and management measures adopted by regional fisheries organizations and arrangements, consistent with Article VI of the Compliance Agreement.

36. Anticipating the entry into force of the Compliance Agreement, States should strive to apply the provisions of Article III of that Agreement.

37. States should ensure that no transfer of capacity to the jurisdiction of another State should be carried out without the express consent and formal authorization of that State.

38. States should, in compliance with their duties as flag States, avoid approving the transfer of vessels flying their flag to high seas areas where such transfers are inconsistent with responsible fishing under the Code of Conduct.

Section IV: Immediate actions for major international fisheries requiring urgent measures

39. States should take immediate steps to address the management of fishing capacity for international fisheries requiring urgent attention, with priority being given to those harvesting transboundary, straddling, highly migratory and high seas stocks which are significantly overfished.

40. Within the framework of their respective competencies, States should act individually, bilaterally and multilaterally, as appropriate, to reduce substantially[3] the fleet capacity applied to these resources as part of management strategies to restore overfished stocks to sustainable levels considering, in addition to the other relevant provisions of the International Plan of Action:

> i. the economic importance of the fleets catching overfished stocks and the need to limit these fleets to a level commensurate with stock sustainability and economic viability; and
>
> ii. the use of appropriate measures to control the transfer of overcapacity to fully exploited or overexploited fisheries, taking into consideration the condition of the fish stocks.

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[3] The required reduction would vary from fishery to fishery; e.g. a 20 to 30% reduction was mentioned for large-scale tuna long line fleet (Report of the FAO Technical Working Group on the Management of Fishing Capacity. La Jolla, United States of America, 15-18 April 1998. FAO Fisheries Report No. 586).

PART IV - MECHANISMS TO PROMOTE IMPLEMENTATION

41. States should develop information programmes at national, regional and global levels to increase awareness about the need for the management of fishing capacity, and the cost and benefits resulting from adjustments in fishing capacity.

Scientific and technical cooperation

42. States should support the exchange of scientific and technical information on issues related to the management of fishing capacity and promote its worldwide availability using existing regional and global fora.

43. States should support training and institutional strengthening and consider providing financial, technical and other assistance to developing countries on issues related to the management of fishing capacity.

Reporting

44. States should report to FAO on progress on assessment, development and implementation of their plans for the management of fishing capacity as part of their biennial reporting to FAO on the Code of Conduct.

Role of FAO

45. FAO will, as and to the extent directed by its Conference, collect all relevant information and data which might serve as a basis for further analysis aimed at identifying factors contributing to overcapacity such as, *inter alia,* lack of input and output control, unsustainable fishery management methods and subsidies which contribute to overcapacity.

46. FAO will, as and to the extent directed by its Conference, and as part of its Regular Programme activities, support States in the implementation of their national plans for the management of fishing capacity.

47. FAO will, as directed by its Conference, support development and implementation of national plans for the management of fishing capacity through specific, in-country technical assistance projects with Regular Programme funds and by use of extrabudgetary funds made available to the Organization for this purpose.

48. FAO will, through COFI, report biennially on the state of progress in the implementation of the International Plan of Action.

The First Lake Victoria Fisheries Organization and FAO Regional Technical Workshop on Fishing Effort and Capacity on Lake Victoria was held in Dar es Salaam, United Republic of Tanzania, from 12 to 14 December 2005.
The main objectives of the regional workshop were to raise the importance of managing fishing capacity and effort and discuss strategies that may be used to reduce capacity, where necessary, as part of taking measures for ensuring long-term sustainable utilization of the fishery resources of Lake Victoria; to develop and agree on mechanisms for assessing overall capacity on the entire lake; and to highlight the linkages between the management of fishing effort, capacity, and concomitant illegal, unreported and unregulated fishing.
The results of the workshop include actions for progressing work on the management of fishing capacity as well as guidance for the development of a Regional Plan of Action for the Management of Fishing Capacity on Lake Victoria.
This document contains the report of the workshop as well as information and inputs provided by the participants. This document, and in particular, the actions adopted by the workshop participants can serve as a basis for further work aimed at improving regional fisheries management and the management of fishing capacity.

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