



The Inland Fisheries Sector

SADC
INLAND FISHERIES SECTOR
PROGRESS REPORT



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TECHNICAL COMMITTEE MEETING ON FISHERIES
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1.0. EXECUTIVE SUMMARY

- 1.1. The promotion of sustainable exploitation, utilization and marketing of fish resources and effective protection of the environment to sustain development is the key statement in the SADC Inland Fisheries Sector (IFS) Policy Strategy. The programs, projects and activities of the sector are therefore centered on this policy and the defined strategies are being adopted in line with the identified areas of concern to the sector's development efforts within the region.
- 1.2. The sector has embarked on a number of projects that are aimed at rendering prospects for joint management of the fish resources among states sharing these resources in the region
- 1.3. The region is endowed with abundant fisheries resources. The untapped potential of the Inland Fisheries can satisfy the growing demand for animal protein in the region, particularly among poor members of our societies. The Inland Fisheries Programme of Action is therefore geared towards increasing fish production through aquaculture and capture fisheries development. The SADC Inland Fisheries Sector production output is mainly through commercial fisheries, artisanal fisheries as well as commercial and small-scale fish farming.
- 1.4. The SADC Inland Fisheries Programme of Action that addresses inland fisheries issues has 13 approved projects with a total estimated cost of US\$63million. Of these 7 are under implementation with a total budget of US\$43.8 million.
- 1.5. Six projects have remained unfunded for a long time while others have been concluded. Four of the unfunded projects were revised in 1994. With the development of the Inland Fisheries Policy and Strategy Statement of September 1997, the current PoA has just been reviewed. This review has taken on board all the current regional inland fisheries development needs on the basis of national priorities.
- 1.6. Emphasis for development in the sector is now towards the promotion of private sector involvement, increased fish production and stakeholder participation. However, the development capacity of national industrial fishing is not possible due to the size of investment required which is high and beyond the means of most of the SADC states. There is a need to put into action, through donors and other institutions, a plan of action for a regional fisheries investment programme to enhance private capital input and credit.
- 1.7. In line with the SADC requirements for regional integration and community building, the sector is preparing a protocol on fisheries. The final document will be ready for presentation to the Sectoral Ministers Meeting in June 2000.
- 1.8. The sector will need to focus its development agenda in the areas of fisheries and aquaculture, human resource and gender. Information generation and dissemination will be a key factor to the success of this development program.

2.0. REVIEW OF THE REGIONAL SITUATION

Inland fisheries are to some extent an important source of protein and income in all the SADC Member States. The sector has a major impact in Malawi, Zambia, Zimbabwe, Mozambique, Tanzania and Angola. This impact is related mainly in particular to aspects of fisheries exploitation, current knowledge and statistical management and national policy making.

In the SADC countries are found some of the major freshwater resources of the African continent. The fisheries of the area are based on natural production processes; and are therefore dependent on environmental conditions affecting the productivity of the water bodies. Differences in climate, geography, economic conditions and cultural preferences has meant that different water bodies have been affected and exploited differently in terms of productivity levels, type of fishery, species exploited and markets supplied.

2.1. Fisheries Catches

The demand for fish by the region's growing population is higher than it has ever been in the past and will inevitably continue to increase for the foreseeable future. The region has great potential that if harnessed can meet this shortfall. The Inland Fisheries Sector has an estimated fish production of a little over half a million tonnes per year, while fish production potential is just below a million tonnes at about 810, 000 metric tonnes (Table 1)

Country	Current landings (tons / year)	Potential (tons)
Angola	6,000	115,000
Botswana	2,000	15,000
D. Rep. of Congo	158,367	
Lesotho	30	290
Malawi	56,340	120,000
Mauritius	<0.5	
Mozambique	11,505	34,5000
Namibia	1,495	6,000
Seychelles	<0.5	
South Africa	850	33,000
Swaziland	65	700
Tanzania	306,750	370,000
Zambia	65,902	80,000
Zimbabwe	18,056	35,000

Source: FAO Fishstat. Figures on potential are from ICI 1996.

2.2. Aquaculture

A considerable potential exists to increase fish production through Aquaculture in the region. About 250 million hectares of land has been identified as potentially ideal for aquaculture.

Country	Production (metric tons) ¹
Angola	Data not available
Botswana	Data not available
D. Rep of Congo	750
Lesotho	14
Malawi	224
Mauritius	118
Mozambique	0
Namibia	45
Seychelles	584
South Africa	4196
Swaziland	66
Tanzania	250
Zambia	4800
Zimbabwe	185

Source: *Aquaculture Production Statistics 1988-1997*. FAO, Rome, 1999
1. Fish and shellfish.

It is estimated that if less than 0.5% of this suitable land was to be used for the development of aquaculture, the annual fish production could be increased by 250,000 metric tonnes.

2.3. Cage Culture

Recent developments in cage culture on Lake Kariba using the Nile tilapia have demonstrated that this fishery has great potential for the SADC region. The Lake Kariba operation is targeting 7,000 metric tonnes annually, through currently only a 3-5000 metric tonnes are being produced.

The large deep waters of the rift valley, Malawi and Tanganyika and the relatively shallow lakes, Malombe, Chilwa and various dams and water bodies could be made to produce relatively large amounts of fish using cages. There is a need for the region to seriously look at the introduction of cage culture in inland and marine environments.

2.4. Economy of Inland Fisheries

The structure of the inland fisheries is such that in other areas it is heavily dependent on artisanal means, and in other areas it is highly mechanised. Recreational fishing is also a popular sport practised in rivers, dams and lakes. Capture fisheries remains the highest money earner in the region with small pelagic species being more prolific than the highly valued tilapia species. Although there are considerable areas with physical and resource potential, only industrial-scale export oriented aquaculture will have any significant impact in the region. The difficulties promoting aquaculture for domestic markets in the region are not linked to existing physical resources per se, but mainly to institutional factors, as well as research and entrepreneurial capacity.

2.5. Employment in Inland Fisheries

The number of people dependent on fishing, directly as in employment or indirectly as in various industries and services associated with the inland fisheries is not easy to ascertain due to the nature of the artisanal fisheries. It is, however, estimated that over 1 million people could be dependent on the sector for their livelihood, and this number could be growing with an increase in the population (Table 3).

Country	People employed directly in Inland Fisheries	People employed indirectly in Inland Fisheries	Annual fish consumption (kg/year)
Angola	—	—	11.9
Botswana	1000	5000	8.1
D.R.C.	113700	567100	5.7
Lesotho	200	1000	2.4
Malawi	43000	150000	6.8
Mauritius	—	—	25.3
Mozambique	—	—	2.2
Namibia	—	—	10.8
Seychelles	—	—	71.3
South Africa	—	—	9.4
Swaziland	200	1000	0.1
Tanzania	—	—	12.2
Zambia	70000	350000	9.1
Zimbabwe	10640	53200	2.2

Sources: Friedrichs, S. (comp), 1998. *Basic indicators on the economy and fisheries of African, Caribbean and Pacific countries*. Compilation. Brussels, European Commission, Directorate General for General Development, 79p. (Mimeo).

2.6. Information and Fisheries Management

Commercial fishers and artisanal fishing communities appear to be ill-informed about fisheries issues and projects. Although there has been a great deal of scientific information generated through research in the region, much of this information has not been translated into technologies to enable exploitation or enhancement of fish production in the region. This is one of the reasons why the huge potential in inland waters remains unexploited, resulting in some of the countries with high potential being net importers of fish. Given the right environment the users of resources can make a greater direct contribution to fish production.

An apparent scarcity of information on the possible potentials of fish to be harvested in the region has been and still remains elusive. There is a need to develop an action plan to enhance access to information on the potential areas of development for aquaculture.

2.7. Investment Opportunities and Private Sector Development

The SADC region has enormous inland fisheries resources, the potential being close to a million tonnes. The resources are composed of commercially important freshwater species such as Breems, Nile perch and Kapenta. These resources are essentially exploited by rural small-scale low income fishing communities. The commercial fisheries are very small and dominated by poorly developed fishing crafts and processing plants. Developing capacity of

national industrial fishing is not possible due to the size of investment required which is high and beyond the means of most of the SADC states. As a solution to this problem, there is a need to develop a plan of action for a regional fisheries investment program to enhance private capital input and credit.

There is also a need to put in place fisheries management policies for the sustainable utilisation of the fisheries resources.

2.8. Fisheries Development

Fish and fishery products are important commodities in the region as a source of high quality protein, employment and income, particularly in rural areas. Some SADC member states rely significantly on their fishery resources for food security at home and income generation through exports. There is a need to develop a strategy to promote fish processing, quality assurances, storage and marketing, and the promotion of intra- and extra-SADC trade. This should be done in conjunction with arrangements for loan finance of investment for commercial production, together with the establishment of micro-finance for production, processing and marketing by entrepreneurs, and a full study of the socio-economic impacts of both interventions. This intervention will enable member states to improve their financial and nutritional returns from these resources.

For products to move from the point where they are produced to the consumers there is a need for infrastructure development in the form of on-shore facilities. At each landing site there is a need for of shore based facilities such as boat repair equipment, a small mechanical workshop, emergency generators, fuelling facilities, a market, water reticulation, cold chain and dry storage facilities. In addition there is a need to develop a road and communication infrastructure to link the point of production and the market.

2.9. Protocol Development

The Inland Fisheries Sector Protocol is being developed alongside the Marine Fisheries one. The aim for the development of the protocol is to promote community building and regional integration. The protocol is being drawn upon the lines of policy harmonisation, training, information, regional monitoring, control and surveillance, infrastructure development, trade, aquaculture, management of shared resources and artisanal fishing. The final document will be ready for presentation at the Fisheries Technical Committee Meeting in April 2000, and to the Sectoral Ministers Meeting in June.

2.10. Human Resource Development

The SADC Inland Fisheries Sector has not been able to benefit from the Human Resources Development Programme. In view of the fact that the majority of the people in the fishing communities are either illiterate or semi-literate, there is a need for tailor made training programmes that can suit their capabilities and needs. Resource managers and scientists also require on the job management training.

2.11. Gender and Development

The Inland Fisheries Technical Co-ordination Unit has designated a Gender Focal Point in the Unit.

2.12. Country Profiles

2.12.1. Angola

Angola has inland water resources of about 2,000 km². Current production stands at an average of 7,000 tonnes per year. However there is an estimated potential production of 115,000 tonnes.

2.12.2. Botswana

Botswana has limited inland water resource endowments relying mostly on the Okavango water system. Estimated current landings are 1,900 metric tonnes a year, with a potential estimated production of 15,000 metric tonnes.

2.12.3. Democratic Republic of Congo

The DRC has the largest inland water resources in the SADC region, at about 78,000 km². It probably has the second largest potential estimate at about 500,000 tonnes per year.

2.12.4. Lesotho

With the completion of the new dam, the potential production of this otherwise low fish production country is expected to rise from the estimated 290 metric tonnes.

2.12.5. Malawi

Malawi relies on Lake Malawi, for some 50% of its freshwater fish production. Although the lake is shared with Tanzania and Mozambique, these latter countries do not exploit the lake to any great extent. Great potentials of unexploited fish stocks remain to be utilised in the pelagic areas. Other water bodies also produce significant amounts of fish.

2.12.6. Mozambique

Mozambique's inland fisheries resources are dominated by its access to some 6,400-sq. km. (21%) of Lake Malawi/Nyasa and the man-made Lake Cahora Bassa. Potential catches of 20,000 to 25,000 tonnes for Lake Malawi and 15,000 tonnes for Cahora Bassa have been estimated.

2.12.7. South Africa

The South African Inland Fisheries is mostly to a large extent recreational, with most fish production coming out of rivers and smallwater bodies.

2.12.8. Swaziland

Swaziland has limited inland water resources.

2.12.9. Tanzania

Tanzania has inland water resources estimated at 60,000 km², with a total production of 327,532 metric tonnes. It has a potential of 630,000 metric tonnes.

2.12.10. Zambia

Zambia possess a small area to the south of Lake Tanganyika, the man-made Lake Kariba shared with Zimbabwe and the major lakes Banwgeulu and Mweru-wa-Ntipa. Over some time now total landings have been stable in Zambia from all sources. Most stocks are apparently being well exploited and the only potentials to be yet exploited are the pelagic stocks of some of the larger lakes and wetland fish populations.

2.12.11. Zimbabwe

Zimbabwe has limited freshwater resources, apart from the shared resource of Lake Kariba and numerous small water bodies. The fishery for kapenta on Lake Kariba is the mainstay of the Zimbabwe inland fishery. The cage culture fisheries on Lake Kariba is one of the most success stories in the Inland Fisheries of Africa, with an anticipated production of about 5,000 tonnes of tilapia. There is a need to replicate this elsewhere.

3.0. REVIEW OF THE SECTOR PROGRAMME

The SADC Inland Fisheries Programme of Action is aimed at developing and implementing regional projects which address inland fisheries sector issues as stipulated in the SADC Inland Fisheries Sector Policy. The Inland Fisheries Programme of Action consists of 13 projects: out of which seven are funded, and six are still unfunded. Four of the unfunded projects were revised in 1994. Revision of the fifth unfunded project, AAA.4.7 (3) Trout Management Project, awaits recommendations from South Africa and Lesotho.

3.1. Review of Projects under Implementation**3.1.1. Regional Fisheries Information Programme (RFIP) AAA.4.6**

This project started in 1995 with financial support from the Icelandic International Development Agency (ICEIDA) and the Malawi Government.

The project is in three phases; under phase one the Information Centre (IFIC) has been established. Under phase two the project is involved in a study of the status of information handling in SADC member states, provision of training, hardware and software to national contact points and the establishment of the Inland Fisheries Information Network.

The third phase will focus on designing and implementing follow-on sub-projects and components that may be identified to improve information networking in the SADC region. Funding is sought for the third phase of the project.

3.1.2. Aquaculture for Local Communities Development Project AAA. 4.7(1)

A bridging phase has been funded by BADC for a period of 15 months, starting from January 1999. The bridging phase will lead to a final institutionalisation phase of 3 to 5 years.

At an extra-ordinary meeting of SADC Fisheries experts held in Mbabane, Swaziland, 21-22 May 1999, it was agreed that the focus of the new ALCOM project is on aquaculture and the exploitation of small water bodies aside from the local community per se. With this change in focus, the SADC Fisheries Technical Committee recommended that the title of the project be changed to "Integrated Fisheries and Aquaculture Systems for Smallholder Farmers". The Technical Committee further recommended that the draft project document be reformulated to take into account the above observations.

3.1.3. Research for the Management of the Fisheries of Lake Tanganyika Project Tan 4.1.

The draft framework was reviewed and endorsed by delegates to the 6th Meeting of the Lake Tanganyika Research (LTR) Co-ordination Committee in June 1998. The meeting also endorsed an extension of LTR in order to provide for its smooth completion until end 2001 with support from the Finnish International Development Agency (FINNIDA).

3.1.4. Zambia-Zimbabwe SADC Fisheries Project (Lake Kariba) ZAM 4.1.

The first phase of the project came to an end in 1998. A second phase commencing the year 2000 has been proposed for a three-year consolidation period under NORAD. The Consolidation phase will mainly focus on setting up and implementing a mechanism for joint research and management of the Lake Kariba fisheries resources.

The project has developed a protocol on the joint management of the fisheries resources of Lake Kariba known as The Protocol on Economic and Technical Co-operation between the Governments of the Republics of Zambia and Zimbabwe concerning the Management and Development of the Fisheries on Lake Kariba and the transboundary waters of the Zambezi River. The two governments ratified this protocol at a signing ceremony presided over by responsible Ministers from the two governments on 26th November 1999 at Kariba in Zimbabwe.

3.1.5. Support to SADC Inland Fisheries Co-ordination Unit (IFSTCU) AAA. 4.10(1)

This project designed to provide technical and financial support to the SADC IFSTCU is slated to terminate December 2000. It has assisted mainly in implementing the regional fisheries information and training programmes. ICEIDA decided to terminate the Technical Assistance to the Unit as a matter of its policy.

3.1.6. Regional Fisheries Training Programme (RFTP) A.A.A. 4.5

An In depth Training Needs Assessment funded by the Commonwealth Secretariat (COMSEC) had taken off with the arrival of the Education Specialist at the SADC IFSTCU in February 1999. During implementation it has been found out those funds as provided for by COMSEC) are not adequate to cover all activities of the project. As a result other funding mechanisms are being explored.

3.1.7. SADC/ GEF Lake Malawi/Nyasa Biodiversity Conservation Project A.A.A. 4.13

This project designed to create a scientific, educational and policy basis for conserving the biological diversity of the lake and its unique ecosystem for the SADC riparian countries of

Mozambique, Malawi and Tanzania, ended on 31 July 1999. It is now under an 11 months extension period using residual funds from the current phase.

During the extension phase, a monitoring program will be conducted; the remaining critical activities such as the completion of civil works at Metangula and Kyela research stations in Mozambique and Tanzania respectively; and a follow up project will be prepared. Funding for the follow up project preparation exercise has been obtained from the Japanese government through a US\$330,000 grant being managed by the World Bank.

3.2. Review of IFS Program of Action

Following the preparation of the Inland Fisheries Sector Policy and Strategy Statement of September 1997, it became necessary that the Sector Programme of Action be reviewed in order to take on board the aspirations of SADC as stipulated therein.

The Programme of Action was reviewed through a regional workshop held in Malawi starting from 13 to 17 March 2000 with financial support from both the Belgian Agency for Development Co-operation (BADC) and the Icelandic International Development Agency (ICEIDA). The draft Programme of Action will be tabled at the 25th Technical Committee Meeting on Fisheries in Luanda, Angola from 17-21 April 2000.

3.3. Cross-Sectoral Collaboration

3.3.1 Accession to the FAO COFI and CIFA

SADC has acceded to the FAO Committee on Fisheries (COFI) and to the Committee on the Inland Fisheries of Africa (CIFA). IFSTCU and the Marine Sector are applying to become official SADC representatives to these committees.

3.3.2. BSc Course in Natural Resources (Fisheries and Marine option) – University of Namibia

This is an offshoot of the Fisheries Planning and Management Course which was being hosted by the University of Namibia supported by NORAD. The support from NORAD phased out in 1998 and member states will now be required to fund their own students.

3.3.3 BSc in Agriculture (Aquaculture option 3 years) - Bunda College of Agriculture

This regional programme is on going at Bunda College of Agriculture, University of Malawi. Currently the Icelandic International Development Agency (ICEIDA) is offering 10 full scholarships on competitive basis. Individuals from the SADC region are encouraged to benefit from these available scholarships.

APPENDIX 1. SUMMARY OF PROJECTS

TABLE 4. SUMMARY OF STATUS OF APPROVED INLAND FISHERIES PROJECTS

PROJECT TITLE		ESTIMATED COST US\$ million			FUNDING SECURED US\$ m		FUNDING UNDER NEGOTIATION	FINANCING GAP	COMMENTS / STATUS
		Total	Foreign	Local	Amount	Source			
AAA.4.5	Regional Fisheries Training Programme	9.67	9.67	-	2.20	NORAD ICEIDA	-	7.47	Under implementation Additional Funding sought
AAA.4.6	Regional Fisheries Information Programme	7.256	6.085	1.171	-	-	-	6.085	Under implementation Project funding to phase out end 2000
AAA.4.6(1)	Computerization of Inland Fisheries Production Statistics	0.332	0.332	-	-	-	-	-	Funding sought
AAA.4.7(1)	Aquaculture for Local Communities Development (ALCOM)	9.27	9.27	-	7.07 2.20	SIDA BADC	-	-	Project phased out in 1997. Under bridging phase with BADC funding.
AAA.4.7(3)	SADC Regional Trout Management Project	8.518	8.518	-	-	-	-	8.518	Funding sought
AAA.4.7(4)	Improved Management of Fish Farms in Cool Water Areas of the SADC Region	1.320	1.320	-	-	-	-	1.320	Funding sought
AAA.4.7(5)	Strategic Integrated Aquaculture Research for SADC Smallholder Farms	6.32	6.32	-	-	-	-	6.32	Funding sought
AAA.4.10(1)	Support to SADC Inland Fisheries Coordination Unit	0.9737	0.80	0.173	0.80	ICEIDA	-	-	Under implementation. Project funding to phase out end 2000
AAA.4.10(3)	Support to SADC IFSTCU – Information and Aquaculture Sections	0.584	0.4104	0.1737	0.15	-	-	0.434	Funding not secured
AAA.4.13(1)	SADC/GEF Lake Malawi/ Nyasa Biodiversity Conservation	10.0	10.0	-	10.0	GEF	-	-	Project phased out in 1999, it is under 11-month extension up to June 30, 2000.
AAA.4.14	Support to Fisheries Development Planning	4.095	4.095	-	-	-	-	4.095	Funding sought
TAN.4.1	Research for the Management of Fisheries on Lake Tanganyika	1.51	1.08	0.43	1.08 0.43	FIN TAN	-	-	Being implemented as part of FAO/FININIDA project
ZAM.4.1	Zambia – Zimbabwe SADC Fisheries Project (Lake Kariba)	8.34	8.34	-	0.77 7.57	DANIDA NORAD	-	-	Under implementation
	Totals	68.887	66.2404	1.9477	32.27			34.242	

Project AAA.4.5

Regional Fisheries Training Programme (RFTP)

Estimated costs (US\$ million)

Total:	9.67	Financing Gap:	7.47
Foreign:	9.67	Executing Agency:	NORAD, ICEIDA, IFSTCU and others
Local:	To be estimated		

Funding secured

Foreign	2.2	Start:	1990 preparatory phase
Local	In kind	Duration:	Main phase 5 years if fully funded

OBJECTIVES: New and upgraded training programs established at selected training institutions in SADC countries.

Expanded training opportunities available to SADC country fisheries personnel in fields and levels not covered by national or regional training programs.

Capacity for collaboration on a sustainable basis established for regional training programs and other training opportunities.

DESCRIPTION: The program is intended to provide for most of the training within the SADC region. This will be accomplished through the use of national institutions selected and agreed to conduct the regional identified courses. Training institutions for specific areas were identified in Angola, Lesotho, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe. Since training needs keep on changing, training needs and capacity studies will on timely basis be conducted in order to modify curricula based on demands from the public sector, private sector and the general public.

STRATEGIES: Establish fisheries courses of regional relevance at selected institutions within the region.

Advertise the availability of these courses to satisfy training components of fisheries projects in the region, where appropriate.

Encourage the development of linkage agreements for a period of several years.

Develop fisheries training fund in order to provide access to training opportunities in the region.

STATUS: Co-ordination of the RFTP is carried out from the Inland Fisheries Sector Technical Co-ordination Unit. The activities of the Programme are supported by ICEIDA.

The RFTP covers eleven approved sub-projects. Funding is being sought for most of the courses planned. Funding for the implementation of the in-depth training needs assessment was secured from the Commonwealth Secretariat and a Training Consultant (Education Specialist) was recruited and was in post by February 1999. The consultant, however, suffered sudden death due to heart attack on 10th October 1999 when he was about to undertake field visits to member states to gather information for the study. Malawi government has since requested the Commonwealth Secretariat for a replacement.

Project AAA.4.6

Regional Fisheries Information Programme - RFIP

Estimated costs (US\$ million)

Total:	7.256	Financing Gap:	6.085
Foreign:	6.085	Executing Agency:	IFSTCU and other SADC Member States
Local:	1.171		

Funding secured

Foreign	Start:	1995 preparatory phase
Local	Duration:	Main phase 7 years

OBJECTIVES: The overall objective is to facilitate the use of information for developing the Inland Fisheries Sector (IFS) to achieve the objectives of SADC, the Food Agriculture and Natural Resources Sector and the Inland Fisheries Sector.

Specific objectives of the program include strengthening links with national, regional and international sources of information; systematic collection, processing and dissemination of inland fisheries information; wide accessibility of inland fisheries information within and outside the sector.

DESCRIPTION: The RFIP is the umbrella where all such activities are co-ordinated. An essential part of the RFIP is the Inland Fisheries Information Network (IFIN) forming links between the IFSTCU and the national information contact points in the SADC member states. The network will be the pathway for information exchange with sources within and outside the SADC region.

STRATEGIES: The RFIP will be implemented in three phases:

Phase one: Internal training of IFSTCU staff, provisional of computer hardware and software for the IFSTCU. Establishment of the IFSTCU Information Centre. A full-fledged Library and Documentation Centre has since been established at the SADC IFSTCU.

Phase two: Study of status of information handling in the region. Provision of training, hardware and software to national fisheries information contact points as needed. Establishing the Inland Information Network. Developing the IFSTCU Information Centre.

Phase three: Design and implementation of sub-projects and components already identified or which will be identified in future. Phase three entails the continuous activities of the foreseeable future.

STATUS: Phase one has been completed with financial and technical support from ICEIDA, which provided funds for equipment and the training of IFSTCU staff. A second ICEIDA sponsored Information Adviser joined the unit in September 1997 and will work on the RFIP for two years up to December, 2000.

The RFIP is an ongoing activity within the IFSTCU. Co-operating partners are sought for financial and technical support in implementing phase two and three.

Project AAA4.6 (1)

Computerization of Inland Fisheries Production Statistics throughout the SADC Region

Estimated costs (US\$ million)

Total:	0.322	Financing Gap:	0.322
Foreign:	0.322	Executing Agency:	SADC and others
Local:	In kind		

Funding secured

Foreign	Nil	Start:	As soon as funding is secured
Local	Nil	Duration:	3 Years

OBJECTIVES: The project will establish the current status of data collection procedures in the Inland Fisheries Sector and harmonize methods and processing procedures within the SADC region especially for shared fish resources.

An important aspect of the project will be increased reliability and compatibility of fisheries statistics in the region. Integration into the information network of the Regional Fisheries Information Programme (RFIP) will ensure accessibility of information for management purposes.

DESCRIPTION: This project is a component of the RFIP. It will in particular focus on fisheries

Statistics in shared water bodies such as the Great Lakes of Africa (Lakes Tanganyika and Malawi/Nyasa specifically) and Lake Kariba as well as the shared river systems, such as the Zambezi river systems. The project is envisaged in two phases.

STRATEGIES: In a preparatory phase, the status of fisheries statistics in the SADC countries will be analysed in a regional workshop with wide participation of professionals responsible for fisheries statistics in each of the SADC member states. The workshop will be organised and facilitated by a fisheries statistics expert.

The workshop will report on the status of fisheries statistics, and propose an approach to reach harmonization and compatibility in the region.

On the basis of workshop findings, a project proposal will be designed in cooperation with the IFSTCU and national statistics contact points.

STATUS: This shift of emphasis from the original project proposal is the decision of the Inland Fisheries Sector Project Revision Workshop held in Malawi in November 1994. The basic concepts and justifications for the project are still valid. A complete revised project document will emerge from the results and findings of the preparatory phase. Cost estimates are not available for the revised project proposal and will be worked out as part of the preparatory phase. The estimate above is the original. Technical and financial assistance is sought for the preparatory phase and the implementation of the project.

Project AAA.4.7 (3)

SADC Regional Trout Management Project

Estimated costs (US\$ million)

Total:	8.518	Financing Gap:	8.518
Foreign:	8.518	Executing Agency:	SADC (Malawi, South Africa, Lesotho, Zimbabwe, Tanzania and others)
Local:	In kind		
Funding secured			
Foreign	Nil	Start:	As soon as funding is secured
Local	Nil	Duration:	7.5 Years

-
- OBJECTIVES:** An increase in farmed trout production within the region Promoted.
- Losses due to disease minimized as a result of good management.
- Trout stocks in angling rivers in the countries where conditions for trout survival are more favorable improved in long run.
- Contribution of trout as dietary component to food security promoted.
- DESCRIPTION:** Within SADC, Malawi, Lesotho, South Africa and Zimbabwe have had trout production experiences at varying degrees of success. Trout can contribute to increased supplies of high quality fish product. Properly managed, trout is an export earner, thus saving foreign exchange used to import trout into the region.
- Good stocks of trout in rivers with the necessary conditions are a tourist attraction. Two major problems associated with trout management are inadequate availability of high quality feed and incidence of diseases. These problem areas would best be tackled at regional level to pool the experiences and improve productivity.
- The experiences as obtained in Malawi, Lesotho, South Africa and Zimbabwe need to be exchanged regionally for the improvement of trout management in these countries. In addition to these countries, Tanzania has also highland rivers stocked with trout the management of which needs to be upgraded.
- STRATEGIES:** Trout management is very demanding in terms of need for high quality feed, clean and clear waters with high levels of dissolved oxygen. Facilities for trout raising are therefore more complex. This project is being marketed through the private sector to establish model facilities for trout management drawing on experiences in Lesotho, South Africa, Zimbabwe and other member states. The IFSTCU will continue to collaborate with the private sector in order to also assist in disseminating relevant information on the project implementation.
- STATUS:** Funding is sought from cooperating partners so that the project is developed further particularly through the private sector.

Project AAA.4.7 (4)

Improved Management of Fish Farms in Cool Water Areas of SADC Region

Estimated costs (US\$ million)

Total:	1.320	Financing Gap:	1.320
Foreign:	1.320	Executing Agency:	SADC Members States
Local:	In kind		

Funding secured

Foreign	Nil	Start:	As soon as funding is secured
Local	Nil	Duration:	3 Years

OBJECTIVES: The overall objective is to increase sustainable fish farming production in the cool water areas in the SADC region through improved management procedures and integration into existing farming systems. More specific objectives are:

Improved knowledge of the operation of whole farm systems.

Development of fish farm options (species, techniques and technologies)

Setting up improved extension systems in collaboration with agriculture personnel.

DESCRIPTION: The project will focus on selection of species and technologies that suit the farmers needs and capabilities. Emphasis will be on integration into existing agricultural farming systems. The project will consider both small holder farming and commercial farming and provide participatory extension services that enhance farmer understanding of integrated farming and improve farmer-farmer communication channels.

STRATEGIES: The main strategies envisaged in implementing the project is:

Establish models of fish farming within conventional farming systems.

Make an inventory of currently farmed species and farming techniques used in the region.

Establish a typology of fish farmers.

Research and refine technological options through combined efforts of the project team and farmers.

Develop improved farming techniques in collaboration with fish farmers.

Transfer tested options to the farming society through participatory extension work.

STATUS: The revised project outline is guided by results of an Inland Fisheries Sector Project Revision Workshop in November 1994. The project implementation is envisaged in two phases, a feasibility study and an implementation phase.

Like the other unfounded projects, latest cost estimates are not available for the revised project proposal and will be worked out as part of the feasibility study.

Technical and financial assistance is sought for the feasibility study phase and the implementation phase of the project.

Project AAA.4.7 (5)

Strategic Integrated Aquaculture Research for SADC Smallholder Farms

Estimated costs (US\$ million)

Total:	6.32	Financing Gap:	6.32
Foreign:	6.32	Executing Agency:	SADC- IFS / SACCAR / ICLARM
Local:	In kind		

Funding secured

Foreign	Nil	Start:	As soon as funding is secured
Local	Nil	Duration:	5 Years

OBJECTIVES: To improve rural food security, incomes and habitats through sustainable integrated farming.

Identify and overcome constraints to the adoption and sustained implementation of improved farming systems.

Develop and promote farmer- farmer communication system that will complement formal government-extension services.

Strengthen the capacity to conduct applied research in aquaculture in regional institutions.

DESCRIPTION: This is one of the sub-projects that are under the Aquaculture Development Programs of Action. It will mainly be addressing issues that fit into applied or adaptive research to feed information into the other sub-projects, which are directly development oriented. Research will cover socio-economic investigation as well as fish farming applications involving various combinations of inputs to maximize use of farm resources such as land, water, labor and capital.

STRATEGIES: Measurements will include comparisons of non- integrated farming systems with integrated systems with the aim of transforming into improved and manageable systems. Conduct various participatory rural appraisals of a number of existing smallholdings to determine some common problems that will require regional approach in solving them. Farmer -Extension-Research linkages will have to be strengthened by promoting strong interaction at these levels in order to build -up confidence between farmers, extension and research staff at field level.

STATUS: Funding was originally to come from GTZ who developed interest at the beginning but due to drastic budget cuts within GTZ, it is indicated that it might be difficult to source funding for this project at present. However, since there are plans to review the Aquaculture Programme of Action, this project will be recast so as to emphasize applied rather than basic research for funding consideration.

Project AAA.4.14

Support to Fisheries Development Planning (in the SADC Region)

Estimated costs (US\$ million)

Total:	4.095	Financing Gap:	4.095
Foreign:	4.095	Executing Agency:	IFSTCU/ other SADC member states
Local:	In kind		

Funding secured

Foreign	Nil	Start:	As soon as funding is secured
Local	Nil	Duration:	5 Years

OBJECTIVES: The main objective of the FISHPLAN project is to strengthen the fisheries planning capacity within SADC region. The immediate objectives will be:

Facilitating the drawing up of medium - and long - term fisheries development plans in individual countries.

Facilitating the development of fisheries planning expertise in SADC countries, through training and the creation of national planning units.

DESCRIPTION: Implementation will be in several phases, some of which may be concurrent.

Phase 1. IFSTCU internal preparation

Phase 2. IFS regional preparation and workshop

Phase 3. National activities

Phase 4. Regional activities

Phase 5. Follow-up activities and workshop

FISHPLAN project officer will be based in the SADC Inland Fisheries Sector Technical Coordination Unit (IFSTCU), where she/he will liaise closely with the Unit and with staff of other projects.

STRATEGIES: The active involvement of the Inland Fisheries Technical Committee will be needed in order to identify and prioritize certain of the activities.

Regional expertise will be used wherever possible in carrying out activities to achieve the objectives.

STATUS: The present project is the result of decision taken at an Inland Fisheries Project Revision Workshop held in Malawi in November 1994. Detailed cost estimates have not been carried out for the new project approach.

Technical and financial assistance is sought for the preparatory phase and the implementation of the project.

**SADC Inland Fisheries Sector
Project Information Sheet**

Project AAA.4.10 (1)

Support to SADC Inland Fisheries Co-ordination Unit

Estimated costs (US\$ million)

Total:	0.9737	Financing Gap:	Nil
Foreign:	0.8000	Executing Agency:	SADC IFSTCU
Local:	0.1737		

Funding secured

Foreign	0.8000	Start:	1995
Local	0.17370	Duration:	5 years

OBJECTIVE: The objective of the project is to establish a functional structure in the IFSTCU and build the capacity of the IFSTCU to efficiently carry out the co-ordination responsibilities in the Inland Fisheries Sector of SADC.

DESCRIPTION: The project provides technical and financial support to the IFSTCU. Two technical advisers were attached to the IFSTCU under the project, assisting in developing the overall structural organization of the IFSTCU and implementation of the Regional Fisheries Information Programme. The development co-operation between Iceland and Malawi on SADC Fisheries Co-ordination commenced in 1989 and has continued since. The project has remained the main source of support to IFS co-ordination and provided substantial proportions of technical and financial resources of the IFSTCU since.

STATUS: The current phase of the project is formalized in the Memorandum of Understanding (MoU) between Malawi and ICEIDA on development co-operation in the Fisheries Sector. This phase of the project started on 1st January 1997 and will end on 31st December 2000 following a two-year extension that covered the period 1995 to 1997. During the first phase which covered the period 1991 – 1995, the specific focus of the co-operation was on training and implementation of some sub-projects under the Regional Fisheries Training Programme. However, since 1995 it has specifically focused in the Regional Fisheries Information Programme and the Information function of the IFSTCU. SADC highly values the benefits derived from this program. As a result, plans are under way to formulate a follow-up project.

Project AAA.4.13 (1)

SADC/ GEF Lake Malawi / Nyasa Biodiversity Conservation Project

Estimated costs (US\$ million)

Total:	10.0	Financing Gap:	Nil
Foreign:	10.0	Executing Agency:	3 SADC member states, the World Bank, CIDA and DFID
Local:	Nil		

Funding secured

Foreign	10.0	Start:	July 1995
Local	Nil	Duration:	5 years

OBJECTIVES: The main objective of the project is to assist the three riparian states, Malawi, Mozambique and Tanzania, in creating the scientific educational and policy basis necessary for conserving the biological diversity of the Lake and its unique ecosystem.

DESCRIPTION: The project is serving the three countries that surround the lake. Its headquarters are at Senga Bay in Salima, Malawi. The main output of the project will be a Biodiversity Map and Management Plan for Lake Malawi/Nyasa.

The project is administrated by World Bank, CIDA (Canadian International Development Agency) and DFID (Department for International Development) and funded through the GEF (Global Environmental Facility). Additional funding came from United Nations Development Programme (UNDP), World Wild Fund for Nature of South Africa (WWF-SA) and the South African Government.

STATUS: Phase 1 of this project ended on 31 July 1999. The project is now in an eleven months extension. During this extension phase, a monitoring program is being implemented. In addition, uncompleted components such as civil works at Metangula and Kyela research stations in Mozambique and Tanzania, respectively, are being finalized and a follow up project is being prepared. Funding for the project preparation exercise has been secured from the Japanese Government and the Department for International Development of the United Kingdom (DFID).

Project TAN 4.1

Research for the Management of the Fisheries on Lake Tanganyika

Estimated costs (US\$ million)

Total:	1.51	Financing Gap:	Nil
Foreign:	1.0	Executing Agency:	FINNIDA, Tanzania
Local:	0.43		

Funding secured

Foreign	1.51	Start:	1992
Local	Nil	Duration:	

OBJECTIVES: The underlying aim of this project is to establish a comprehensive understanding of the basis for fish production of Lake Tanganyika. This in turn can facilitate formulation of a coherent lake-wide fisheries management plan.

DESCRIPTION: Lake Tanganyika Research project (LTR) activities started with a preparatory phase (January 1992-June 1993) during which headquarters facilities at Bujumbura (Burundi) were constructed and lakeside research stations in Uvira (D.R.C.), Kigoma (Tanzania) and Mpulungu (Zambia) were renovated and equipped. LTR's three-year long Scientific Sampling Programme (SSP) ran from July 1993 to July 1996. Principal SSP components study areas were:

Lake hydrodynamics, including standard meteorology, major upwellings / downwellings and currents affecting the water circulation, stratification, and nutrient/energy flow.

Pelagic food webs, including the dynamics of composition, production, and vertical migration, and the efficiency of energy pathways to fish.

Fish biology, including population structure, recruitment, and size, along with prey/predator relationships; and fish stock size and biomass distribution as it affects fish yields and utilization.

Evaluation of LTR results during the latter part of 1996 led to recommendations for the continuation of activities over the course of a further four-year period.

STATUS: Completion of the SEC investigations and final analysis of remaining SSP data set the stage for preparation, during the first half of 1998, of a draft Regional Framework Plan for the Management of Lake Tanganyika Fisheries. The draft Framework was reviewed and endorsed by delegates to the 6th Meeting of the LTR Coordination Committee held in June 1998 (Lusaka, Zambia). The above meeting also endorsed a further extension of LTR in order to provide funds for the smooth completion of the project with Finnish International Development Agency (FINNIDA) as cooperating partners, until end 2001.

Project ZAM 4.1

Zambia – Zimbabwe SADC Fisheries Project (Lake Kariba)

Estimated costs (US\$ million)

Total:	8.34	Financing Gap:	Nil
Foreign:	8.34	Executing Agency:	DANIDA / NORAD
Local:	Nil		

Funding secured

Foreign	8.34	Start:	1989
Local	Nil	Duration:	10 years

OBJECTIVES: The overall objective of the project is to set up a system of joint fisheries research and management, which will facilitate the sustainable utilization of the shared fisheries resources on Lake Kariba.

DESCRIPTION: The project involves Zambia and Zimbabwe, the two riparian countries on Lake Kariba. The Department of Fisheries (DoF) in Zambia and the Department of National Parks and Wildlife Management (DNPWM) in Zimbabwe is carrying out project implementation. The Co-operating partners are Norway (NORAD) and Denmark (DANIDA).

STATUS: The project began in 1989 and phased out in December 1999. It is now been extended for six months to complete outstanding work from the previous phase and to allow finalization of funding agreements between NORAD and SADC for the follow-on Consolidation phase. The Consolidation phase has been planned for three years. NORAD has agreed in principal to fund this phase of the project. The consolidation phase will focus on setting up and implementing a mechanism for joint fisheries research and management of the Lake Kariba fisheries resources.

Zambia and Zimbabwe have developed a protocol on the management of Lake Kariba. The two countries signed the Protocol on 29th November 1999 at Kariba.

Project AAA.4.10(3)

Support to Inland Fisheries Sector Technical Coordination Unit - Information and
Aquaculture Sections

Estimated costs (US\$ million)

Total:	0.5841	Financing Gap:	0.4340
Foreign:	0.4104	Executing Agency:	IFSTCU
Local:	0.1737		

Funding secured

Foreign	0.1500	Start:	1998
Local	In kind	Duration:	3 Years

OBJECTIVE: The overall objective is promoting the dissemination of relevant information that can sustain the development of capture fisheries and aquaculture in the SADC region. The specific objective is to strengthen the capacity of IFSTCU in collecting, documenting and disseminating of relevant information for aquaculture and capture fisheries development to the region.

DESCRIPTION: This project is a sub- component of project AAA. 10- Support to SADC IFSTCU. While the main project is of general support to the strengthening of the Unit, the information and aquaculture component is specifically for building up the capacity in these two fields.

STATUS: Staff specifically recruited to handle information and aquaculture development issues have been deployed in the Unit. Internal training will be initiated and linkages with ALCOM and other institutions dealing with information on fisheries and aquaculture will be strengthened.

The ICEIDA support to this project phases out in December 2000. The strengthening of the capacity to handle and disseminate information is one of the priority areas identified in the SADC Inland Fisheries Policy and Strategy Statement. Hence the IFSTCU is sourcing for technical and financial assistance is to continue work that will be left by the present ICEIDA support.

APPENDIX 2 COMMON ACRONYMS

ACC	Annual Consultative Conference
ADB	African Development Bank
ALCOM	Aquaculture for Local Community Development
BADC	Belgium Agency for Development Cooperation
CIDA	Canadian International Development Agency
COFI	Committee on Fisheries (UN/FAO)
COMSEC	Commonwealth Secretariat
DANIDA	Danish International Development Agency
DNPWM	Department of National Parks and Wildlife Management
DoF	Department of Fisheries
DRC	Democratic Republic of Congo
EEC	European Economic Community
EIA	Environmental Impact Assessment
EU	European Union
FANR	Food, Agriculture and Natural Resources
FAO	Food and Agricultural Organisation
FCBW	Fisheries Community Building Workshop
FINNIDA	Finnish International Development Agency
GEF	Global Environmental Facility
GTZ	German Gesellschaft für Technische Zusammenarbeit
ICEIDA	Icelandic International Development Agency
ICLARM	International Centre for Living Aquatic Resources Management
IDRC	International Development Research Centre (Canada)
IFIC	Inland Fisheries Information Centre
IFIN	Inland Fisheries Information Network
IFSTCU	Inland Fisheries Sector Technical Coordination Unit
IFS	Inland Fisheries Sector

IUCN	International Union for the Conservation of Nature
JICA	Japan International Cooperation Agency
LTR	Lake Tanganyika Research Project
MFRSCU	Marine Fisheries and Resources Sector Coordinating Unit
MFRS	Marine Fisheries and Resources Sector
NORAD	Norwegian Agency for Development Cooperation
PoA	Programme of Action
RFIP	Regional Fisheries Information Programme
RFTP	Regional Fisheries Training Programme
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SIDA	Swedish International Development Agency
SSP	Scientific Sampling Programme
SWB	Surface Water Bodies
TAN	Tanzania
TCM	Technical Committee Meeting
TOR	Terms of reference
UNAM	University of Namibia
UNDP	United Nations Development Programme
UNESCO	United Nations Education and Scientific Cooperation
USAID	Agency for International Development (USA)
WB	World Bank
WWF	World Wide Fund
WWFSA	World Wide Fund for Nature of South Africa
ZAM	Zambia
ZIM	Zimbabwe