



NEPAD
A Programme of The African Union

Fish for All

Proceedings of the NEPAD-Fish for All Summit

22-25 August 2005
Abuja, Nigeria

Cover Design & Printing: Elias Modern Press



Contents

Foreword, Otunba Bamidele F. Dada, OON, Nigeria	iii
Executive Summary	vii
Section 1 The Technical Workshop on New Directions for Fisheries and Aquaculture in Africa	1
Chapter 1 Introduction	3
Chapter 2 The Comprehensive Africa Agriculture Development Programme (CAADP): The Role of Fisheries in Achieving CAADP Objectives	7
Chapter 3 The NEPAD- <i>Fish for All</i> Consultative Process	11
Chapter 4 The <i>NEPAD Action Plan for the Development of African Fisheries and Aquaculture</i>	15
Chapter 5 Regional Priorities Areas for Implementation of the NEPAD Action Plan	21
Chapter 6 Regional Opportunities and Challenges for Fast-track Implementation	25
Section 2 The Heads of State Summit	29
Chapter 7 Introduction	31
Chapter 8 Speeches and Addresses	33
Opening Address, His Excellency, President Olusegun Obasanjo, Nigeria	33
Welcome Address, Hon. Alhaji Adamu Bello, Nigeria	37
Welcome Address, Professor Firmino G. Mucavele, NEPAD	39
Keynote Address, Dr Ichiro Nomura, FAO Enhancing the Contributions of Fisheries and Aquaculture to Africa's Development Agenda	41
Keynote Address, Dr Stephen Hall, <i>Fish for All</i> African Fisheries and Aquaculture and the Millennium Development Goals	44

Address to the Summit, Warren Evans, World Bank 49

Address to the Summit, Stella Williams, WorldFish Center 52

APPENDIXES

Appendix 1 *The NEPAD Action Plan for the Development of African Fisheries and Aquaculture* 53

Appendix 2 *The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa* 81

Appendix 3 Regional Working Group Recommendations 87

Appendix 4 Summit Program 97

Appendix 5 List of Participants 101

Acronyms 109

Foreword

Otunba Bamidele F. Dada, OON,
Honorable Minister of State for Agriculture and Rural Development,
Federal Republic of Nigeria¹

I will start by congratulating Distinguished Colleagues, Ministers of Agriculture and Fisheries, and Delegates, on the realization of this important milestone in the history of fisheries and aquaculture in Africa. This Summit accords with the vision of our great leaders in Africa to establish an enduring framework for development, i.e. a New Partnership for Africa's Development (NEPAD). Indeed, the implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) of NEPAD was launched at a similar ceremony only recently.

I am delighted to inform you that His Excellency, Chief Olusegun Obasanjo, GCFR, President and Commander-in-Chief of the Armed Forces, Federal Republic of Nigeria, Chairman of the African Union, as a member of the Global Steering Committee of the *Fish for All* Initiative of the WorldFish Center graciously accepted to host the Africa Regional Summit in Nigeria, under the auspices of NEPAD. *Fish for All*, as you may be aware, is an initiative of the WorldFish Center of the Consultative Group for International Agriculture Research (CGIAR) designed to build greater international commitment and address the challenges of fisheries development and management worldwide. The importance of the fisheries sub-sector to global/regional food security and sustainable livelihoods cannot be overemphasized. In the African context, such challenges include: sustainable management of natural fish stocks; development of aquaculture production systems; enhancing fish marketing and trade; intensifying scientific research; and sustainable management of the aquatic environment both coastal and inland. The initiative, also designed to raise awareness of how fisheries and aquaculture can contribute to both food and livelihood security of the poor in developing countries, particularly in Africa, forms one of the 'pillars' of the CAADP.

CAADP in its original four-pillar structure was launched on the occasion of the G8/NEPAD Summit held in Accra, Ghana on 5–6 May 2005. The Africa Regional Economic Communities (RECs) had identified priority project areas, which were put together in 'Early Action Plans' for ratification at the Summit. They were presented for funding by international development partners and funding agencies. It is, therefore, our responsibility at the Technical Sessions of this Summit to ensure that we formulate an Action Plan on fisheries and aquaculture development, the content and timing of which, accords fully with the implementation of the NEPAD/CAADP.

I would like to reiterate that this Summit hosted by the Federal Government of Nigeria has been organized in collaboration with the NEPAD Secretariat, the Food and Agriculture Organization of the United Nations (FAO) and the WorldFish Center with the support of development partners. I am aware that in the build-up to this Technical Session, the WorldFish Center has supported the organization of thematic pre-Summit workshops in Lilongwe, Malawi (30–31 May), Dakar, Senegal (8–9 June) and Cairo, Egypt (27–28 June) focusing on inland fisheries, marine

¹ This Foreword was delivered as the Keynote Address during the Opening Session of the Technical Workshop at the NEPAD-*Fish for All* Summit, Abuja, Nigeria, 22 August 2005.

fisheries and aquaculture, respectively. These workshops harnessed national perspectives on the prevailing issues in the sub-sectors and formulated them into a draft NEPAD Action Plan for consideration at this Technical Session. Nigerian fisheries professionals participated in the workshops and I expect that our national aspirations and priorities, just like others, have been reflected in the outcome of these workshops.

Moreover, beyond the thematic regional workshops, Nigeria has gone further in preparing for this great event, by presenting the workshop reports to a National Stakeholders' Forum in Ibadan, Oyo State, on 29–30 July 2005. We ensured the participation of a wide spectrum of stakeholders including artisanal fishermen, fish farmers, industrial fishery operators, fish feed producers, fish processors, packaging companies, researchers, policymakers, consultants, womens' groups, cooperative societies, non-governmental organizations (NGOs), etc. The interest generated by the National Stakeholders' Forum was significant because of the prime position of the fisheries sub-sector in meeting the noble objectives of the National Economic Empowerment and Development Strategy and contributing to the achievement of the United Nations Millennium Development Goals.

Distinguished Ladies and Gentlemen, this Summit is timely as the present democratic administration of His Excellency, Chief Olusegun Obasanjo, GCFR, has been emphasizing the importance of "Fish for Food and Development". The current status of fisheries in Nigeria, as in many African countries, poses serious developmental challenges. At present, the total fish demand in Nigeria is about 1.5 million t while current domestic fish production is 511 700 t. The implication of this is that the shortfall between demand and supply is met by the importation of 680 000 t of fish annually. Although shrimp and other fishery products contribute about US\$50 million annually to non-oil export earnings, the Federal Government is determined to reduce the huge import bill on frozen fish, which is second only to rice in the food sector. The President has, therefore, set in motion the necessary machinery to harness the enormous potential and investment opportunities in the fisheries sub-sector. He has set up a Presidential Committee on Fisheries and Aquaculture Development under my Chairmanship to discuss all aspects of fisheries development in Nigeria and to come up with blueprints for government consideration. The ultimate objective is to make Nigeria self-sufficient in fish production by 2007 and also to become one of the leading exporters of fish and fishery products in Africa.

I am pleased to report that the Federal Government of Nigeria has put in place many interventions in which fisheries feature prominently. In this connection, considerable progress has been achieved with the implementation of the National Special Program for Food Security (NSPFS), which was launched by the Federal Government in collaboration with FAO. The NSPFS is of regional significance and the Nigerian experience has been acclaimed a model and success story in Africa. The Aquaculture and Inland Fisheries Project, as a major component of the NSPFS, is focused on the development of freshwater commercial aquaculture as well as on the culture-based, comanagement of inland fisheries. I had the privilege earlier this month at Sabke Lake, Katsina State, to inaugurate a fish stocking program of major lakes, irrigation dams and reservoirs nationwide. Similarly, the private sector has risen to the challenge of Mr President to invest in modern aquaculture. Today, Nigeria has become the leading aquaculture producing country in Africa. Furthermore, Mr President is personally blazing a trail in the utilization of aquaculture to meet domestic fish demand and to target the export market. The tremendous progress recorded so far in catfish farming has proven something of a quiet revolution, which will take only a few years to flourish. However, to achieve the ultimate

objective of self-sufficiency in fish production, we must embark upon the comprehensive development of a sustainable artisanal and industrial marine sector as well as inland fisheries and aquaculture.

Distinguished Colleagues and Delegates, the overall goal of this Summit, including the Technical Sessions and Exhibition, is to improve the contribution of fisheries and aquaculture to the food and nutrition security of over 200 million Africans and to sustain the livelihoods of about 10 million Africans actively engaged in fish production, fish processing and fish trade. This will bring about an improvement in the status of fish as a source of food and micronutrients and a leading export commodity for Africa with an estimated annual export value of about US\$3 billion. The end result will be poverty alleviation, gainful employment generation and regional economic development.

In conclusion, I make bold to say that Africa can be a major player in the world economy through the fisheries sub-sector. Africa's potential resources for fish production are immense and include the great lakes, the straddling rivers and their huge deltas, the highly valued deltaic stocks and the highly productive oceans surrounding the continent, whose abundant fish stocks are sought after by other nations from around the world. We should take advantage of every opportunity to realize the dream of African leaders to put our countries on the path of sustainable growth and development. We need to pursue vigorously the African Action Plan that will emerge from the Technical Session and upon which the Summit Declaration will be premised. Finally, I believe that the display around this arena is rich and informative and I invite you to spare some time to visit it.

On this note, it gives me the greatest pleasure to declare this important Technical Workshop on 'New Directions for Fisheries and Aquaculture in Africa' open. I wish you fruitful deliberations.

I thank you for your attention and God bless you all.

Executive Summary

The NEPAD-*Fish for All* Summit was held on 22–25 August 2005 in Abuja, Nigeria, to draw global attention to the vital role of fisheries and aquaculture in meeting Africa's development agenda. On invitation from His Excellency, President Olusegun Obasanjo of Nigeria, the NEPAD (New Partnership for Africa's Development) Secretariat, the WorldFish Center and the Food and Agriculture Organization of the United Nations provided technical support to the Summit, which comprised a 2-day Technical Workshop (22–23 August), a Nigeria Fisheries Day and Africa Fisheries Exhibition (24–25 August), and a Heads of State Summit (25 August) to endorse common African objectives for the future of fisheries and aquaculture in pursuit of the Millennium Development Goals.

The Summit achieved its main objectives, which were:

- to establish a shared understanding among key stakeholders from public, private and civil society sectors of the current status and likely future trends of African fisheries and aquaculture;
- to agree on priorities for investment in the future development of fisheries and aquaculture in Africa within the context of the NEPAD program;
- to agree future directions for research and capacity building in support of these investment priorities.

The main output of the Technical Workshop was the *NEPAD Action Plan for the Development of African Fisheries and Aquaculture* that was adopted by the workshop on 23 August 2005. The Technical Workshop was attended by over 120 experts from governments, research institutions, private sector companies and civil society organizations from 26 African countries, as well as from international organizations. The Action Plan was based on comprehensive regional consultations coordinated by NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) and prepared through a series of technical reviews of current status and likely future trends in inland fisheries, coastal and marine fisheries, and aquaculture in Africa. The Action Plan emphasizes the contributions by the fisheries sector to NEPAD's development objectives and seeks to strengthen the linkages between fisheries and other economic sectors in order to increase development benefits and improve sustainability.

The Action Plan provides a technically sound pan-African framework that allows the Regional Economic Communities (RECs) and their member states to identify and pursue specific interventions in support of their development priorities and ongoing initiatives. The Action Plan identifies the following priority areas where further investment can help to increase the development value of the fisheries sector.

For inland fisheries

- Improving fisheries governance and defining resource access, particularly for the poor
- Enhancing productivity through post-harvest management
- Sustaining production through integrated water resource management
- Supporting transboundary management
- Improving market access, particularly for small-scale producers, processors and traders
- Promoting enterprise development through enabling institutions and policy frameworks
- Strengthening consideration of inland fisheries in national and regional policies and actions on food security

For coastal and marine fisheries

- Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production
- Building capacity of African countries to harness the full benefits of marine and coastal fisheries
- Improving fisheries governance and participatory management
- Improving management of the coastal and marine environment
- Strengthening the access of African fisheries to regional and international trade in fish products
- Supporting post-harvest activities through adequate investments and policies
- Promoting enterprise development through enabling institutions and policies
- Strengthening consideration given to coastal and marine fisheries in national and regional policies and actions on food security

For aquaculture

- Developing sector-wide strategies at national level for expansion and intensification of aquaculture
- Supporting priority aquaculture zones
- Encouraging private sector investment across the sector
- Applying proven technologies to increase production
- Maintaining the competitive advantage that Africa's environment provides for aquaculture production
- Harnessing the opportunities for small and medium-scale enterprise development provided by expanding domestic markets for fish, including growing urban demand
- Supporting the emerging regional trade in aquaculture products
- Harnessing the opportunity of expanding export markets for high-value products to increase investment in African aquaculture production and processing
- Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security
- Exploiting the potential of aquaculture production to contribute to food security programs

If investments are made across these areas it is projected that the stagnating or declining fishery production in the region can be stabilized and, in a few cases, expanded. By improving processing and access to regional and global markets through improved policies and public-private partnership investments in quality control capacity, market information systems and sector management, it is expected that their contributions to socioeconomic development can be enhanced and diversified. In the case of aquaculture, substantial growth in sustainable production can be achieved.

Based on this pan-African framework, the Technical Workshop further identified specific interventions at the level of RECs and their member states that can be pursued in the near term. Building on and supporting ongoing programs and initiatives, these interventions emphasize opportunities for exchanging lessons and expertise, focusing on comparative advantages of zones of innovation and growth, and realizing synergies from regional and cross-sectoral approaches.

On 25 August 2005, under the chairmanship of His Excellency, President Olusegun Obasanjo of Nigeria, the Heads of State Summit discussed and adopted *The Abuja Declaration on*

Sustainable Fisheries and Aquaculture in Africa. The Summit was attended by the Vice President of The Gambia and Ministers from 10 African countries representing their Heads of State or Governments, as well as over 400 observers and invited guests. In the Abuja Declaration, the Heads of State expressed their strong commitment to promoting the sustainable development of African fisheries and aquaculture through leadership and support in the following areas:

- regional cooperation through NEPAD, regional economic bodies and regional fisheries management organizations;
- implementation of the FAO Code of Conduct for Responsible Fisheries (CCRF);
- introduction of rights-based fisheries and taking steps to control fleet and fishing capacity;
- participation of fishing and fish-farming communities, civil society and stakeholder organizations in policymaking, planning and implementation processes;
- integrating fisheries and aquaculture in national and regional economic policies, strategies, plans and investment portfolios;
- fostering the development of an appropriate investment climate for fisheries and aquaculture, private investors and strategic public sector investments;
- harnessing the potential and entrepreneurship of small-scale fishers, fish farmers, fish traders and service providers and their associations, including women entrepreneurs;
- fostering small, medium and large-scale aquaculture production in a sustainable and environment-friendly manner compatible with the rational use of land and water resources and evolving market opportunities;
- strengthening human and institutional capacity at national and regional levels with particular emphasis on training institutions, transferring appropriate technologies and knowledge to small producers and ensuring a rational and scientific basis for management decisions and design of programs;
- conserving and rehabilitating aquatic environments and habitats essential to living aquatic resources and aquatic biodiversity;
- promoting trade in artisanal and industrial fish products to respond to regional and global market opportunities for African fish products.

SECTION 1

The Technical Workshop on New Directions for Fisheries and Aquaculture in Africa

Chapter 1 Introduction

African fisheries and aquaculture are at a turning point. The fish sector makes vital contributions to the food and nutrition security of 200 million Africans and provides income for over 10 million engaged in fish production, processing and trade. Moreover, fish has become a leading export commodity for Africa, with an annual export value of US\$2.7 billion. Yet these benefits are at risk as the exploitation of natural fish stocks is reaching its catch limits and aquaculture production has not yet fulfilled its potential.

Strategic investments are needed urgently to safeguard the future contribution of Africa's fish sector to poverty alleviation and regional economic development. Broadly, investment is needed: (i) to improve the management of natural fish stocks; (ii) to develop aquaculture production; and (iii) to enhance fish trade in domestic, regional and global markets. In support of this investment, capacity needs to be strengthened at regional and national levels for research, technology transfer and policy development. As a first step, stakeholders in the region need to build a common and strategic understanding of the importance of fisheries and aquaculture for Africa's development and the challenges being faced by the sector.

The NEPAD-*Fish for All* Summit was the first high-profile Africa-wide event to draw global attention to the vital role of fisheries and aquaculture in meeting Africa's development agenda. The New Partnership for Africa's Development (NEPAD) Secretariat, the WorldFish Center and the Food and Agriculture Organization of the United Nations (FAO) accepted the invitation from His Excellency, President Olusegun Obasanjo of Nigeria, Chairman of NEPAD and Chairman of the *Fish for All* Initiative, to hold this event in Abuja, Nigeria on 22–25 August 2005. It comprised a 2-day Technical Workshop, a Nigeria Fisheries Day and Africa Fisheries Exhibition, and a Heads of State Summit to endorse common African objectives for the future of fisheries and aquaculture in pursuit of the Millennium Development Goals.

The Summit built upon similar events held in Asia in 2002 and 2003 under the *Fish for All* Initiative of the WorldFish Center. *Fish for All* is designed to build greater international commitment to addressing the challenges facing fisheries and in Africa works in support of NEPAD's development agenda. The Summit highlighted how investments in fisheries development can help African countries and their international partners to achieve their commitments to the UN Millennium Development Goals and the World Summit on Sustainable Development (WSSD) Plan of Implementation. The Summit supported NEPAD's role as a catalyst and facilitator of Africa's socioeconomic transformation agenda by bringing together key stakeholders from African Union member states, Regional Economic Communities (RECs), civil society, scientific institutions and international organizations.

Africa's Fisheries and Aquaculture

Africa produces 7.31 million t of fish each year. Of this 4.81 million t is from marine fisheries and 2.5 million t is from inland fisheries. While capture fisheries rose steadily throughout the 1980s and 1990s they have stagnated since then, reaching about 6.85 million t in 2002. Aquaculture on the other hand has risen, but slowly, and only in Egypt has growth achieved the rates of increase seen in other parts of the world, rising from 85 000 t in 1997 to 376 000 t in 2002. These trends combined with population growth mean that per capita consumption of fish in

Africa is low and stagnating, and in sub-Saharan Africa specifically, per capita consumption has fallen in the past 20 years. In a recent study by the International Food Policy Research Institute (IFPRI) and WorldFish Center, analyzing future demand and supply of fish, suggested that if per capita consumption is to be maintained at present levels up to the year 2020, capture fisheries will need to be sustained and where possible enhanced, and aquaculture developed rapidly, with an increase of over 260% in sub-Saharan Africa alone over the course of the next 15 years.

While these trends underline the enormous internal demand for fish in Africa, they also highlight both the importance of managing capture fisheries more effectively so that their full development potential can be achieved and sustained, and the urgent need to foster more rapid development of aquaculture. For capture fisheries, there is growing recognition that improved governance systems for fisheries resources and better management of the resource base upon which they depend are needed for sustainable use, while carefully targeted investments in infrastructure and marketing are needed if the full value of these resources is to be realized by the local, national and regional economies.

In addition, studies by FAO have shown that there is considerable physical potential to respond to the growing demand for fish by improving aquaculture production. For sub-Saharan Africa alone, it is estimated that 9.2 million km², or 31% of the land area, is suitable for smallholder fish farming. If yields from recent smallholder development projects can be replicated elsewhere, only 0.5% of this area would be required to produce 35% of the region's increased fish requirements up to the year 2010. At present, however, this potential for aquaculture remains largely untapped: by 2002, total aquaculture production in sub-Saharan Africa was only 79 500 t (0.15% of world production), yields in most countries remain low, commercial operations have yet to develop in many areas, and fish farmers are relatively few in number. However, the main economic parameters are starting to change and opportunities for aquaculture are opening up. With growing urbanization, improved market integration and the concurrent supply crisis from capture fisheries, small and large-scale investors are gaining interest in aquaculture production. There is an urgent need to develop guidelines and policies that create a conducive aquaculture investment climate and at the same time provide safeguards against environmental and social risks.

Trade in fish products has increased substantially over the past two decades and African fish exports were valued at US\$2.7 billion in 2001, from a total global value of US\$56 billion. Much more can be done to foster markets for African fish products, both within the region and globally. In several countries, fish exports to European and other overseas markets are now contributing significantly to national economies. In a relatively short time, the fish processing and exporting industry has acquired access to tightly regulated markets by meeting international Hazard Analysis and Critical Control Point (HACCP) and sanitary and phytosanitary (SPS) standards. There is great potential to learn from these success stories and build the capacity of a wider spectrum of small and medium-sized enterprises to participate in these growth opportunities. At the same time, trade relations with importing countries need to develop further to stimulate the growth of value-adding industries in Africa. In marine fisheries, arrangements that regulate the access of foreign fleets to African fish stocks need to be considered from a long-term perspective on fish supply and economic development opportunities. The growing export orientation of many African fisheries has also given rise to concerns about the implications for local food and nutrition security, particularly in view of growing hunger and malnutrition as highlighted by the Millennium Development Goals. Clearly, the implications of accelerated fish trade for poverty and food security need to be fully understood so that the potential of trade as a

stimulus to fisheries development can be effectively harnessed. Importantly, this will include increased attention to domestic and regional markets in addition to exports to industrialized countries. Trade of fish between African countries is an important, if often unreported, sector that provides affordable fish products to millions of consumers across the continent. It is estimated to absorb up to 50% of fish catches in some inland fisheries and it is widely acknowledged that better processing, improved transport and marketing, and more conducive regional trade relations could increase the contribution of this trade to the regional economy and food security. Gaining a wider and more balanced perspective on opportunities for trade at all levels will be an important step towards maximizing the development impact of fish exports to regional and global markets.

The NEPAD-*Fish for All* Summit

Against this background, there is growing international interest in supporting greater investment in the development of sustainable fisheries and aquaculture in Africa within a NEPAD framework. Accordingly, NEPAD, the WorldFish Center and FAO accepted the invitation of His Excellency, President Obasanjo to hold a NEPAD-*Fish for All* Summit in Abuja, Nigeria on 22–25 August 2005.

The objectives of the Summit were:

- to establish among key stakeholders from public, private and civil society sectors a shared understanding of the current status and likely future trends of African fisheries and aquaculture;
- to agree on priorities for investment in the future development of fisheries and aquaculture in Africa within the context of the NEPAD program;
- to agree future directions for research and capacity building in support of these investment priorities.

The Summit week took the following format:

Dates	Event
22–23 August	Technical Workshop: New Directions for Fisheries and Aquaculture in Africa
24 August	Nigeria Fisheries Day and Africa Fisheries Exhibition
25 August	NEPAD- <i>Fish For All</i> Summit

The 2-day Technical Workshop reviewed and amended the draft *NEPAD Companion Document on Fisheries* and the draft *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*. It built on technical papers developed through the NEPAD-WorldFish regional consultation process during March–June 2005. Participants included senior officials, specialists and development agents from African Union member states involved in fisheries and aquaculture, and the related areas of rural development, food security, environment and social equity.

The Nigeria Fisheries Day, organized by the Government of Nigeria, included a conference and exhibition on the development of fisheries and aquaculture in Nigeria.

An Exhibition of African fisheries and aquaculture took place at the Summit venue on 24–25 August. NEPAD member countries, NGOs, the African private sector and selected international partners showcased achievements in fisheries and aquaculture in the region with the objective of stimulating bilateral cooperation, trade and knowledge exchanges between African countries.

The NEPAD-*Fish for All* Summit on 25 August was chaired by His Excellency, President Obasanjo and attended by the Vice President of the Republic of The Gambia and Ministers in charge of fisheries from 10 African countries representing their Heads of State or Governments. The Summit received outcomes from the Technical Workshop and adopted *The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa*.

Chapter 2 The Comprehensive Africa Agriculture Development Programme (CAADP): The Role of Fisheries for Achieving CAADP Objectives

The Comprehensive Africa Agriculture Development Programme (CAADP) is a framework for pursuing agricultural growth, food security and rural development in Africa. Initiated under the aegis of NEPAD (New Partnership for African Development) and endorsed by African Heads of State and Governments, CAADP provides a point of departure for a common agenda reflecting a broad agricultural vision for Africa. It is a manifesto of the commitment which African governments have towards addressing development priorities through support to the agricultural and fisheries sectors.

NEPAD, supported by its development partners, seeks to harness the contributions of Africa's largest economic sector, agriculture, to help build self-reliant and productive economies throughout the continent. NEPAD envisages agriculture-related activities delivering broad-based economic advancement on a more significant scale than other sectors such as manufacturing, petroleum, minerals and tourism.

CAADP focuses on the implementation of agricultural development plans. It aims to identify actionable programs at the regional level and fast-track them by mobilizing both finance and expertise. These programs will be implemented in cooperation with the RECs, as well as with individual countries.

CAADP has set itself specific targets, to be achieved by 2015. These are:

- improving agricultural productivity and reaching consistent annual growth rates of 6% within the agricultural sector;
- focusing more attention on the empowerment of small-scale farmers and women;
- promoting dynamic agriculture markets within countries and regions;
- accelerating the integration of farmers into a market economy and improving access to markets to become net exporters;
- ensuring a more equitable distribution of wealth;
- becoming a strategic player in agricultural science and technology development;
- improving environmental awareness and sustainable management of resources.

The CAADP Pillars

In order to accomplish these goals, CAADP has identified four investment areas or pillars where increased investment can generate development and wealth in the near and medium term whilst laying the foundation for long-term sustainable growth. In each of these areas, fisheries and aquaculture make significant contributions and offer scope for further investments to increase value and improve sustainability.

Pillar 1: Extending the area under sustainable land management and reliable water control systems

Africa, particularly in the sub-Saharan region, lags behind other regions of the world in irrigated arable land, soil nutrient reserves and fertilizer productivity. Building up soil fertility and

increasing the areas equipped with irrigation will provide African farmers with the opportunity to raise output and contribute to the reliability of food supplies. Well-managed inland fisheries and aquaculture can contribute significantly to improving integrated water management in the region. Aquaculture has been proven to improve water management practices at the community and farm level, thus increasing returns from crop production in drought-prone regions in Southern Africa. Inland fisheries provide entry points for enhancing water management at basin and community levels, increasing water productivity and diversifying the income base for communities. In both areas, much more can be done to increase productivity and flow of economic and environmental benefits. It is essential to develop integrated approaches across fisheries, agriculture and natural resources sectors.

Pillar 2: Improving rural infrastructure and trade-related capacities for market access

Improvements in roads, storage, markets, packaging and handling systems, and input supply networks are vital to raising the competitiveness of local production in domestic, regional and export markets. A strong emphasis needs to be laid upon the development of the supply chain across most agricultural sub-sectors; investment in this area will stimulate the volume of production and trade. The Agribusiness, Supply Chain and Quality Control Initiative and the Regional Trade Facilitation Initiative were developed to help instigate these changes. In many African countries, the fisheries sector has been a catalyst for market-driven development. In addition to the increasing export of fish and fish products to global markets, domestic and regional trade of fish products, especially from small-scale capture fisheries, has opened many remote areas to commercial development, in the process enhancing the market involvement of rural producers. In order to further increase the value of fish production in the region, it will be important to pursue this investment area and link the fisheries sector closely with CAADP initiatives on infrastructure and market access.

Pillar 3: Increasing food supply and reducing hunger

CAADP recognizes the critical importance of improving food security based on the recognition that one-third of the African population suffers from chronic hunger and malnutrition. Two current programs promote investments to reduce the growing frequency and severity of food emergency crises, i.e. the Regional Strategic Food Reserves and Risk Management Systems Program and the home-grown School Feeding Program, as well as the African Nutrition Initiative. Capture fisheries in inland and coastal waters supply protein and other vital nutrients to the diets of 200 million Africans through well-established local and regional distribution networks. These market chains need to be supported and where possible enhanced to ensure continued supply of high quality and affordable fish products to food insecure populations. Aquaculture, although still at a low level of production in much of sub-Saharan Africa, is emerging as an alternative source of fish from integrated production systems on-farm and in rural markets. In addition, more commercialized aquaculture production is emerging in peri-urban zones targeting growing demand for fish among urban populations.

Pillar 4: Agricultural research, technology dissemination and adoption

It is widely recognized that the most effective way to reduce poverty and improve food security in the long term is to raise the productivity of resources that poor people depend on for their livelihood. In the case of most African countries, these resources are agricultural land and labor. Thus, the option of agriculture-led development and the CAADP objective of an overall 6% agricultural growth require a more rapid and sustained increase of productivity in the agricultural sector. Currently, CAADP pursues three programs in this area: the Multi-country Agricultural

Productivity Program, the Pan-African Cassava Initiative and the Pan-African NERICA (Rice) Initiative. Fisheries and aquaculture provide a further area where research and technology can make a big difference in increasing productivity and improving sustainability. Aquaculture research, technology development and transfer are already making a growing contribution to increasing fish supply and have the potential to widen their impact substantially in the future. The recent success of commercial aquaculture in Egypt, which today contributes 50% of the country's domestic fish supply, provides an example of the opportunities that exist within Africa if such technologies are widely distributed. Likewise, sustained production of fish from natural stocks can be enhanced through improved integration of research and science into management of fisheries resources.

Cutting across these four pillars and supporting implementation of the CAADP programs, the critical areas of capacity building, information and knowledge systems, governance and policy processes need to be addressed. This includes the strengthening of Africa's research and training institutions through upgrading linkages and specialization to improve their impact on agricultural development in the region. CAADP further recognizes the importance of enhancing information and knowledge support systems for the formulation and implementation of agricultural sector strategies at country and regional levels. In order to ensure consistency of long-term development efforts, CAADP seeks to align its programs and priorities with ongoing national and regional policy processes, such as the Poverty Reduction Strategy Papers that many African countries are now developing.

In all these areas, fisheries and aquaculture have achieved successes at local and national levels that can be scaled-up regionally. The NEPAD Secretariat has an important role to play in achieving this goal as a clearinghouse for resources and expertise. In this capacity, the Secretariat will advocate the mobilization of resources and build technical and financial relationships between development partners. NEPAD will be able to use its political capital to facilitate access by African countries to a much larger pool of investment finance and technical expertise than they could muster individually. In addition, coordination and leadership by NEPAD will lead to 'benchmarking' and thus encourage mutual learning and exchange across countries. This will speed up the spread and adoption of successful development models and best practices.

With growing demand for fish and stagnating supply figures, there is an urgent need to now build on these success stories in developing a regional approach to fisheries development. In its efforts to identify opportunities arising from particular sectors and initiatives, the CAADP Action Plan has recognized the importance of fisheries in the region and the potential for development of aquaculture. There is considerable potential to include a Fisheries and Aquaculture Development Plan amongst the 'flagship programs' of the Action Plan to further guide the fisheries sector's key contributions to the CAADP priorities.

Importance of fisheries for other NEPAD programs

Fisheries development can also contribute to objectives and programs in other NEPAD pillars. The NEPAD Market Access Initiative emphasizes the competitiveness of African economies in global markets and the enhancement of intra-African trade. In both areas, fish has become a leading commodity, with an export value of US\$2.7 billion annually for Africa as a whole. The full potential for a vibrant fish trade in and beyond Africa has, however, not yet been realized. With fish demand projected to rise substantially on the continent as well as globally, the long-term

prospects for African fish products are very promising. Building on the successes of fish processors and exporters in several countries, the private sector is now presented with tremendous opportunities in capture fisheries as well as the aquaculture sector. Further investments need to be directed towards assessing fish supply and demand trends, developing conducive fish trade policies, improving market infrastructure and building capacity among fish producers and processors for continued technical innovation, market exploration and self-regulation. These investments should include public-private partnerships that will support business development across the continent while also safeguarding wider poverty reduction objectives through involvement of small-scale entrepreneurs and attention to regional markets.

Further, the *NEPAD Environment Action Plan* has prioritized the “conservation and sustainable use of marine, coastal and freshwater resources” as well as “cross-border conservation or management of natural resources”. Both objectives are of critical importance to the future of fisheries and aquaculture. Investments into developing environmental safeguards for the expansion of aquaculture and improving the management of wild fisheries resources will be key contributions by the fisheries sector to overall environmentally sound management of aquatic resources.

In view of these multiple contributions to the NEPAD agenda there is growing recognition that fisheries and aquaculture can provide an important area for investments in pursuit of the NEPAD objectives and the broader Millennium Development Goals. If this investment is to achieve an effective return it will, however, need to be targeted carefully at those priorities that will have maximum short and medium-term impact while leveraging longer-term action and investment by the private sector. This will in turn need to be underpinned by major investments to build capacity for planning, research and technology transfer through a strengthened network of training and research facilities around the continent.

Chapter 3 The NEPAD-*Fish for All* Consultative Process

The global *Fish for All* Initiative aims to strengthen awareness of fisheries development issues and in particular the critical role fisheries play in providing economic opportunities and food security for the world's poor. As *Fish for All* extended its work to include a regional initiative for Africa in 2005, it chose to work in support of NEPAD and in particular the CAADP, which had already recognized the importance of the aquatic food sector for achieving its objectives. The NEPAD-*Fish for All* Initiative provides a pan-African perspective on the sustainable development of fisheries and aquaculture in the region. In preparation for the Abuja NEPAD-*Fish for All* Summit, comprehensive regional consultations were undertaken to develop a sound technical understanding of the current trends and likely future scenarios in the main areas of fisheries, i.e. inland fisheries, coastal and marine fisheries, and aquaculture. These consultations built on existing knowledge and expertise in science, management and policy in key institutions and countries in the region. Additional technical advice from international experts complemented these views.

The consultation process proceeded in four stages leading to the adoption of the Action Plan at the NEPAD-*Fish for All* Summit.

1. Preparation of Technical Review Papers by regional teams of fisheries experts, in the areas of inland fisheries, coastal and marine fisheries, and aquaculture.
2. Regional Stakeholder Workshops on each of these production systems, to discuss the Technical Review Papers and develop recommendations for action.
3. Preparation of a draft *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*, integrating the priorities and recommendations of the Technical Review Papers and Regional Stakeholder Workshops.
4. Regional Technical Workshop at the NEPAD-*Fish for All* Summit to discuss and adopt the Action Plan and identify sub-regional priorities and implementation mechanisms.

Stage 1

Teams of regional experts in the areas of inland fisheries, coastal and marine fisheries, and aquaculture were identified to prepare technical reviews of the current status and likely future trends in these sub-sectors. Issues addressed in these reviews included economic production and value, environmental trends, trade and markets, governance and policy frameworks, research and management capacity, social equity, food security contributions and linkages to other economic sectors. Each team solicited additional inputs from scientists, fisheries managers and other stakeholders and produced a Technical Review Paper which was circulated widely for comments.

Stage 2

In order for regional stakeholders to discuss these technical reviews and assess their implications for development interventions, regional consultative workshops were held for each of the sub-sectors as follows:

- inland fisheries – Lilongwe, Malawi (30–31 May 2005)
- coastal and marine fisheries – Dakar, Senegal (8–9 June 2005)
- aquaculture – Cairo, Egypt (27–28 June 2005)

In each case, participants represented a wide range of stakeholders, including national governments, RECs, civil society organizations, private sector companies, research institutes and international organizations. In total, 64 participants from 21 African countries attended these workshops. On the basis of the technical reviews, the workshops developed recommendations for interventions to support the further development of fisheries and aquaculture in Africa. These recommendations were grouped around the CAADP pillars (productivity, markets and trade, food security, and research and technology) to ensure alignment with NEPAD's programs. They expressed the priorities and development aspirations of the region's stakeholders within a technically sound framework.

Stage 3

Based on the recommendations and discussions from these consultative workshops, a first draft of the NEPAD Action Plan was developed. The Action Plan combines the priorities of each of the three sub-sectors and looks for cross-cutting issues and areas of synergy. The draft version of the Action Plan was widely circulated among workshop participants as well as the wider fisheries stakeholders and researchers in the region and internationally. A revised draft Action Plan was then prepared for the Technical Workshop at the Abuja NEPAD-*Fish for All* Summit.

Stage 4

The Technical Workshop on New Directions for Fisheries and Aquaculture in Africa was held on 22–23 August 2005 as part of the Abuja Summit. It brought together over 100 fisheries and aquaculture experts from Africa as well as representatives of international organizations. On the first day, participants reviewed the draft Action Plan and suggested further amendments. The revised Action Plan was then adopted by the workshop.

The second day of the workshop focused on identifying, from among the comprehensive program offered in the Action Plan, specific priorities and vehicles for immediate action at sub-regional level. For this purpose, delegates participated in working groups according to regional affiliation, corresponding with the following RECs: SADC (Southern African Development Community), COMESA (Common Market for Eastern and Southern Africa), ECCAS (Economic Community of Central African States) and ECOWAS (Economic Community of West African States).

In developing their list of priorities, the working groups focused on the following four areas: (1) productivity of fisheries (inland, marine and aquaculture); (2) environmental protection and sustainability; (3) market development and trade; and (4) food and nutritional security. For each priority area, participants identified available mechanisms and ongoing programs for implementation. From this process, a roadmap for the implementation of regional agendas emerged. Details of the outputs of the working group sessions are given in Chapters 5 and 6.

The Summit week closed with a 1-day Heads of State Summit hosted by the Government of Nigeria on 25 August 2005, which brought together 400 participants from across the continent. The major conclusions from the technical meetings were presented to a wide audience, and the contribution of fisheries and aquaculture to NEPAD's agenda was highlighted. Under the chairmanship of His Excellency, President Obasanjo and with the participation of the Vice President of The Gambia and 10 Ministers representing Heads of State of African countries, the Summit adopted *The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa*, endorsing the NEPAD Action Plan and calling for sustained commitment to the goal of realizing the potential that fisheries and aquaculture present for Africa's development.

The NEPAD-*Fish for All* Initiative has thus achieved a number of objectives. Firstly, it has created a shared understanding among stakeholders of the development options for African fisheries and aquaculture to increase the sector's contribution to poverty reduction and the achievement of the UN Millennium Development Goals. Secondly, it has facilitated the development of the *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*, a document that identifies areas of investment for inland and marine fisheries, and aquaculture, along with priority actions for each. Within the framework of the Action Plan, it has generated a consensus on more specific areas in need of particular attention at sub-regional level, which will provide a sound foundation for securing future investments in fisheries and aquaculture in support of the NEPAD Action Plan. Finally, it has helped stimulate the development of the Abuja Declaration which, for the first time, expresses the political commitment of African leaders to promote the sustainable development of fisheries and aquaculture in the region.

Chapter 4 *The NEPAD Action Plan for the Development of African Fisheries and Aquaculture*

The *NEPAD Action Plan for the Development of African Fisheries and Aquaculture* identifies areas of investment for inland fisheries, coastal and marine fisheries, and aquaculture, along with priority actions for each. These investment areas reflect the strategic thrusts of NEPAD's programs, based around four themes: improved productivity, environmental sustainability, market development and trade, and food security and nutrition. Ultimately the specific priorities for each Regional Economic Community (REC), and each country, will need to be decided at the sub-regional and national level. The Action Plan is designed to guide this debate and encourage international investment in support of these priorities.

The composition of the NEPAD Action Plan was agreed during the NEPAD-*Fish for All* Summit week following extensive discussions amongst participants. The discussions were based on a draft version of the NEPAD Action Plan, a template document that emerged from the regional consultative process during the first half of 2005, as outlined in Chapter 3. The participants at the Summit proposed a number of changes to the draft NEPAD Action Plan, in particular noting areas that had not been given sufficient emphasis in the initial document. The areas noted by participants are summarized below:

1. Improved productivity

The importance of networking between countries to share expertise, technology and experience was considered to be important, including the role that linkages between NEPAD and RECs could play within Africa. Strengthening cooperation between the public and private sectors at country and regional levels was also seen as important, not least for operationalizing the comanagement and governance aspects of fisheries. The need for harmonization at the regional level was also emphasized.

2. Research and development

Actions in this area were identified as key for achieving objectives, and the importance of basic research was emphasized. In particular, governments should recognize the importance of investing in research capacity and the research process in the fisheries sector.

3. Market development and trade

It was concluded that increased access to markets needed to be promoted in all sectors. The importance of information and market system development was noted, and it was felt that there should be a particular effort to identify regional market opportunities. The need to review fisheries agreements with foreign regions (e.g. the European Union) was highlighted, along with the issues of SPS measures and other standards. In these areas, capacity among African countries to realize full benefits from international markets needs to be strengthened.

4. Gender

Gender-specific aspects of fisheries should be made more explicit. There should be stronger focus on women's opportunities in trade and processing, and equal access to resources should be promoted.

5. Environmental sustainability

It was argued that the Action Plan had not placed enough emphasis on environmental issues. Attention was drawn to the relationship between aquaculture and the environment, and the need

for defining and promoting 'best practice'. For marine fisheries, the importance of reducing and managing by-catch was also mentioned.

6. Management

A number of management-related issues were recognized as requiring further consideration. The critical role of improved management within all sectors was discussed and the following areas were noted for specific attention: integrated coastal management; the role of participatory management; institutional and human capacity building; and the control of illegal fishing through management capacity.

7. Food and nutrition security

The socioeconomic role of small-scale and artisanal fisheries should also be accorded greater importance, including a clearer definition of options to improve resource access for fishers.

8. Use of the Action Plan

It was felt that the Action Plan provided a strategic regional framework rather than a practical development plan that could be implemented immediately at sub-regional or country level. It was recommended, therefore, that the Action Plan be linked quickly to ongoing programs at these implementation levels in order to add value through increased technical capacity and leverage for resource mobilization. The specific roles of NEPAD, RECs and country-level agencies in this process need to be clarified for each program or project to ensure subsidiarity and complementarity of efforts. An overview of risks and assumptions was suggested for inclusion, along with examples of good practice provided by specific success stories.

These issues were integrated into the final version of the Action Plan which is presented in Appendix 1. This version was adopted by all participants on 23 August 2005.

Outlined briefly below are the key investment areas identified by the NEPAD Action Plan for inland fisheries, coastal and marine fisheries, and aquaculture.

Inland Fisheries

Africa's inland fisheries provide employment and income and are a principal source of animal protein and essential micronutrients for millions of people across the continent. However, catches from many inland fisheries have reached their maximum capacity, while increasing competition for water is likely to be a major challenge in the future. To realize the potential of Africa's inland fisheries in a sustainable manner, an appropriate level of policy support and investment is required in different domains, including infrastructure and post-harvest facilities.

Investment Area 1. Improving fisheries governance and defining resource access, in particular for the poor

The value of Africa's inland fisheries will only be realized through more effective and equitable governance arrangements, including improved representation of fishing communities in decisionmaking processes and increased stakeholder capacity, supported by appropriate legislation.

Investment Area 2. Enhancing productivity through post-harvest management

The volume and value of fish products lost can be reduced by improving post-harvest technologies, and increasing investments into the rehabilitation of existing landing sites and

development of additional ones. Formal and informal financial support mechanisms for the post-harvest sector should also be prioritized.

Investment Area 3. Sustaining production through integrated water resource management

The long-term productivity of Africa's inland fisheries is dependent on maintaining the ecosystems on which they rely. Investments in land and water management that sustain aquatic resources (including inland fisheries) are urgently needed, together with water governance that provides for full integration of inland fisheries priorities in water resource management.

Investment Area 4. Supporting transboundary management

Sustainable management plans for transboundary resources require collaboration across national, state and provincial boundaries. Capacity to initiate or pursue such approaches needs to be developed, and institutions that can foster this supported.

Investment Area 5. Improving market access, in particular for small-scale producers, processors and traders

Investments are required to develop market information systems and build capacity, as well as to improve market infrastructures and communication and transport networks for artisanal fishers and small-scale traders. These interventions need to be supported by the promotion of fisheries products in international, regional and local markets.

Investment Area 6. Promoting enterprise development through enabling institutions and policy frameworks

Fishers and operators along the marketing chain need to be provided with training for enterprise management and marketing strategies. Access to financial institutions, in particular for small-scale operators and grass-root organizations, will have to be facilitated, as will provision of utilities, such as electricity and water, to remote fishing communities.

Investment Area 7. Strengthening consideration of inland fisheries in national and regional policies and actions on food security

The role of fish as a major source of animal protein and micronutrients has to be reflected in Africa's national food policy frameworks. The contribution of fish to food and nutritional security needs to be promoted by senior decisionmakers and supported at national and regional levels.

Coastal and Marine Fisheries

Coastal and marine fisheries provide over half of Africa's fish production. As efforts are made to increase the contribution of fisheries to the continent's development, it is essential to sustain and, where possible, enhance the benefits these fisheries provide. This will require considerable investment at multiple levels to address the increasing challenges faced by coastal and marine fisheries and the conflicts these generate, while a wide range of innovative investments are needed in order to, where possible, add value to the resources that are harvested.

Investment Area 1. Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production

Long-term fisheries management plans are needed, which recognize the transboundary nature of many stocks and the migratory nature of many fishing communities. This will require a

harmonization of laws and institutional frameworks, including the implementation of monitoring, control and surveillance (MCS) measures.

Investment Area 2. Building capacity of African countries to harness the full benefits of marine and coastal fisheries

At present, an important part of the fish harvested from African marine waters is neither caught by African boats nor processed within the continent. There is broad consensus that the capacities to reverse this situation need to be developed and investments to support this made. This will require public and private sector investment in boats and processing capacities and the general infrastructures of roads and ports to support this. These substantial investments will necessitate strong political support at national, regional and pan-African levels.

Investment Area 3. Improving fisheries governance and participatory management

To achieve improved governance, laws and legislative tools which allow for better representation of different stakeholder groups are required, in addition to comanagement reforms. Communication and education at all levels are essential.

Investment Area 4. Improving management of the coastal and marine environment

Integrated management must take into account the interactions within the sector between small-scale and larger-scale fisheries, and between the fisheries sector and other resource users. Rights-based management systems to address issues of access should be strengthened. These developments need to be supported by MCS measures, and the promotion of marine protected areas (MPAs).

Investment Area 5. Strengthening the access of African fisheries to regional and international trade in fish products

Further negotiation of fair and equitable fishing agreements, and more effective consideration of African fishery priorities and constraints within global trade negotiation processes are required. Capacities for quality control and certification need to be developed and strengthened. Access of small-scale coastal fishers to regional and international fish-trade markets needs to be improved.

Investment Area 6. Supporting post-harvest activities through adequate investments and policies

An efficient post-harvest sector needs to be developed, including improved infrastructure and equipment. Public sector investment will need to provide this in most cases. Public-private partnerships should be encouraged to expand research and development, particularly in relation to technology innovation and dissemination and technical support services.

Investment Area 7. Promoting enterprise development through enabling institutions and policies

African coastal fisheries display a number of comparative advantages. Seizing these opportunities requires programs and initiatives that will help small-scale operators acquire managerial skills and capacities that are urgently required to manage their businesses.

Investment Area 8. Strengthening consideration of coastal and marine fisheries in national and regional policies and actions on food security

The contribution of marine fisheries to food and nutritional security needs to be better understood and supported through more coherent policies, both at the national and regional

level. In this context, the substantial regional trade in 'low-value' fish and fish products, and its role in the nutrition of the poor, needs to be recognized and supported.

Aquaculture

Aquaculture has grown strongly in most regions of the world where the technical potential exists. This has not yet happened in sub-Saharan Africa, and Egypt is the only African country to have achieved the scale of expansion observed elsewhere in the world. However, there is now a growing recognition that the prospect of market-led growth, improved investment climate and broader regional integration, together with a more realistic understanding of the technical potential, provides substantial opportunities for aquaculture growth in Africa.

Investment Area 1. Developing sector-wide strategies at national level for expansion and intensification of aquaculture

A viable sector strategy at the national level will involve targeting support to the different needs of small, medium and large-scale aquaculture enterprises. It is essential that available lessons from other regions are utilized effectively, based on regional cooperation through RECs and NEPAD, and through strengthening international partnerships.

Investment Area 2. Supporting priority aquaculture zones

Priority areas with high potential for aquaculture are beginning to emerge. These include high priority resource systems, peri-urban zones, areas with existing processing capacity and clusters of rural aquaculture. These zones of current growth and innovation should be given immediate support to generate lessons, technologies and approaches for wider regional applications.

Investment Area 3. Encouraging private sector investment across the sector

The growing interest among private sector investors in aquaculture production needs to be supported and guided towards sustainable growth through enabling policies and sector management. Beyond this, public-private partnerships offer a variety of options to deliver support services and management functions that are critical for sector development, including information, research and development, monitoring, regulatory and financial support.

Investment Area 4. Applying proven technologies to increase production

A range of proven technologies exist in the region and elsewhere, yet there are constraints in availability and application of technology, including purchasing and operating costs, technical skills, disease and other risks in intensive systems, and biosafety concerns. Support is needed to improve information, dissemination, application and risk management capacity in the region.

Investment Area 5. Maintaining the competitive advantage that Africa's environment provides for aquaculture production

The relatively intact natural environment in most African countries offers a comparative international advantage for Africa as an aquaculture region. This advantage needs to be assessed in terms of resource value, production options and marketing strategies. Aquaculture growth strategies need to support the continued integrity of this environment.

Investment Area 6. Harnessing the opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including growing urban demand

There is a need to assess the range of products, seasonality, price elasticity and substitution effects in domestic markets, and to target aquaculture production, harvesting and marketing strategies accordingly. It is also necessary to assess the structure of urban fish and food markets and support peri-urban zones as priority aquaculture areas.

Investment Area 7. Supporting the emerging regional trade in aquaculture products

The current structure, volume and economics of fish trade between countries must be assessed. As aquaculture products increasingly enter these trade routes as fresh or processed products, these opportunities need to be supported through better cross-border information systems, conducive regulatory and policy frameworks and enterprise development support to women entrepreneurs in particular.

Investment Area 8. Harnessing the opportunity of expanding export markets for high-value aquaculture products

The emerging success of African aquaculture exports needs to be further supported through investments in policy, legal frameworks and support services. In particular, capacity for quality control has to be strengthened to meet the food safety and traceability requirements of international markets.

Investment Area 9. Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security

Successful examples of integrated aquaculture-agriculture need to be scaled-up and adapted for the region. At a commercial level, options for the intensification of integrated systems need to be explored. The viability of stocking small water bodies in food insecure dry regions should also be assessed.

Investment Area 10. Exploiting the potential of aquaculture production to contribute to food security programs

The nutrition benefits from fish consumption need to be documented and promoted through educational and health programs focusing on women as decisionmakers. Aquaculture production and marketing strategies should be adjusted to benefit vulnerable populations, and linked with food security and school feeding programs.

If investments are made across these areas, it is projected that the stagnating or declining fishery production in the region can be stabilized and even expanded. In the case of aquaculture, substantial growth in production can be achieved. To guide these investments and enhance sustainability of impact, several cross-cutting areas need to be supported. The Action Plan serves as an Africa-wide framework for developing specific interventions by stakeholders at REC and national levels, taking into account their ongoing initiatives and development priorities, and drawing on NEPAD-CAADP to enhance their impact. It is proposed that implementation of the Action Plan should follow a 'piloting' approach, with fast-track programs to be identified for immediate action.

Chapter 5 Regional Priorities Areas for Implementation of the NEPAD Action Plan

Using the NEPAD Action Plan as a pan-African framework, the workshop identified areas of short-term priority for action at sub-regional level. In recognition of the important role the Regional Economic Communities (RECs) play in specifying and implementing NEPAD's programs, participants proceeded to work in sub-regional groups organized around four RECs and including participants from neighboring countries and international organizations. The following groups were formed:

- Common Market for Eastern and Southern Africa (COMESA)
- Economic Community of Central African States (ECCAS)
- Economic Community of West African States (ECOWAS)
- Southern African Development Community (SADC)

Each working group identified specific priority areas from among the comprehensive pan-African list of recommendations offered by the NEPAD Action Plan. Working groups were guided by their regional and national development priorities and ongoing programs in the fisheries and aquaculture sectors. In many cases, opportunities for adding value to these programs through regional exchange of expertise, technology and capacity building could be identified.

The following provides a summary of the findings of each working group. A full account is given in table format in Appendix 3. Corresponding to the NEPAD Action Plan, working groups organized their discussions around the four NEPAD-CAADP objectives: (i) increased productivity; (ii) environmental sustainability; (iii) market development and trade; and (iv) food and nutrition security. In each area, priorities were identified for inland fisheries, coastal and marine fisheries, and aquaculture, and for cross-cutting issues with impacts in each sub-sector.

Common Market for Eastern and Southern Africa (COMESA)

The working group noted the importance of building the capacity of African countries to better harness the benefits provided by marine and coastal fisheries. To accomplish the same goals in the aquaculture sector, the group identified three general priorities: (i) encouraging investment from private sector companies; (ii) developing sector-wide strategies at national level for the expansion and intensification of aquaculture; and (iii) applying proven technologies to increase production.

In order to promote environmental sustainability, the group recommended integrated water resource management as a means for sustaining production of inland fisheries.

In order to further market development and trade of inland fisheries, it is critical to improve market access, particularly for small-scale producers, processors and traders. The group further observed that strengthening the access of African fisheries to regional and international trade in fish products will achieve similar goals for marine fisheries. It noted two priorities for expanding markets and trade in the aquaculture sector: (i) harnessing the opportunity of expanding export markets for high-value aquaculture products to increase investment in African aquaculture production and processing; and (ii) supporting the emerging regional trade in aquaculture products.

Economic Community of Central African States (ECCAS)

The ECCAS group noted that the priority for marine fisheries is increasing production through the preparation and implementation of long-term fisheries management plans. Such efforts must be supplemented by supportive policies for sustained production, notably through the implementation of sub-regional monitoring and control systems. In order to achieve similar goals for inland fisheries, the group promoted the expansion of post-harvest management to enhance productivity and availability of output. For the aquaculture sector, two priorities were identified: (i) developing sector-wide strategies at national level for the expansion and intensification of aquaculture; and (ii) supporting priority aquaculture zones through encouraging private investment and the application of proven technologies.

In the area of environmental sustainability, the ECCAS group prioritized integrated water resource management as a means of sustaining production from inland fisheries. Furthermore, the group emphasized the importance of supporting transboundary management.

To further market development and trade for inland fisheries, ECCAS identified as a priority the promotion of enterprise development through enabling institutions and policy frameworks. The group also noted that it was vital to strengthen the access of fisheries and aquaculture to regional fish trade. For aquaculture specifically, ECCAS prioritized the need to harness opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including a growing urban demand.

Economic Community of West African States (ECOWAS)

The group identified the need to strengthen capacity at national level for harnessing the full development benefits of marine fisheries as a first priority. This needs to be supported through improved fisheries governance and increased participatory management. These investments need also to be extended to inland fisheries. To achieve the same goals for the aquaculture sector, the group recommended encouraging investment from private sector companies through enabling policies.

In order to increase the environmental sustainability of inland fisheries, ECOWAS delegates advocated the protection of natural ecosystems through integrated water resource management. For both inland and marine fisheries, the group stressed the need for restoration of damaged ecosystems.

To spur market development and trade for inland and marine fisheries, the group listed three priorities: (i) improving market access, particularly for small-scale producers, processors and traders; (ii) promoting enterprise development through enabling institutions and policy frameworks; and (iii) supporting post-harvest activities through adequate investments and policies. In order to achieve the same goals for the aquaculture sector, participants emphasized the importance of supporting the emerging regional trade in aquaculture products.

In the area of food security and nutrition, the group noted the increasing importance of aquaculture in contributing to food supplies. To support this, they recommended strengthening consideration of aquaculture in national and regional policies and actions on food security.

Southern African Development Community (SADC)

In order to improve productivity in inland fisheries, the group identified the need for better governance of fisheries and a clearer definition of resource access, particularly for the poor. Participants also emphasized the need for improved post-harvest management. For marine fisheries, the priority is to prepare and implement long-term management plans, supported by government policies for sustained production. In the aquaculture sector, the group emphasized the application of proven technologies as a means to increase production. They also stressed the necessity of building capacity in African countries in order to harness the full benefits of marine and coastal fisheries.

To achieve environmental sustainability, it was recommended that environmental management of capture fisheries resources in inland, coastal and marine environments in Southern Africa should be improved. Likewise, an expanding aquaculture sector needs to be supported through enhanced capacity for environmental management.

In order to expand market development and trade across the fisheries and aquaculture sector, market access for producers, traders and processors, including small-scale operators, should be increased. This needs to be further supported through enterprise support programs and the development of enabling institutions and policy frameworks.

In the area of food security and nutrition, the SADC group emphasized the emerging role of aquaculture in contributing to food supplies. They recommended strengthening consideration of aquaculture in national and regional policies and actions on food security.

Chapter 6 Regional Opportunities and Challenges for Fast-track Implementation

Focusing on the regional priority areas developed in the previous session, the regional working groups proceeded to identify available institutional resources and ongoing programs and initiatives that could be harnessed to implement and support priority actions. Where these resources were not considered sufficient, the groups proposed additional areas for training and capacity building to enable timely implementation of their priority agendas.

The following provides a summary of the findings of each working group. A full record of their suggestions is given in Appendix 3.

Common Market for Eastern and Southern Africa (COMESA)

In order to advance their regional fishery agenda, the COMESA group identified multiple processes and initiatives required. Foremost among these was the need to develop partnerships with the private sector, as well as the inclusion of ongoing private sector initiatives in existing regional fora. To accomplish this goal, NEPAD, national governments and private partners must work to strengthen existing private-public endeavors. Furthermore, NEPAD and COMESA should facilitate the formation of strong private-sector associations. An important starting point for such relationships is in the area of fish marketing and trade.

In order to achieve progress, it is vital to strengthen existing national strategies and action plans. National governments, regional bodies, NEPAD and COMESA should work together to enhance, harmonize and support these plans. Building on political goodwill between countries in the region, existing legal frameworks related to access and trade need to be expanded and targeted to the fishery sector. NEPAD, COMESA and FAO should direct their efforts towards scaling-up existing frameworks and harmonizing similar structures throughout the region.

To enhance environmental sustainability of the sector, both national governments and the private sector can compile details of existing schemes and experiences in order to better assess the impact of aquaculture and fisheries and integrate lessons into existing environmental legislation and regulatory frameworks.

COMESA highlighted the need to create synergies between existing protocols and agreements on fisheries. This will be made possible by continued political goodwill between the governments of member states and COMESA. Furthermore, the working group highlighted the importance of building upon the existing Code of Conduct for Responsible Fisheries (CCRF) as defined by FAO. Expansion can be achieved if NEPAD, FAO, COMESA and member states can create awareness among stakeholders, and governments can include CCRF principles in their national plans. Finally, as a related topic, it is necessary to use the regional plan for addressing illegal, unregulated and unreported (IUU) fishing as currently exists for Lake Victoria as a model for developing similar plans in the region. FAO and COMESA can work together to make regional integration possible.

Ongoing initiatives on the development of fisheries and aquaculture in reservoirs and river basins need to be strengthened and knowledge and experience made available to the wider

region. NEPAD and the Nile Basin Initiative need to facilitate exchange of expertise among member states to pursue this important area of fisheries expansion effectively.

For coastal and marine fisheries, existing marine protected areas (MPAs) need to be further developed and capacity for their management needs to be strengthened. Available mechanisms for this include the ongoing capacity building program by the World Wide Fund for Nature (WWF) for the conservation of marine resources.

COMESA noted the importance of establishing resource assessment and research capability in the region. NEPAD, FAO and national institutions can use related international bodies to support resource monitoring and evaluation and simultaneously strengthen existing institutions.

COMESA called attention to their existing initiative to encourage regional trade. This program aims to remove non-tariff trade barriers and improve intra-regional communication as key steps to increase trade. The program is being pursued in partnership between COMESA, national governments and private sector stakeholders and is part of a wider process of regional integration.

Finally, the working group identified the need for the creation of centers of excellence for fisheries and aquaculture research, database creation and training. Partners such as NEPAD, COMESA, FAO and national governments can help spur this development by first identifying the capabilities of existing institutions, and then selecting and strengthening the identified institutions to specifically cater to the region's needs.

Economic Community of Central African States (ECCAS)

The ECCAS group identified 11 ongoing initiatives and institutional programs that can potentially support implementation of fisheries and aquaculture priorities. Several of these comprise programs under regional institutions such as ECCAS and the Comité régional des pêches du Golfe de Guinée (COREP). Specifically, these include the COREP Strategic Action Plan, the ECCAS Regional Food Security Program (which has a fisheries component), the Lake Chad Basin Commission, the Economic Commission for Cattle, Meat and Fish Resources, the Central Africa Forests Commission Convergence Plan (with a water and fisheries resources component) and the Ministerial Conference on Fisheries Cooperation among African States bordering the Atlantic Ocean. In all these cases, plans and priorities consistent with the NEPAD Action Plan have been developed and are ready for implementation.

In addition, several regional projects were identified as vehicles for taking forward the NEPAD priorities in more than one country in the sub-region. These include FAO's Sustainable Fisheries Livelihoods Programme (SFLP), which addresses policy and institutional constraints to community development, and the Gulf of Guinea Large Marine Ecosystem Project that is focused on the marine environment.

The group further noted that country-level projects on aquaculture in Cameroon by the WorldFish Center and FAO have generated lessons and a development framework that can be scaled-out to the wider region.

Economic Community of West African States (ECOWAS)

The ECOWAS group identified 14 different processes or programs with the potential to substantially impact the fishery sector in their region. These initiatives include programs specifically aimed at economic, administrative and environmental priorities, at both national and regional levels. In many cases, utilizing these programs requires either compliance or partnerships with existing conventions or international organizations.

Environmental initiatives and programs that impact ECOWAS' fishery sector involve the regulation of pollution and hazardous wastes, regulation of marine and coastal environments, and freshwater management. These are: the United Nations Environmental Program (UNEP) Regional Seas Program for West and Central Africa, World Bank Initiative, UN-GEF Large Marine Ecosystem Program, and the London Convention on the Dumping of Hazardous Wastes. Also emphasized by the working group were the Action Plan on Freshwater by the African Ministerial Conference/Council on Water, regional river basin commissions (e.g. Lake Chad, Niger Basin), the Abidjan Convention for sustainable management and pollution of the coastal and marine environment of West and Central Africa, and the coastal, marine and freshwater components of Agenda 21 from the World Summit on Sustainable Development (WSSD).

Initiatives that would have a positive impact on trade expansion or lead to inclusive participatory management for the fishery sector require action from local, national and regional communities, at a variety of economic scales. These include the SFLP, the FAO Initiative on Integrated Irrigation and Aquaculture, the ongoing projects and programs of regional and sub-regional bodies and non-governmental organizations (NGOs). The working group emphasized that it is also necessary to involve small-scale stakeholders in the development process; this can be accomplished through national programs that provide support to: agricultural services and farmers' organizations, rural infrastructure, and food security. ECOWAS noted that an invaluable resource is the sharing of experiences on the institution of comanagement amongst countries in the region.

Southern African Development Community (SADC)

In order to take their regional agenda forward, the SADC group identified the need to strengthen four key initiatives: (i) regional training and capacity building; (ii) forming a regional approach to aquaculture development; (iii) improved pre- and post-harvest handling, processing and storage; and (iv) expanded market access and development.

In the field of training and capacity building, the group noted two critical areas in which the SADC Secretariat needs to provide leadership. These are the establishment of a regional training and capacity network, and the establishment of a regional coordinating committee. Opportunities for immediate progress include the expansion of existing networks and capacity available in the region, as well as the strengthening of the current SADC Secretariat capacity.

To develop a region-wide approach to aquaculture development, both the SADC Secretariat and member states must work together on three critical areas: (i) the development of regional aquaculture policy to guide national aquaculture policy, strategy and programs; (ii) assistance to national governments to develop a legal framework, policies and strategies; and (iii) promotion

of commercial aquaculture development. The SADC representatives identified five opportunities for immediate progress: (i) building on existing successes in Africa; (ii) building on existing investments in the region; (iii) adoption of proven technologies; (iv) utilizing trade fairs as an opportunity for outreach; and (v) promoting the implementation of existing investment guidelines.

In the area of improved handling, processing and storage practices, member states and international partners can help to increase capital investment in landing sites. They can also help to provide vital information, education and communication on fish quality. The necessary first step in achieving these goals is expanding use of, and access to, available relevant technologies.

To expand market access and development, member states must support the development of better market information systems and facilitate trade negotiation at national and regional levels. Opportunities for immediate progress in these areas are the utilization of the SADC InfoPêche office (INFOSA) and available network, improved support for existing trade negotiation frameworks regionally and nationally, and better use of available African and international expertise.

SECTION 2

The Heads of State Summit

Chapter 7 Introduction

On 25 August 2005, His Excellency, President Obasanjo hosted a Heads of State Summit to deliberate on the promotion of sustainable fisheries and aquaculture development in Africa. Participants included the Vice President of the Republic of The Gambia and Ministers in charge of fisheries from 10 African countries representing their Heads of State or Governments. Over 400 delegates from around Africa, diplomats, representatives of international organizations, technical experts, private sector companies and civil society organizations attended the Summit.

The Summit was chaired by His Excellency, President Obasanjo. The outputs of the preceding Technical Workshop on New Directions for Fisheries and Aquaculture in Africa, notably the *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*, were presented. The Summit endorsed the Action Plan and discussed and unanimously adopted *The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa*.

In the Abuja Declaration, Heads of State expressed their commitment to promoting the sustainable development of African fisheries and aquaculture through leadership and support in the following areas:

- regional cooperation through the New Partnership for Africa's Development (NEPAD), regional economic bodies, and regional fisheries management organizations;
- implementation of the FAO (Food and Agriculture Organization of the United Nations) Code of Conduct for Responsible Fisheries (CCRF);
- introduction of rights-based fisheries and taking steps to control fleet and fishing capacity;
- participation of fishing and fish-farming communities, civil society and stakeholder organizations in policymaking, planning and implementation processes;
- integrating fisheries and aquaculture in national and regional economic policies, strategies, plans and investment portfolios;
- fostering the development of an appropriate investment climate for fisheries and aquaculture, private investors and strategic public sector investments;
- harnessing the entrepreneurship of small-scale fishers, fish farmers, fish traders and service providers and their associations, including women entrepreneurs;
- fostering small, medium and large-scale aquaculture production in a sustainable and environment-friendly manner;
- strengthening human and institutional capacity at national and regional levels with particular emphasis on training institutions, transfer of appropriate technologies, and ensuring a rational and scientific basis for management decisions and design of programs;
- conserving and rehabilitating aquatic environments and habitats essential to living aquatic resources and aquatic biodiversity;
- promoting trade in artisanal and industrial fish products to respond to regional and global market opportunities for African fish products.

Several significant speeches were delivered during the Summit, chief among them the opening address by His Excellency, President Obasanjo and the keynote addresses by FAO and the *Fish for All* Initiative. The Summit was opened by the Nigerian Minister of Agriculture and Rural Development, the Honorable Alhaji Adamu Bello. Further addresses were given by Professor

Firmino Mucavele, Chief Executive of NEPAD, Mr Warren Evans, Director of the Environment Department of the World Bank, and Dr Stella Williams, member of the Board of Trustees of the WorldFish Center.

Chapter 8 Speeches and Addresses

Opening Address

His Excellency, Chief Olusegun Obasanjo (GCFR),
President of the Federal Republic of Nigeria

All protocols duly observed

Today marks another opportunity to bring about a major international re-awakening to the enormous potential of Africa's fisheries and aquaculture and its relevance to our development agenda. As part of the holistic reform program going on in the continent, we must begin to pay very special attention to how we can strategize and act together on specific policies and programs to improve the lot of our people. I am pleased at the new enthusiasm and commitment to progress in Africa and I think that with such a positive disposition, we can achieve a lot together. It therefore gives me great pleasure to welcome you all to Abuja for this important regional African Summit on '*Fish for All*'.

It is a fact that Africa's fish sub-sector makes vital contributions to food and nutrition security of 200 million of our peoples and provides income for over 10 million engaged in fish production, processing and trade. Moreover, African fish and fishery products have an annual export value of US\$2.7 billion. Yet these benefits are at risk as the exploitation of African natural fish stocks is reaching its limits and aquaculture production has not yet realized its full potential.

As we look forward to 2015 and consider how Africa will meet the Millennium Development Goals, it is essential that we substantially increase the contributions of fisheries and aquaculture to Africa's total development agenda. By so doing, we will:

- foster the eradication of poverty and hunger by increasing earnings from fish and providing high quality fish protein;
- promote and empower women by supporting their engagement in fish processing and trade;
- improve maternal health and reduce child mortality through better nutrition from increased fish consumption;
- combat HIV/AIDS through income enhancement of fishers, thereby enabling the poor to obtain improved health services;
- promote biodiversity and a sustainable environment through responsible fishing;
- foster integrated rural development (including coastal development) through enhanced investment in aquaculture research and development;
- foster a global development partnership by promoting international trade in fisheries and so help African nations to improve their trade balance.

Your Excellencies, Distinguished Ladies and Gentlemen, when I was contacted in 2002 by the immediate Past Director of the WorldFish Center, Dr Meryll J. Williams, to be on the Board of the Global Steering Committee of the *Fish For All* Initiative, I gladly accepted because of my belief and that of the Nigerian Government in the importance of the fisheries sub-sector, not only in contributing to the non-oil revenue earnings of the Nigerian economy, but also in sustaining national food security, promoting job creation, fast-tracking integrated rural

development and enhancing national security. It is for this reason and in appreciation of how fishery issues are widely and intricately linked to almost every aspect of sustainable development, as enunciated by the *Plan of Action of the 1996 World Food Summit* as well as the World Summit on Sustainable Development (WSSD) that I held a Forum on Fisheries and Aquaculture Development with Nigeria's fisheries stakeholders in May 2004.

In Nigeria, we are taking the production of fish and fish products very seriously. In line with this, a Presidential Committee on Fisheries and Aquaculture Development that I set up during the Forum on Fisheries and Aquaculture Development produced a blueprint for the comprehensive development of Nigeria's fisheries and aquaculture.

The ultimate aim is to make Nigeria self-sufficient in fish production by increasing production thereby making the country a net exporter of fish and fishery products. We have thus placed great emphasis on commercial catfish farming and provided key inputs such as fish seed, fish feed, reliable technical assistance and microcredit to fish farmers. For instance, in the area of catfish production, we are supporting hatcheries for fingerling production, the establishment of high quality fish feed mills and ensuring remunerative prices for catfish.

I am pleased to report that in the past 24 months, investment in fish hatcheries has more than doubled and fingerling production has increased the capacity fish ponds and farms. This has been possible because we have developed a package of incentives for investors to enable them to exploit new opportunities for wealth and job creation, increased foreign exchange earnings and the introduction of new technology to the fisheries sector.

NEPAD is taking the lead in developing regional priorities for future investments in fisheries and aquaculture as part of its wider agricultural program. The enormous potential of fisheries and aquaculture for Africa's integrated development therefore, needs to be urgently and seriously addressed, particularly at regional, sub-regional and national levels for the desired goals to be fully realized. To achieve this, we will require concerted efforts along with our development partners and indeed all stakeholders. I invited the WorldFish Center, FAO and the World Bank to support NEPAD in this regional challenge and I am delighted to see their positive response as demonstrated by their commitment and collaboration in organizing this Summit.

Distinguished Ladies and Gentlemen, presently, the African continent has the lowest fish consumption, only 6 kg/head/year, compared with Japan, where consumption is over 40 kg/head/year. If Africa's per capita consumption of fish is just kept at the present level, although grossly low and unacceptable, then fish production must increase by over 250% by 2015, consistent with the continent's population growth. This unhealthy situation calls for urgent action and indeed poses a great challenge for all of us. It also underscores the seriousness and importance of the objectives and outcome of this NEPAD-*Fish for All* Summit for African leaders. For me, we must aim at reaching by 2015, 25% of the present Japanese consumption, i.e. 10 kg/head/year. As we look forward to addressing these challenges, I would like to highlight the following for the special attention of international professional fisheries stakeholders, our development partners and indeed African leaders.

We need to foster regional cooperation in fisheries and aquaculture. NEPAD, the Regional Economic Communities (RECs), international development partners and other stakeholders, need to foster collaboration in scientific research and technology development.

We need to develop a stronger multisectoral approach to fisheries and aquaculture development if we are to realize the full benefit of our fisheries and aquaculture potential. To achieve this, the fisheries sector needs to feature in national and regional economic policies, development plans, water programs and other investment portfolios, including poverty reduction and food security strategies.

By empowering fishing and fish-farming communities, civil society and other stakeholders to participate effectively in policymaking and implementation, we can increase opportunities for the poor to benefit from increased investment in fisheries.

We need to promote trade in fish and fishery products among ourselves and respond to regional and global market opportunities for African fish and fish products. This will require our collective resolve in seeking to remove intra-regional trade barriers and developing common approaches to addressing barriers to global trade. A situation where Africa's fisheries resources are exploited by non-Africans and re-exported back to Africa at the expense of our meagre and hard earned foreign exchange is unacceptable. We must squarely face and address these challenges.

The private sector needs to be engaged as a major partner in developing aquaculture and increasing the benefits from fisheries. It should take full advantage of the growing demand for fish and invest in the technologies required to produce high quality fish and fishery products and deliver them successfully to the market.

An appropriate investment climate for fisheries and aquaculture development has to be created by our national governments, while the private sector needs to seize these opportunities in a socially responsible manner.

Underpinning all of these, we need to build human and institutional capacity and capability at national and regional levels to enable all stakeholders to have access to the best available technologies. If Africa is to share in the fish 'Blue Revolution', we urgently need to invest in sustainable capacity building over time. Strategic investment is needed urgently to safeguard the future contribution of Africa's fisheries sector to poverty alleviation and regional economic development.

Broadly speaking, investment is needed: to improve the management of natural fish stocks; to develop aquaculture production; and to enhance fish preservation, processing and trade in domestic, regional and global markets. We must take these options and opportunities very seriously and work together by exchanging ideas, information and best practices. We must build strong and strategic partnerships to promote fisheries and aquaculture development in Africa. This will require urgent and clear strategies for building capacity with emphasis on infrastructure, technology and policy development. We must not lag behind other regions of the world that are making the development of the fisheries sector a priority.

As you are already aware, the Abuja Summit is expected to, among other things, highlight investments in fisheries development and research, help African countries and their international partners to achieve their commitments to the UN Millennium Development Goals and the WSSD Plan of Implementation. It will support NEPAD's role as a catalyst and facilitator of Africa's socioeconomic transformation agenda by bringing together key stakeholders from

African Union member states, RECs, civil societies, scientific institutions and international organizations.

Your Excellencies, Distinguished Ladies and Gentlemen, it is my fervent hope that the Abuja Declaration, which will emerge from this Summit for consideration and endorsement by African Heads of Government, will create a new roadmap for the realization of the full potential of fisheries and aquaculture in the attainment of the Millennium Development Goals in Africa.

I thank you all for listening.

Welcome Address

The Honorable Minister of Agriculture and Rural Development,
Alhaji Adamu Bello, FCIB

Your Excellencies

I am greatly honored to welcome you to a great event on our continent, the NEPAD-*Fish for All* Summit. The President of Nigeria, His Excellency, Chief Olusegun Obasanjo is hosting Africa and indeed the world to an Africa Regional Summit on *Fish for All* under the auspices of NEPAD, the Implementation Committee of which he is heading. *Fish for All* is a global initiative of the WorldFish Center and Nigeria is committed to furthering its course through our President's membership of the Global Steering Committee.

For us in Africa, fisheries constitute a real means for economic advancement, rural poverty alleviation and food and nutrition security. Additionally in Nigeria, fisheries are a major component of non-oil foreign exchange earnings. The Nigerian Government is aware of the great potential for fisheries development and has devoted due attention to it. The current administration from its inception has embarked on a series of programs to promote fisheries.

The National Special Program on Food Security (NSPFS) has given fisheries a high priority as the second largest of its six components. Laudable achievements have been made, particularly in aquaculture and inland fisheries development. There has been remarkable capacity building of private fish farmers in modern fish farming practices, book-keeping and business practices, fingerling production and hatchery management, and value addition to fisheries products. Many lakes and reservoirs have been scientifically studied and are currently being selectively stocked for enhanced production.

Another great effort has been put into the Presidential Initiative on Fisheries and Aquaculture Development, which has produced a blueprint for the Government's approval. It will be a roadmap for fisheries development now and into the future. Through it, the President will establish the public-private sector partnership which is already in place under NEPAD.

Your Excellencies, Nigeria believes that aquaculture can contribute significantly to Africa's vision for agriculture, especially in the area of increased productivity towards targeted growth rates. Much has happened in Nigeria in recent years. Mr President himself is employing his personal experiences as a fish farmer to make Nigerians aware of the potentialities and possibilities of development. This strategy has been so effective that Nigeria is looking forward to adding catfish to the fish products export basket. Rest assured that Nigeria is very committed to the Africa regional initiative for which we are all gathered.

On behalf of the Government and people of Nigeria, I warmly welcome the Heads of State and Governments, the diplomatic corps of the Ministries of Agriculture and Fisheries from around Africa, the Heads of international development agencies, especially FAO, the WorldFish Center, NEPAD, captains of industry, sponsors of the great event and technical delegates who have the responsibility of realizing the vision of the leaders of our great continent.

I would like to end this Welcome Address by acknowledging the contributions of the International Steering Committee, the National Steering Committee, the Local Organizing Committee who put the program together, and the inspiring leadership of our President, Chief Olusegun Obasanjo.

I assure you of the hospitality of our people, which will make your stay memorable.

Welcome Address

Professor Firmino G. Mucavele,
Chief Executive, NEPAD

All protocols duly observed

May I extend our gratitude to His Excellency, the President of Nigeria and the Government and people of Nigeria for the tremendous efforts devoted to the implementation of programs and activities to accelerate economic growth, especially in the agriculture sector. This meeting is another demonstration of Nigerian commitment to the implementation of the Comprehensive Africa Agriculture Development Programme (CAADP).

I also want to thank the development partners and delegates from the various countries and institutions, for their contributions to the development of the Action Plan that NEPAD is recommending to the Summit for adoption and realization of the potential in the fisheries sub-sector. The Action Plan identifies the priority investments and interventions necessary to develop aquaculture and manage African fisheries to contribute to the attainment of the Millennium Development Goals.

This year a number of countries in Africa face critical food shortages. I appeal to the African Governments and the African people to quickly mobilize food supplies and resources to provide the required food as a short-term measure. NEPAD commends the African Governments, the UN and other development partners that are already responding to offset this crisis.

As we implement the Action Plan, significant resources are required. We expect to obtain the necessary resources from ongoing programs, increased national budget allocations to the agriculture sector, as agreed in the Maputo Declaration in 2003, and increased development partner allocations to CAADP interventions at national, regional and continental levels.

NEPAD and the RECs will meet development partners on 24–25 October 2005, in Cape Town, South Africa, to submit fully developed and costed plans to address the challenges of accelerated economic growth, as a necessary condition for reducing poverty and food insecurity in Africa. We expect development partners to declare firm commitments and take the necessary steps to unlock the resources that have been pledged to the development of agriculture in Africa. Without direct investment in the identified priorities of the NEPAD Action Plan, the desired progress of at least 6% growth per annum, will not be achieved.

Our goal is to increase fish production and productivity to meet demand, and to export the surplus. We will engage with our development partners in seeking to remove trade barriers and facilitate market growth.

Let history judge this Summit as the point in time when a pan-African fisheries and aquaculture vision was adopted and implemented. In conclusion, in a spirit of partnership, solidarity and political commitment, NEPAD will accelerate the implementation of sustainable programs to increase food production and productivity.

Once again, I thank His Excellency, the President of Nigeria, the Nigerian people, the distinguished guests, development partners and all participants for making this Summit a success.

Keynote Address

Enhancing the Contributions of Fisheries and Aquaculture to Africa's Development Agenda

Dr Ichiro Nomura,
Assistant Director General, Fisheries Department of the Food and Agriculture Organization
(FAO) of the United Nations
(representing Dr Jacques Diouf, Director General, FAO)

Excellencies, Ladies and Gentlemen

It is for me a privilege and an honor to be present here among you on this auspicious occasion. I wish to say a few words on behalf of Dr Jacques Diouf, the Director General of the Food and Agriculture Organization (FAO).

First of all, I want to pay a special tribute to His Excellency, Mr Olusegun Obasanjo, President of the Republic of Nigeria, for this commendable and timely initiative that will allow leaders from this continent to discuss strategies on the development of fisheries and aquaculture within the context of the NEPAD program.

This Summit constitutes a unique opportunity to assess the present situation of fisheries and aquaculture in Africa, evaluate its trends and, finally, identify at the highest political level, priorities and directions for future action.

It is, therefore, with great satisfaction and interest that FAO, and more particularly its Fisheries Department, received the invitation to participate in this Summit, as well as in its preparation, in cooperation with the NEPAD Secretariat and the WorldFish Center.

We see in this Summit the unambiguous expression of a political commitment to ensure the success of a shared and agreed objective, that of enhancing the role of fisheries and aquaculture, not only in combating hunger and poverty, but also in contributing to the economic and social development of African countries and their people.

A political commitment of this nature is essential in order to reach that objective. There are also other factors that must be taken into account, since they contribute to defining the objective parameters of all actions which will have to be undertaken.

On one side, there are a number of positive and encouraging elements.

The high productivity of African marine and inland waters ecosystems has made possible the significant development of important fisheries over the years. These fisheries are providing direct employment and revenue to approximately 2.6 million fishers and fish farmers. More broadly, these fisheries bring many social and economic benefits. Among them we may mention food self-sufficiency and food security, improvement of nutrition, growth and diversification of exports. Therefore, in spite of the differences and variations that may be observed in the relative importance of fisheries in the various countries and sub-regions, we may say that fisheries and aquaculture contribute actively to the economic development of the continent.

To illustrate this point, I wish to quote briefly some numbers, which are significant.

First, fish is important in Africa as a source of food and protein. The fish eating population of sub-Saharan Africa is estimated at about 200 million. Fish contributes up to 50% of animal protein in the diet of many Africans; second only to Asia. Presently, Africa represents 6.5% of the world total consumption of fish. It contributes 5.7% of world total production. In this respect, we must also recall the vital role of small-scale fisheries. In several African countries, small-scale fisheries contribute at least 80% of production.

Second, an increasing part of the production is traded internationally. The net value of African exports of fish and fish products exceeds the net foreign exchange income for African international trade in cocoa, coffee or any other agricultural commodity, combined. In 2003, 36% of production (live weight equivalent) was traded at regional and international levels, with a large share (88% in value terms) destined to countries out of Africa.

It is important to stress that this situation can be improved even more, since there is still significant room for further enhancement and development of the fisheries sector in Africa, for the benefit of African countries and their people.

This was the positive side. On the other side, there are a number of negative elements which we cannot ignore and which constitute serious constraints and obstacles to the enhancement and development of fisheries and aquaculture in Africa. Worse, they can lead to serious deterioration of fisheries and aquaculture. In this respect, I wish to bring to your attention to some of the working documents which have been prepared for this Summit. They contain some alarming projections for several groups of countries, if the interested governments and fishing industry and other stakeholders fail to take specific actions to redress and rectify the current trends observed in these countries.

In particular, the unsustainable levels of exploitation of fish resources and the destruction of aquatic ecosystems which are brought about by, among others, the failure of sector governance systems and illegal fishing, inhibit the capacity of the fisheries sector to respond to the pressures of a growing population and an increasing demand for fish.

There are a number of principles and standards to which countries should refer and rely upon when defining, organizing and implementing the actions necessary to circumvent or eliminate such constraints or obstacles.

In this respect, you should not be surprised if I take this opportunity to insist on the importance of the Code of Conduct for Responsible Fisheries (CCRF), which has been developed by FAO. Africa has played an important and active role in the negotiations that led to the adoption of the CCRF, 10 years ago, as well as that of the International Plans of Action which were elaborated afterwards within the framework of the Code. The principles and standards contained in the CCRF and its associated instruments constitute most valuable references for the definition of policies and the adoption of measures at regional, sub-regional, national and local levels, with a view to ensuring the sustainable use of fish resources while respecting fully the specificities of each situation.

The international community has also the occasion to adopt periodically updated recommendations for a better and more efficient implementation of the CCRF. Every 2 years, the Committee on Fisheries of FAO meets and, on the basis of a thorough review of the situation, adopts such recommendations directed at governments, regional fishery bodies, non-governmental organizations (NGOs), fish workers and other concerned stakeholders. Needless to say, African countries and the African group have always played an important and active role in the debates and negotiations which take place in FAO's Committee on Fisheries.

It is also necessary work more directly at the regional level. In that context, this is one of the main reasons for which FAO has welcomed the NEPAD Initiative and decided to provide support for the realization of its aims and objectives. As an example of that support, in addition to our involvement in the preparation and organization of this NEPAD-*Fish for All* Summit, I wish to recall the formulation, in 2003, of a fisheries component for the Comprehensive Africa Agriculture Development Programme (CAADP) of NEPAD, as well as the formulation of fisheries components in several of the bankable project proposals which were developed afterwards.

We expect that this Summit will be successful in adopting the *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*. We expect this Action Plan to be consistent with the CCRF and other applicable international instruments, such as the Johannesburg Plan of Implementation, and to define a number of priority actions to respond in an appropriate manner to the challenges that African countries face in relation to fisheries and aquaculture. These priority actions will also serve as a useful reference to target more efficiently the private and public investments which will be needed.

I can ensure you that FAO will remain present and is committed to continuing its cooperation and support throughout the process of implementation of the Action Plan. Needless to say, FAO and its Fisheries Department will also continue its work with individual countries and communities, as well as with regional entities, particularly the regional fishery bodies.

In this context, FAO has a number of tools at its disposal. I only wish to mention two of them, since they are particularly relevant. First, the FAO Global Partnerships for Responsible Fisheries Programme, also known as 'FishCode'; second, the Sustainable Fisheries Livelihoods Programme (SFLP) constitutes a fruitful partnership between the UK's Department for International Development (DFID) and FAO.

You will understand, Mr Chairman, Excellencies, Ladies and Gentlemen, how strong and heartfelt, therefore, are our wishes for the success of this Summit.

Before finishing, I wish to express our thanks to the Government of Nigeria and its people for their warm and generous hospitality which will certainly contribute to that success.

Thank you for your attention.

Keynote Address

African Fisheries and Aquaculture and the Millennium Development Goals

Dr Stephen Hall
Director General, WorldFish Center
(representing Professor M.S. Swaminathan, Chairman of the *Fish for All* Steering Committee)

Your Excellency, The President of the Federal Republic of Nigeria, Chief Olusegun Obasanjo GCFR, Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria

Your Excellencies, Heads of Government present here, Honorable Ministers, Ambassadors, Distinguished Guests and Participants

All protocols duly observed

It is a great pleasure to be here today to talk on behalf of the Chairman of the *Fish for All* Steering Committee, Professor M.S. Swaminathan. Your Excellency, Prof Swaminathan, whom I know is a personal friend, asked me to extend to you his very best wishes.

Cast your eyes over the titles in the business and self-improvement sections of the bookshop in any international airport and pick a few at random. Most of them will have one thing in common. They will make one message very clear. It is a message about the importance of setting goals, about being clear and explicit about what it is you wish to achieve. Recognition of the importance of setting goals has never been greater, whether in your personal life where, as Stephen Covey says you should “begin with the end in mind” or in business where “managing by objectives”, “balanced scorecards” and a myriad of other devices are designed to improve performance.

The international community made a huge step forward when it identified its own goals through the Millennium Declaration, which was adopted by the General Assembly of the United Nations on 8 September 2000.

Yes, there have been declarations before and goals set for development, but I believe the Millennium Development Goals are different. They are different for two reasons.

First, the Millennium Development Goals seem to have gained traction in the minds of governments, development agencies and the rest of the international community in a way that few efforts before have done. The level of accountability seems to be higher.

Second, rather than single out one aspect of the problem, the Millennium Development Goals are a linked set of objectives – a portfolio of targets – that represent a coherent assault on the problem of development.

It is these goals that have made the specialists’ job much easier. We now have something clear to aim at. We can now ask in a more focused way: “what can we do to help?”; “what contribution can my discipline, my field of work, make to the Millennium Development Goals?”

My job here today is to ask that question for our own specialist area – fisheries and aquaculture. More specifically, I would like to achieve three things.

First, I would like to illustrate why fisheries and aquaculture matter to the development agenda for Africa. Second, I would like to show you that by making carefully targeted investments in the fisheries and aquaculture sector, we can make a really substantial contribution to the Millennium Development Goals. Finally, I would like to convince you that this NEPAD-*Fish for All* Summit can mark a turning point in recognizing the true value and importance of African fisheries and aquaculture and strengthening our commitment to respond to the opportunities they provide.

Let me illustrate how important fish are for Africa by giving you some hard numbers on the current situation. About 200 million Africans eat fish regularly and FAO estimates that fish provides 22% of the protein intake in sub-Saharan Africa; in some countries, fish provides more than 60% of the protein.

Fishing provides between 6 and 9 million full and parttime jobs and the income from fishing supports 30–45 million people. Of this number, many are women involved in fish processing and trade who lead single-headed households. For them, fish is the primary – and sometimes the only – source of income to support their livelihood and their children.

Fisheries generate export revenue to the value of US\$2.7 billion, one of the leading sources of export revenue on the continent. Now consider some of these trends. If you look at the global picture, average fish consumption worldwide increased between 1973 and 1997 from 12 to 16 kg/year – in sub-Saharan Africa, it went down from 9 to 6.6 kg/year. Capture fisheries production is stagnant and many wild fish stocks are declining, while the population grows. While aquaculture is the fastest growing food production sector and now accounts for some 38% of global fish supplies, it accounts for just 2% in sub-Saharan Africa.

These numbers tell us a story. They tell us that the gap between fish supply and fish demand in Africa is going to grow dramatically unless we do something about it, and that if we do not do something about it, a lot of people are going to suffer. They also tell us that aquaculture in particular offers a great opportunity for the economic development of the continent, but that the potential has yet to be realized.

At the most fundamental level, therefore, fish matters for Africa's development. Let me now turn more specifically to the Millennium Development Goals. When we think about fisheries and aquaculture, the most obvious of these is, of course, the goal to eradicate extreme poverty and hunger by 2015. Let us first think about fisheries and poverty. Here, it is important to recognize that over 99% of African fishers are engaged in labor-intensive, small-scale fisheries under a variety of ownership and employment arrangements. What they all have in common is that they provide economic opportunity for the poor. Small-scale fisheries are 'safety-nets' for the poor, both rural and urban, who might work in fisheries during hard times when opportunities elsewhere are absent. But they are also engines of rural development, creating wealth and bringing commerce to rural areas.

We need to ensure that those fisheries are sustainable and that the poorest obtain an equitable share of the benefits from them. Investing now in improving the way those fisheries are managed; in developing the tools and approaches to react appropriately when stocks decline to unsustainable levels; in developing the markets and supply chains that maximize the economic

returns from the resource; and in developing the regional trade arrangements to boost opportunities, can make a real impact on poverty.

Now let us think about aquaculture and poverty. There are two things we now understand about poverty. The first is that stimulating the economic growth of a country is one of the fastest ways to reduce poverty. The second is that a focus on agricultural production in rural economies is a key driver for the economic growth of developing countries. Since aquaculture is the fastest growing agricultural sector globally, it is not hard to see why it deserves attention.

The story of Jesse Kaunde in Malawi provides an example of how aquaculture can make a difference. Jesse recognized fish farming as an opportunity to provide herself with a better future back in 1999, when she heard a radio program describing how including a fish pond on her small farm could help improve income. She took the ideas to heart and built on them so that she now grows both crops and fish, raises more than 500 chickens and ducks at a time, and uses their droppings to fertilize her ponds. In her own words, Jesse describes how having "fish in the pond" is "like money in the bank".

Just think how much of an impact simply replicating that idea across the continent could have and how much entrepreneurial potential we could unleash to help the economies of African nations grow. But if we are going to replicate it, we need to invest in building capacity and sharing knowledge about what works; we need to develop and adapt the ideas that are working in countries such as Egypt, Nigeria and Malawi, where aquaculture production is starting to take off, and draw upon the spectacular achievements of China and other Asian countries; we need to improve market access and supply chains; and we need to develop national strategies for the sector to join up our thinking and align plans for aquaculture growth with other economic planning decisions associated with, for example, water allocation, infrastructure investment, access to credit, etc.

How much difference could this make? Think about that growing gap between supply and demand. We estimate that if we could realize just 5% of Africa's estimated aquaculture potential we could meet the supply gap and maintain per capita supplies at their current rate.

An investment of US\$30 million in the recently launched NEPAD-WorldFish Program for Sustainable African Aquaculture alone could increase Africa's aquaculture production by 10% annually to about 3 million t over the next 15 years, worth some US\$1–2 billion, it could create employment for up to 5 million by 2020, and provide food security for millions more. It could also generate exports valued at US\$50–100 million annually by 2020.

So much for poverty – what about hunger and nutrition? Well of course, the two are intimately linked, and increasing fish supply has a direct impact on both. We all know about the health benefits of fish, but we do not always think about the health risks of an inadequate fish supply. Fish contain essential fatty acids that are not readily available from other food sources. Importantly these fatty acids play a vital role in fetal development and maternal health. They are essential, for example, for eye and brain development in the last trimester of pregnancy. A lack of those nutrients in the under-fives can permanently impair brain function, especially in lower birth rate populations. Clearly, there are many dimensions to the health and nutrition issue that connect to the fish supply question.

These linkages illustrate another important point about fisheries and the Millennium Development Goals – there is connectivity everywhere you look. Reduce hunger and improve nutrition by improving fisheries and aquaculture and child and maternal health improves (Goals 4 and 5); increase incomes and children are more likely to be sent to school (Goal 2); develop the trade in fish and stimulate small-scale enterprise and you empower women (Goal 3); manage fisheries and aquaculture in a sustainable manner and the environmental capital and services on which we depend are preserved for future generations (Goal 7).

Some of those linkages are not obvious. For example, the connection between HIV/AIDS and fisheries and aquaculture has a number of facets. We now know that diversifying livelihoods to include fish culture is an important option for AIDS-affected households where the available labor to grow crops is diminished. We now appreciate that a better understanding of why fishing communities have some of the highest prevalence rates and are some of the least responsive to current HIV/AIDS interventions can provide the knowledge needed to address the problem more effectively. These are important dimensions to consider if we are to meet Goal 6 and combat this terrible disease.

I hope by now I have achieved my second objective and shown you that targeted investments in this sector can make a real impact on the Millennium Development Goals in substantive and varied ways.

My final objective is to convince you that this Summit and the wider process of which it is a part can mark a turning point in giving African fisheries and aquaculture the attention they deserve. Let me first of all underline the leadership shown by His Excellency, Chief Olusegun Obasanjo, President and Commander in Chief, as a member of the *Fish for All* International Steering Committee, in stimulating and catalyzing the process that has culminated in this Summit. Let me also commend NEPAD for taking up fisheries and aquaculture as a prominent component of CAADP. This has already led to a comprehensive engagement of African nations and their RECs at both the technical and political level, as evidenced by the attendance of Heads of State and their representatives here today.

The commitment shown through this extraordinary response to His Excellency, President Obasanjo's call to come to Abuja makes me very optimistic that indeed we are now recognizing the true value of African fisheries and aquaculture and realize that this sector offers great opportunities to do something about poverty. I am further delighted to see that the RECs and their member states as well as private sector and civil society stakeholders have together developed the *NEPAD Action Plan for the Development of African Fisheries and Aquaculture*. This Action Plan will offer a framework for supporting and expanding regional and national initiatives that have developed around the continent and have achieved real progress and produced truly African success stories.

It has been a great privilege to talk on behalf of the *Fish for All Initiative* here today, and I hope that I have met my goals for this talk. Wearing another hat as Director General of the WorldFish Center, it is also a great privilege to be a part of this genuinely African-led process under the auspices of NEPAD.

In conclusion, I would like to leave you with this thought. As someone said to me yesterday, if you look at the current situation you could argue that Africa missed the Green Revolution. Let us make sure we catch up on that one, but also make sure we do not miss the 'Blue' one.

Address to the Summit

Warren Evans,
Director of Environment, The World Bank

Honorable President Obasanjo

Honorable Ministers, Members of the Diplomatic Corps, Directors, Permanent Secretaries, Distinguished Delegates, Ladies and Gentlemen

Let me first express my thanks to you, Mr President, for your invitation to participate here today. My thanks also to the organizing committee, the NEPAD Secretariat, the WorldFish Center, FAO and others who have supported this important event.

How do we ensure *'Fish for All'*? Today we face a tremendous challenge – one that is growing. As the world's population increases, so too does the demand for fish protein. And human activities – from overfishing, to pollution of inland and coastal waters and destruction of nursery grounds – are putting increasing pressures on fish stocks and undermining the basis for future productivity and recovery.

We are here in Abuja to demonstrate our concern for what is at once a global food security issue as well as a public goods issue and to agree on how we must proceed to meet the challenge before us. How will we increase fisheries production to meet increasing demand in a way that is environmentally responsible and socially equitable – that ensures fish for all – now and in the future?

Fish is important in the anti-poverty agenda. It is a vital source of nutrition for the world's poor. About 400 million poor people in Africa and Asia rely on fish for more than half of their daily protein intake. Added to this is the heightened demand for high-value fish by economies in transition – and a growing middle class eager to eat fish.

Yet we know from FAO and other sources that the world's fisheries are in dire straits. Global production of capture fisheries has stagnated since the late 1980s with over 25% of wild stocks estimated to be overexploited and another 50% fully exploited, with little scope for increase. Small species, like anchovies and sardines, which constitute by far the largest component by volume of the global marine catch, are siphoned off and reduced to fishmeal to meet competing demands in livestock production. While most of this is now being converted to fish feed for aquaculture, which is growing at a rapid rate, the higher value fish produced are either exported or sold at prices beyond the reach of most of the world's poor.

Notwithstanding inequities in the production and consumption of higher value farmed fish in many parts of the world, and the environmental impacts often associated with it, aquaculture remains the leading hope for bridging the widening gap between demand for fish products and our current ability to supply it.

This has been demonstrated with great success in South and Southeast Asia, through a 'Blue Revolution', which has made innovative fish breeding and farming techniques available to

millions of small farmers, greatly increasing production and access to a nutritious source of food and income. Certainly there are lessons to be learned from this experience in Asia which have relevance (and currency) for rural Africa.

There is also tremendous scope for increasing the productivity and economic returns from capture fisheries in Africa. Greater productivity has the potential to translate into higher yields to meet domestic needs, while increased trade can fuel economic growth to help finance the poverty reduction agenda. Enhancing productivity is key. This has an ecological dimension which requires better management of fish stocks and the ecosystems that support them, as well as a governance dimension.

Good governance involves control over fishing fleets and enforcing limits on catches and numbers of fishers so fish stocks can recover. It requires eliminating billions of dollars of subsidies each year that contribute to overcapacity and the depletion of fish stocks, even on the high seas. Good governance means equitable access to the fish resources – protection of our inshore and coastal fisheries on which the poor and the small-scale fishers depend, while clearly defining the important role of the industrial fisheries. Good governance will recognize the important links between aquaculture development and the responsible management of water basins, the wetlands and the coastal zones. Good governance involves transparent and participatory decisionmaking that is accountable to stakeholders now and in future generations.

The World Bank's Role

What is the World Bank's role in this? Meeting the needs of our member countries, and our commitment to the Millennium Development Goals and the Johannesburg WSSD Plan of Implementation – in our mandate to reduce poverty, these are fundamental.

Globally, the livelihoods of about 150 million people rely on fisheries, aquaculture and associated activities and over 20% of the world's 38 million fulltime fishers earn less than US\$1/day. Many fishers live in the world's poorest countries where their communities are often marginalized and landless. As fishing is often the livelihood of last resort and fish often the only source of animal protein for the poor, the state of the world's fisheries can be critical in the fight against poverty in many parts the developing world. The export value of the world trade in fish – US\$58 billion in 2002 – is more than the combined value of net exports of rice, coffee, sugar and tea. Half of the global fish trade comes from developing countries, while global consumption increased by 21% between 1992 and 2002.

The World Bank and PROFISH

A little more than a year ago, the World Bank announced its re-engagement in fisheries with the publication of a new sector strategy entitled '*Saving Fish and Fishers*', which identifies the problems in the sector and a range of interventions and possible entry points for the Bank. An abbreviated version of this document, '*Turning the Tide*', was released yesterday at a press conference here in Abuja, announcing the launch of a new global partnership in which the Bank is taking a leading role – the Global Program on Fisheries (PROFISH).

Through a partnership of developing countries, donors and technical agencies, PROFISH will help to develop and promote solutions to core fisheries problems. It will create knowledge and awareness, foster effective ways to control fishing capacity and create incentives for more sustainable production, and improve the capture and distribution of benefits from fisheries to fight poverty.

Equally importantly, PROFISH will provide a platform for dialogue among stakeholders on controversial issues, such as reducing subsidies in the sector, making foreign access agreements more transparent and equitable, and controlling Illegal, Unregulated and Unreported (IUU) fishing. Through this partnership, PROFISH will also help to align donor interventions on national, regional and global priorities. PROFISH will have a major focus on Africa and I urge you to explore the information materials here at the Summit (brochures, websites, press release, etc.), to see how you may become engaged.

A complementary initiative, also with a focus on Africa, involves a Strategic Partnership between the World Bank and the Global Environment Facility (GEF) to promote sustainable fisheries in sub-Saharan Africa. This Strategic Partnership Investment Fund for Sustainable Fisheries is designed to leverage US\$60 million in GEF funds in a 3:1 cofinancing ratio, to deliver a total investment of US\$240 million for sustainable fisheries over the next 10 years. The Bank, in partnership with FAO and the World Wide Fund for Nature (WWF), will help to raise the necessary financing to support investment needs for countries in sub-Saharan Africa to bring about the necessary policy reforms and improvements in management, identified in sector work supported under PROFISH. The aim will be to restore degraded fish stocks and put production on a sustainable level in line with WSSD targets for fisheries and environmental management. The Strategic Partnership Investment Fund is in an advanced stage of preparation, and information about it is available through the World Bank's fisheries website.

In addition to these new partnerships, the World Bank has an ongoing global portfolio of some US\$1.2 billion in fisheries, aquaculture, coastal and aquatic environmental management and related projects serving coastal and fishing communities. The Bank is committed to helping Africa meet the challenges of reversing fisheries depletion and enhancing productivity in the fisheries sector to improve livelihoods, food security and the health of coastal and marine ecosystems.

Let me assure you – the World Bank will take full account of the outcomes of this week's deliberations. The World Bank remains a committed partner with developing countries in Africa and elsewhere in taking up the challenge of poverty reduction, sustainable fisheries, and *Fish for All*.

Thank you.

Address to the Summit

Strengthening Research and Capacity for Sustainable Fisheries and Aquaculture

Dr Stella Williams

Member, Board of Trustees, WorldFish Center

Your Excellency, The President of the Federal Republic of Nigeria, Chief Olusegun Obasanjo GCFR, Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria

Your Excellencies, Heads of Government present here, Honorable Ministers, Distinguished Ladies and Gentlemen

All protocols duly observed

It gives me great pleasure to extend the best wishes of the WorldFish Center to you all and to convey our warmest thanks and appreciation to His Excellency Chief Olusegun Obasanjo GCFR, President and Commander-in-Chief, for hosting the NEPAD-*Fish for All* Summit here in Abuja. We are truly grateful for the exceptionally high degree of commitment at all levels that has made this Summit possible. I am sure it is clear to us all that this week forms an important landmark in the history of Africa's fisheries.

Excellencies, in order to do justice to this wonderful commitment we need now to move forward with the same energy and enthusiasm that we have seen in Abuja this week. As we have heard from NEPAD and the World Bank, and as was so clear from the keynote addressees of FAO and the *Fish for All* Initiative, we face major challenges, but also major opportunities to address these. Let us now move ahead quickly to implementation.

If we are to do this effectively, however, we will need to increase human capacity to manage fisheries and aquaculture, and improve understanding of the forces driving the challenges we face as well as those that create and enhance the opportunities. To achieve this, we welcome the emphasis placed in the Action Plan, and in discussion here, on strengthening capacity, exchanging expertise, transferring technology, and in fostering research to further improve technology, inform policy and support capacity building.

The WorldFish Center is committed to supporting NEPAD's agenda through specific programs of collaboration on aquaculture and small-scale fisheries, and by working to ensure that these complement and provide effective support to the existing and emerging priorities of the RECs and national governments. This work will be rooted in investments to strengthen capacity and pursue research that can inform this capacity building and policy development. As we do so, we look forward to building South-South alliances between centers of learning in fisheries and aquaculture in Asia, and foster linkages between emerging centers of excellence in Africa.

Excellencies, let me close by again thanking all of those involved in this Summit for their exceptional efforts. We are delighted to have been able to play a role in facilitating it and we look forward to working with all of you in building on the commitments expressed here in Abuja.

Thank you.

APPENDIX 1

The *NEPAD Action Plan* for the *Development of African* *Fisheries and Aquaculture*

**Adopted by the
Technical Workshop of the
NEPAD-*Fish for All* Summit
Abuja, Nigeria**

23 August 2005

Executive Summary

The New Partnership for Africa's Development (NEPAD) recognizes the vital contributions by African inland and marine fisheries to food security and income of many millions of Africans and to poverty reduction and economic development in the continent. It further recognizes the growing opportunities and emerging successes of aquaculture development in the region. Within the framework of the Comprehensive Africa Agriculture Development Programme (CAADP), a series of regional technical consultations were held that identified the primary areas for investment to safeguard and further increase these benefits, together with a first set of priority actions in each. The *NEPAD Action Plan for the Development of African Fisheries and Aquaculture* describes these investment areas for inland fisheries, coastal and marine fisheries, and aquaculture.

For inland fisheries

- Improving fisheries governance and defining resource access, particularly for the poor
- Enhancing productivity through post-harvest management
- Sustaining production through integrated water resource management
- Supporting transboundary management
- Improving market access, particularly for small-scale producers, processors and traders
- Promoting enterprise development through enabling institutions and policy frameworks
- Strengthening consideration of inland fisheries in national and regional policies and actions on food security

For coastal and marine fisheries

- Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production
- Building capacity of African countries to harness the full benefits of marine and coastal fisheries
- Improving fisheries governance and participatory management
- Improving management of the coastal and marine environment
- Strengthening the access of African fisheries to regional and international trade in fish products
- Supporting post-harvest activities through adequate investments and policies
- Promoting enterprise development through enabling institutions and policies
- Strengthening consideration given to coastal and marine fisheries in national and regional policies and actions on food security

For aquaculture

- Developing sector-wide strategies at national level for expansion and intensification of aquaculture
- Supporting priority aquaculture zones
- Encouraging private sector investment across the sector
- Applying proven technologies to increase production
- Maintaining the competitive advantage that Africa's environment provides for aquaculture production
- Harnessing the opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including growing urban demand
- Supporting the emerging regional trade in aquaculture products

- Harnessing the opportunity of expanding export markets for high-value products to increase investment in African aquaculture production and processing
- Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security
- Exploiting the potential of aquaculture production to contribute to food security programs

If investments are made across these areas, it is projected that the stagnating or declining fishery production in the region can be stabilized and in a few cases expanded. By improving processing and access to regional and global markets through improved policies and public-private partnership investments in quality control capacity, market information systems and sector management, it is expected that their contributions to socioeconomic development can be enhanced and diversified. In the case of aquaculture, substantial growth in sustainable production can be achieved.

To guide these investments and enhance sustainability of impact, several cross-cutting areas need to be supported. These include the development of sector-wide strategies for fisheries and aquaculture using economic planning approaches and a comprehensive value-chain perspective. Regional capacity for research and development needs to be strengthened, and technical expertise in the region needs to be supported through networking and improved communications.

It is proposed that implementation of this Action Plan should follow a 'piloting' approach with fast-track programs to be identified for immediate action. These should focus on areas of strategic regional importance and current growth and will provide a learning process for subsequent expansion of activities. In addition, it is essential that pertinent lessons and experiences from other regions and sectors are effectively applied to accelerate the development of African fisheries and aquaculture.

This Action Plan serves as an Africa-wide framework for developing specific interventions by stakeholders at Regional Economic Community (REC) and national levels, taking into account their ongoing initiatives and development priorities. This will enable these stakeholders to draw on NEPAD-CAADP for expanding the scope of their successful initiatives, addressing critical capacity and strategy needs, and linking with relevant knowledge and technologies in other regions of Africa.

Table 1: Summary of priority investment areas

NEPAD Objective	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
Improved Productivity	<p>Improving fisheries governance and defining resource access, particularly for the poor</p> <p>Enhancing productivity through post-harvest management</p>	<p>Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production</p> <p>Building capacity of African countries to harness the full benefits of marine and coastal fisheries</p> <p>Improving fisheries governance and participatory management</p>	<p>Developing sector-wide strategies at national level for expansion and intensification of aquaculture</p> <p>Supporting priority aquaculture zones</p> <p>Encouraging private sector investment across the sector</p> <p>Applying proven technologies to increase production</p>
Environmental Sustainability	<p>Sustaining production through integrated water resource management</p> <p>Supporting transboundary management</p>	<p>Improving management of the coastal and marine environment</p>	<p>Maintaining the competitive advantage that Africa's environment provides for aquaculture production</p>
Market Development and Trade	<p>Improving market access, particularly for small-scale producers, processors and traders</p> <p>Promoting enterprise development through enabling institutions and policy frameworks</p>	<p>Strengthening the access of African fisheries to regional and international trade in fish products</p> <p>Supporting post-harvest activities through adequate investments and policies</p> <p>Promoting enterprise development through enabling institutions and policies</p>	<p>Harnessing the opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including growing urban demand</p> <p>Supporting the emerging regional trade in aquaculture products</p> <p>Harnessing the opportunity of expanding export markets for high-value aquaculture products to increase investment in African aquaculture production and processing</p>
Food Security and Nutrition	<p>Strengthening consideration of inland fisheries in national and regional policies and actions on food security</p>	<p>Strengthening consideration of coastal and marine fisheries in national and regional policies and actions on food security</p>	<p>Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security</p> <p>Exploiting the potential of aquaculture production to contribute to food security programs</p>

1. Background

1.1 The NEPAD-*Fish for All* Initiative

African fisheries and aquaculture are at a turning point. The fish sector makes vital contributions to food and nutrition security of 200 million Africans and provides income for over 10 million engaged in fish production, processing and trade. Moreover, fish has become a leading export commodity for Africa, with an annual export value of US\$2.7 billion. Yet these benefits are at risk as the exploitation of natural fish stocks is reaching their limits and aquaculture production has not yet fulfilled its potential.

Strategic investments are needed urgently to safeguard the future contribution of Africa's fish sector to poverty alleviation and regional economic development. Broadly, investment is needed: (i) to improve the management of natural fish stocks; (ii) to develop aquaculture production; and (iii) to enhance fish trade in domestic, regional and global markets. In support of this investment, capacity needs to be strengthened at regional and national levels for research, technology transfer and policy development. As a first step, stakeholders in the region need to build a common and strategic understanding of the importance of fisheries and aquaculture for Africa's development and the challenges being faced by the sector.

To foster this understanding and help build regional consensus on future investment priorities the NEPAD-*Fish for All* Initiative called stakeholders from the region to participate in a comprehensive consultation process. During the first half of 2005, regional teams of coauthors from a total of 10 countries prepared technical reviews on inland fisheries, coastal and marine fisheries, and aquaculture. These papers provided the background for regional technical workshops that were held as follows:

Date	Theme	Venue	Participating African countries
30–31 May 2005	Inland Fisheries	Lilongwe, Malawi	12
8–9 June 2005	Coastal and Marine Fisheries	Dakar, Senegal	11
27–28 June 2005	Aquaculture	Cairo, Egypt	12

These workshops identified priority areas of investments in the sub-sectors and discussed initiatives and partnerships within these. Their discussions and recommendations form the basis for this Action Plan.

The global *Fish for All* Initiative is designed to build greater international commitment to addressing the challenges facing fisheries and aquaculture, and in Africa works in support of NEPAD's development agenda. It builds upon global agreements such as the targets of the World Summit for Sustainable Development (WSSD) and the Code of Conduct for Responsible Fisheries (CCRF) to support NEPAD in seeking to harness the contribution of Africa's fisheries and aquaculture to economic and social development across the continent. In so doing *Fish for All* supports NEPAD's role as a catalyst and facilitator of Africa's socioeconomic transformation agenda by bringing together key stakeholders from African Union member states, Regional Economic Communities (RECs), civil society, scientific institutions and international organizations.

1.2 African Fisheries and Aquaculture

Africa currently produces 7.31 million t of fish each year. Of these, 4.81 million t come from marine fisheries, and 2.5 million t from inland fisheries. While capture fisheries rose steadily throughout the 1980s and 1990s, they have stagnated since then, reaching about 6.85 million t in 2002. Aquaculture on the other hand has risen, but slowly, and only in Egypt has growth achieved rates of increase seen in other parts of the world, rising from 85 000 t in 1997 to over 400 000 t in 2004. These trends combined with population growth mean that per capita consumption of fish in Africa is low and stagnating, and in sub-Saharan Africa specifically per capita consumption has fallen in the past 20 years. In a recent study by the International Food Policy Research Institute (IFPRI) and the WorldFish Center analysis of future demand and supply of fish suggested that if per capita consumption is to be maintained at present levels up to the year 2020, capture fisheries will need to be sustained and where possible enhanced, and aquaculture developed rapidly, with an increase of over 260% in sub-Saharan Africa alone over the course of the next 15 years.

While these trends underline the enormous internal demand for fish in Africa, they also highlight both the importance of managing capture fisheries more effectively so that their full development potential can be achieved and sustained, and the urgent need to foster more rapid development of aquaculture. For capture fisheries there is growing recognition that improved governance systems for fisheries resources and better management of the resource base upon which they depend are needed for sustainable use, while carefully targeted investments in infrastructure and marketing are needed if the full value of these resources is to be realized by the local, national and regional economies.

In addition, studies by the Food and Agriculture Organization of the United Nations (FAO) have shown that there is considerable physical potential to respond to the growing demand for fish by improving aquaculture production. For sub-Saharan Africa alone, it is estimated that 9.2 million km², or 31% of the land area, is suitable for smallholder fish farming. If yields from recent smallholder development projects can be replicated elsewhere, only 0.5% of this area would be required to produce 35% of the region's increased fish requirements up to the year 2010. At present however, this potential for aquaculture remains largely untapped: by 2002, total aquaculture production in sub-Saharan Africa was only 79 500 t (0.15% of world production), yields in most countries remain low, commercial operations have yet to develop in many areas, and fish farmers are relatively few in number. However, the main economic parameters are starting to change and opportunities for aquaculture are opening up. With growing urbanization, improved market integration and the concurrent supply crisis from capture fisheries, small and large-scale investors are gaining interest in aquaculture production. There is urgent need to develop guidelines and policies that create a conducive aquaculture investment climate and at the same time provide safeguards against environmental and social risks.

Trade in fish products has increased substantially over the past two decades and African fish exports were valued at US\$2.7 billion in 2001, from a total global value of US\$56 billion. Much more can be done to foster markets for African fish products, both within the region and globally. In several countries, fish exports to European and other overseas markets are now contributing significantly to national economies. In a relatively short time, the fish processing and exporting industry has acquired access to tightly regulated markets by meeting international Hazard Analysis and Critical Control Point (HACCP) and sanitary and phytosanitary (SPS) standards.

There is great potential to learn from these success stories and build the capacity of a wider spectrum of small and medium-sized enterprises to participate in these growth opportunities.

At the same time, trade relations with importing countries need to develop further to stimulate the growth of value-adding industries in Africa. In marine fisheries, arrangements that regulate the access of foreign fleets to African fish stocks need to be considered from a long-term perspective on fish supply and economic development opportunities. Although the export of fish from Africa is an important economic activity for many countries, marketing fish locally needs to be encouraged as this will contribute significantly towards the reduction of hunger and malnutrition as highlighted in the Millennium Development Goals. Clearly, the implications of accelerated fish trade for poverty and food security need to be fully understood so that the potential of trade as a stimulus to fisheries development can be effectively harnessed. Importantly, this will include increased attention to domestic and regional markets in addition to exports to industrialized countries. Trade of fish between African countries is an important if often unreported sector that provides affordable fish products to millions of consumers across the continent. It is estimated to absorb up to 50% of fish catches in some inland fisheries and it is widely acknowledged that better processing, improved transport and marketing, and more conducive regional trade relations could increase the contribution of this trade to the regional economy and food security. Gaining a wider and more balanced perspective on opportunities for trade at all levels will be an important step towards maximizing the development impact of fish exports to regional and global markets.

2. Fisheries and Aquaculture in the NEPAD Process

The NEPAD process prioritizes key areas of agricultural and commercial development for accelerated implementation. Several among them intersect with fisheries and aquaculture development. In the agriculture pillar, the CAADP has identified four strategic thrusts:

- (i) extending the area under sustainable land management and reliable water control systems;
- (ii) improving rural infrastructure and trade-related capacities for market access;
- (iii) increasing food supply and reducing hunger;
- (iv) agricultural research, technology dissemination and adoption.

In all four areas, fisheries and aquaculture have achieved successes at local and national levels that can be scaled-up regionally. Aquaculture has proven to improve water management practices at community and farm levels, thus increasing returns from crop production in drought-prone regions in southern Africa. Marketing of fish products, especially from small-scale capture fisheries, has opened many remote areas to wider markets, in the process enhancing market involvement of rural producers. Fish also contributes substantially and cost-effectively to nutrition security by supplying protein and other vital nutrients to the diets of 200 million Africans. Finally, aquaculture research, technology development and transfer are making a growing contribution to increasing fish supply and have the potential to widen their impact substantially in future. The recent success of commercial aquaculture in Egypt, which today contributes 50% of domestic fish supply, exemplifies opportunities for transferring such technologies within Africa.

With growing demand for fish and stagnating supply figures, there is an urgent need to now build on these success stories in developing a regional approach to fisheries development. In its efforts to identify opportunities arising from particular sectors and initiatives, the CAADP Action Plan has recognized the importance of fisheries in the region and the potential for development of aquaculture. There is considerable potential to include a plan for fisheries and aquaculture development amongst the ‘flagship programs’ of the Action Plan to further guide the fisheries sector’s key contributions to the CAADP priorities.

In doing so, fisheries development can also contribute to objectives and programs in other NEPAD pillars. The NEPAD Market Access Initiative emphasizes the competitiveness of African economies in global markets and the enhancement of intra-African trade. In both areas, fish has become a leading commodity, with an export value of US\$2.7 billion annually for Africa as a whole. The full potential for a vibrant fish trade in and beyond Africa has, however, not yet been realized. With fish demand projected to rise substantially on the continent as well as globally, the long-term prospects for African fish products are very promising. Building on the successes of fish processors and exporters in several countries, the private sector is now presented with tremendous opportunities in capture fisheries as well as the aquaculture sector. Further investments need to be directed towards assessing fish supply and demand trends, developing conducive fish trade policies, improving market infrastructure and building capacity among fish producers and processors for continued technical innovation, market exploration and self-regulation. These investments should include public-private partnerships that will support business development across the continent while also safeguarding wider poverty reduction objectives through the involvement of small-scale entrepreneurs and attention to regional markets.

Further, the *NEPAD Environment Action Plan* has prioritized the “conservation and sustainable use of marine, coastal and freshwater resources” as well as “cross-border conservation or management of natural resources”. Both objectives are of critical importance to the future of fisheries and aquaculture. Investments into developing environmental safeguards for the expansion of aquaculture and improving management of wild fisheries resources will be key contributions by the fisheries sector to overall environmentally sound management of aquatic resources.

Table 2 summarizes the current and potential future contributions of inland fisheries, coastal and marine fisheries, and aquaculture to the strategic objectives of these NEPAD programs.

Table 2: Contributions of fisheries and aquaculture to NEPAD strategic objectives

NEPAD Strategic Objectives	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
The Comprehensive Africa Agriculture Development Programme (CAADP)			
Pillar 1: Extending the area under sustainable land management and reliable water control systems	Improve integrated water management at basin and community levels; increase water productivity; livelihood support to resource-poor populations; broaden income base of communities	Long-term management plans for coastal and marine resources; need to rationalize economic costs and benefits of controlling fishing effort; scope to improve and diversify benefits for local and regional stakeholders	Improve water management practices at community and farm levels, increasing returns from crop production in drought-prone regions of southern Africa, improving viability of investment

NEPAD Strategic Objectives	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
Pillar 2: Improving rural infrastructure and trade-related capacities for market access	Marketing fish products, especially from small-scale fisheries, has opened many remote areas to wider markets; enhancing market involvement of rural producers; potential for further market development exists	Products from coastal and marine fisheries reach local, regional and global markets; in many countries they are the main export commodities; significant investments in processing, marketing and related industries have spurred wider commercial development	Marketing fish products, also from aquaculture, with infrastructure development, has opened many remote areas to wider markets, enhancing market involvement of rural producers
Pillar 3: Increasing food supply and reducing hunger	Inland fisheries provide fish products to many millions of Africans, reaching food insecure populations with affordable products; well-established regional distribution networks	Coastal and marine fisheries provide over 60% of African fish; coastal fisheries feed millions of small-scale fishers and consumers; well-established local, urban and regional trade	Small and medium-scale enterprises provide affordable fish products to rural and urban consumers; integrated systems also increase crop and livestock production
Pillar 4: Agricultural research, technology dissemination and adoption	Research into integrated water management and water productivity of growing significance beyond fisheries sector; post-harvest technologies offer further scope for research and development	Research into coastal zone management and marine protected areas (MPAs) has scope for Africa-wide application and technology transfer; sustainable fishing gear and post-harvest technology development of growing importance as catch limits are being reached	Success of commercial aquaculture in Egypt, now at over 50% of domestic fish supply, suggests good opportunities for regional technology transfer; innovations in biotechnology of potential importance for the wider agriculture and food sector
Market Access Initiative			
Strengthen regional economic integration through intra-African trade; diversification of product range, especially for agricultural products	Inland fisheries products widely traded between African countries; wide participation of women; product range is changing; scope for expansion not fully explored	Products from small-scale and industrial fisheries important regional commodities; removing regional barriers to trade can further strengthen regional markets	Resource base may provide key global advantages, internal markets also expanding; full potential not yet realized
Enhance access and competitiveness of African products in global markets	Examples of international exports from inland fisheries (e.g. Nile Perch from Great Lakes); increasing global demand provides further scope for investment in export capacity; opportunities for targeting niche markets	Marine products provide bulk of African fish exports valued at US\$2.7 billion/year; preferential access to some markets, but to be reviewed; target markets are shifting and larger South-South trade expected	Global demand to rise substantially, long-term prospects very promising; aquaculture plays minor role but could add 20–30% if developed, mainly with higher value products; aquaculture product can link with fish process/trade networks, particularly high-value, traceable products

NEPAD Strategic Objectives	Inland Fisheries	Coastal and Marine Fisheries	Aquaculture
Environment Action Plan			
Conservation and sustainable use of marine, coastal and freshwater resources'	Inland fisheries key component of integrated water management; significant investments and capacity in improved fisheries management benefit overall environmental management; fisheries production offers incentive for sustainable resource use	Fisheries is a main user of coastal and marine resources and offers effective entry point for investing in sustainable use; with production reaching limit, these investments become critical for future of fisheries; MPAs a key conservation tool	Sector development would increase use of resources – land, water, possibly impact biodiversity, but good strategies and well-managed systems could deliver benefits without unacceptable impacts
Cross-border conservation or management of natural resources	Most large inland water systems cross national borders; ecosystem approach increasingly adopted; transboundary management mechanisms emerging	Large marine ecosystems and many economic important fish stocks require cross-border management; regional fisheries bodies provide fora for coordination	Role of aquaculture in major shared water bodies and catchments – environmental capacity, aquatic animal health and biodiversity

In view of these multiple contributions to the NEPAD agenda, there is growing recognition that fisheries and aquaculture can provide an important area for investments in pursuit of the NEPAD objectives and the broader Millennium Development Goals. If this investment is to achieve an effective return it will, however, need to be targeted carefully at those priorities that will have maximum short and medium-term impact while leveraging longer-term action and investment by the private sector. This will in turn need to be underpinned by major investments to build capacity for planning, research and technology transfer through a strengthened network of training and research facilities around the continent. In recognition of these needs the *Action Plan for the Development of African Fisheries and Aquaculture* identifies primary areas for investment for inland and marine fisheries, and for aquaculture, together with priority actions for each. These investments are presented according to four themes of improved productivity, environmental sustainability, market development and trade, and food security and nutrition, reflecting the strategic thrusts of NEPAD's programs. Ultimately the specific priorities for each REC and each country will need to be decided at regional and national level. The Action Plan is, however, designed to guide this debate and encourage international investment in support.

3. The Action Plan

The overall technical objectives of the Action Plan are:

- (i) to support, and where possible increase, the long-term productivity of African fisheries and aquaculture through sustainable use of aquatic resources and application of environmentally sound technologies;
- (ii) to strengthen food security and trade benefits for Africa's socioeconomic development through improved access of African fish products to domestic, regional and international markets.

Context

Africa's inland fisheries play a critical role in supporting the livelihoods and food security of millions of people across the continent. They provide employment and income for households dependent on fishing and post-harvest activities, and provide the principal source of animal protein and essential micronutrients for millions of rural and urban-based poor. Yet catches from most inland fisheries have generally reached their maximum capacity, and many are now declining. Many of these fisheries are considered to be overfished, while the ecosystems that sustain them are threatened by eutro-phication, deforestation, dams and other water management schemes. In the next three decades, increasing competition for water will be a major challenge for these fisheries.

With the exception of semi-industrial fisheries in a few large lakes and reservoirs, the level of private and public investments directed to Africa's inland fisheries is remarkably low. Yet, in regions where inland fisheries and related activities are present, the potential contribution of these activities to the decentralized economic development process is substantial. To unleash this potential, an appropriate level of policy support and investments is required in different domains, including infrastructures and landing facilities, but above all, activities aiming at reducing the high rate of post-harvest losses that severely hampers the development of the African inland fisheries.

Improved Productivity

Investment Area 1. Improving fisheries governance and defining resource access, in particular for the poor

The social and environmental sustainability of most of Africa's inland fisheries, and the realization of their full development value, will only be achieved through more effective and equitable and governance arrangements. Of particular concern is the general under-representation of fishing communities in the decisionmaking process in both local and national political arenas. In order to address this requirement, governance mechanisms and processes need to be strengthened at all levels. Simultaneously the capacity of all stakeholders needs to be strengthened, in particular that of rural fishing communities. Effective participatory planning processes involving all legitimate stakeholders (local community, private sector) and leading to sustainable comanagement frameworks need to be put into place and supported with appropriate legislation.

Action points

- Build capacity of key stakeholders at all levels to engage effectively in improved governance arrangements for inland fisheries
- Analyze property rights arrangements at local level and encourage the development of adapted equitable property rights frameworks
- Pursue the implementation of fisheries comanagement plans that include all fisheries key stakeholders

- Create accountable governance structures at the decentralized level to supervise the fisheries management operations characterized by transparent mechanisms of control and audit
- Develop cost-effective information systems that can support improved governance

Investment Area 2. Enhancing productivity through post-harvest management

The productivity of African inland fisheries can be increased substantially by improving post-harvest management. Africa's inland fisheries are characterized by a high rate of post-harvest losses that affect most particularly small-scale operators (fishers and traders). Often, simple and cheap post-harvest technologies exist which could dramatically reduce the quantities of fish product lost. Further development and widespread application of these technologies would have a major impact on the livelihoods of hundreds of thousands of producers and millions of consumers. Similarly the development of post-harvest activities is largely impeded by the limited number of decent landing sites and investments to rehabilitate the infrastructure of the existing sites and to develop additional ones are required. Private and public investments are urgently needed in those domains to increase the productivity of inland fisheries across Africa. In addition, the majority of small-scale processors are unable to develop their business and adopt better processing techniques simply because they lack access to financial systems which would allow them to invest. Providing, and facilitating, the establishment of formal and informal financial supports for the post-harvest sector is a priority for Africa's inland fisheries.

Action points

- Strengthen public and private investments in post-harvest (processing and trading) infrastructures
- Invest in road and transport systems to improve accesses between major fishing areas and urban centers
- Identify technologies for improving processing in specific fisheries and build capacity through public-private partnerships to disseminate and use these technologies
- Develop the appropriate institutional conditions to stimulate the creation of viable long-term formal and informal financial systems to support small-scale processors and traders

Environmental Sustainability

Investment Area 3. Sustaining production through integrated water resource management

The long-term productivity of Africa's inland fisheries is dependent on maintaining the ecosystems on which these fisheries depend. These are, however, under widespread pressure from land and water management practices that are steadily reducing the availability and production of these systems. If Africa's inland fisheries are to be sustained over the coming decades, fisheries stakeholders will in particular need to engage with other water users at all levels of decisionmaking, particularly with regard to interactions with irrigated agriculture and hydro-power sectors. Investments in land and water management that sustain aquatic resources (including inland fisheries) are urgently needed, together with water governance that provides for full integration of inland fisheries priorities in water resource management. These investments will need to be rooted in a better appreciation of the fisheries resources and their specific contribution to economic development in different river basins.

Action points

- Build capacity of planners and managers at national and local levels to integrate fisheries priorities into integrated water resource planning and management
- Develop and implement decision support tools for land and water management that incorporate the needs of fisheries and the freshwater ecosystems that sustain them, and strengthen the capacity of decisionmakers to implement them
- Undertake assessments and valuations of major inland fisheries and contribute this information in support of improved water management
- Strengthen the capacity of tertiary and research institutions in Africa to provide science and training services required for better water resource planning and management
- Implement cost-effective and sustainable information monitoring systems that provide information to all major stakeholder groups
- Identify priorities for biodiversity conservation in Africa's inland waters and identify actions to address these
- Identify weaknesses in enforcement for freshwater management and actions to address these

Investment Area 4. Supporting transboundary management

Many of Africa's inland fisheries are transboundary resources. The long-term sustainability of these fisheries is dependent on maintaining the freshwater ecosystems on which they depend. These sustainable management plans, however, require collaboration across national and state or provincial boundaries. Capacity to initiate or pursue such approaches needs to be developed and institutions that can foster this supported.

Action points

- Support regional and basin-wide fisheries bodies to manage shared resources
- Raise awareness amongst planners and decisionmakers at regional level to integrate fisheries concerns into land and water management
- Pursue ecosystem-based approaches to river and watershed planning and management
- Improve capacity building (including training for strategic and cross-sectoral planning)
- Develop basin-wide monitoring and information systems and promote establishment of compatible legislative frameworks across basin and between sectoral management agencies

Market Development and Trade

Investment Area 5. Improving market access, in particular for small-scale producers, processors and traders

The full potential of Africa's inland fisheries will only be realized when artisanal fishers and small-scale traders have much improved access to markets for their produce. In order to improve this, multiple investments are required to develop market information systems at both national and regional levels and build capacity to understand and adapt to those market dynamics. Investments are also necessary to improve market infrastructures and communication and transport networks. These interventions need to be supported by increased promotion of fish and fisheries products in international, regional and local markets, and the development of policies and regulations that can help foster this trade, including the

formalization of the currently significant informal regional trade. In addition, the reduction of transaction costs at all levels, including the removal of tariff barriers and elimination of all forms of illegal (informal) taxation systems, need to be implemented. Finally to ensure that the benefits of markets and trade are shared, more accountable and transparent institutions will need to be developed that allow all size operators to benefit from their support and services.

Action points

- Develop market information systems and strengthen market research and development capacities
- Promote fish and fisheries products in international, regional and local markets
- Assess regional fish trade in order to identify current and potential internal African market opportunities
- Provide support to artisanal fish processors and traders, in particular women entrepreneurs, to further develop their enterprises
- Reform policies and regulations to encourage formalization of informal regional trade
- Elaborate guidelines for ecolabeling of inland fisheries products
- Develop competency of testing laboratories and quality control authorities, and develop legal/institutional frameworks to support certification processes
- Prepare and negotiate market access jointly during World Trade Organization (WTO) negotiation rounds and international discussions on sanitary and phytosanitary (SPS) and Technical Barriers to Trade (TBT) agreements.

Investment Area 6. Promoting enterprise development through enabling institutions and policy frameworks

If the economic opportunities offered by the African fish trade are to be realized fully, training for enterprise management, marketing strategies and organizational capacities will need to be provided to the fishers and the full range of operators along the marketing chain. In addition, a specific effort will have to be made to facilitate access to financial institutions, in particular for the small-scale operators and the local grass-root organizations that support these small-scale operators. As part of the improvement of access to credit and financial support, special attention needs to be given to addressing the 'remoteness' of financial institutions that are often located hours or days away from the rural fish farmers or fishers communities. Finally provision of facilities such as electricity and water to remote fishing communities will bring direct health benefits but also indirect benefits through the improvement of the economic performance of micro and larger-scale enterprises.

Action points

- Develop and finance training for enterprise management and marketing strategies along the marketing chain
- Strengthen the organizational and institutional capacities of producers' organizations
- Support fisher and trader associations and professional organizations to access and manage credit
- Introduce mobile financial services and develop appropriate financial services for different enterprises along the marketing chain
- Ensure provision and improvement of utilities in fishing communities

Food Security and Nutrition

Investment Area 7. Strengthening consideration of inland fisheries in national and regional policies and actions on food security

The role of fish as a major source of animal protein and micronutrient is now increasingly well documented internationally. Yet this has so far not been reflected in the integration of fisheries into Africa's national food policy frameworks. To achieve this, the contribution of fish to food and nutritional security needs to be better appreciated by senior decisionmakers and planners at national level and supported through more adequate and coherent policies at both national and regional levels. These need to address how Africa's fish resources can best contribute to food security through better processing and marketing of locally produced fish, while also seizing opportunities to generate income through export of higher value species to international markets. In addition, the role of imports of low-value fish needs to be considered.

Action points

- Document and communicate the real contribution of inland fisheries to regional, national and local food security
- Identify national and regional policies that promote better management of inland fisheries as a contribution to enhanced local and national food security
- Promote fish consumption in areas where it can provide a source of cheap protein
- Develop safety standards that recognize the different requirements of export and local markets

3.2 Coastal and marine fisheries

Context

Coastal and marine fisheries provide over half of Africa's fish production. As efforts are made to increase the contribution of fisheries to the continent's development it is essential to sustain and, where possible, enhance the benefits these fisheries provide. This will require considerable investment at multiple levels to address the increasing challenges faced by coastal and marine fisheries and the conflicts these generate, while a wide range of innovative investments are needed in order to, where possible, add value to the resources that are harvested.

Improved Productivity

Investment Area 1. Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production

With few exceptions, the coastal and marine resources of the African continent are fully exploited and in many places signs of significant overexploitation and resource degradation are evident. Population pressure and urbanization of the coastal areas play an important role in this dynamic, but overcapacity of industrial fleets and artisanal coastal fisheries remains the major factor driving resource degradation. In recent decades, competition for scarcer resources has also led to increasing conflicts amongst users, in particular between local fishers and larger-scale off-shore industrial fleets. However, increasingly these conflicts have taken on a regional

dimension. To address these issues, long-term fisheries management plans are needed at regional, national and local levels. These need to recognize that the transboundary nature of many stocks and the migratory feature of many fishing communities require a more collaborative approach between countries. This will, in particular, require harmonization of laws and institutional frameworks, and the overall approach will need to be underpinned by major investments in capacity building, for policy and implementation of monitoring, control and surveillance (MCS) measures in particular. In many cases these management plans will need to address the politically and socially difficult process of reducing fishing effort in both large-scale and artisanal fisheries. The ecological sustainability and long-term economic viability of the entire fisheries sector depends on these necessary reforms.

Action points

- Develop long-term bilateral and regional fisheries management plans for major marine fisheries, including recognition of the role and contribution of small-scale coastal fisheries
- Harmonize laws and institutional frameworks amongst countries and agencies and conduct audits to ensure conformity with management objectives
- Strengthen planning capacity at all levels through African regional collaboration backstopped by international agencies' technical support
Support emerging regional networks of technical and managerial expertise to provide regional learning platforms and mechanisms for knowledge sharing
- Raise high-level political awareness about the critical importance of effective MCS, and strengthen the capacity to implement these MCS at national and local levels, in particular to support implementation of existing action plans on illegal, unregulated and unreported (IUU) fishing
- Identify situations where reduction in fishing effort is required in marine and/or small-scale coastal fisheries and develop approaches to addressing this that are socially and economically viable

Investment Area 2. Building capacity of African countries to harness the full benefits of marine and coastal fisheries

If the full economic and social benefits of Africa's coastal and marine fisheries are to be harnessed, there is an urgent need to invest in overcoming the key bottlenecks that currently impede these fisheries. At present, an important part of the fish harvested from African waters is neither caught by African boats nor processed within the continent. There is broad consensus that the capacities to reverse this situation need to be developed and investments made to support this. This will require public and private sector investment in boats and processing capacities, and the general infrastructures of roads and ports to support this. These substantial investments will necessitate strong political support at national, regional and pan-African levels. At the local level, reliable and affordable credit facilities are a critical element particularly for small-scale operators, as are strengthened resource access rights for coastal fishing communities. Mechanisms for reinvestment of fisheries revenues through direct and indirect public investments supporting the specific needs of fishing communities will reinforce this.

Action points

- Raise high-level political awareness of the importance of coastal fisheries for local economic development

- Create national legal frameworks that are adapted to the specific conditions of local fishing communities and that allow equitable resource access rights
- Build Africa-wide capacity to catch and process its own fish
- Review existing foreign access agreements and assess their impact on national and regional economic development and food security objectives
- Encourage investments in value-added industries through conducive trade and market access conditions for value-added products from Africa
- Assess the impact of large-scale operations and fully evaluate the long-term impact of policies supporting foreign fleets agreements
- Ensure that revenues and economic rent generated by the sector are reinvested into development interventions with a strong focus on fisheries sector priorities
- Modernize and upgrade existing landing site infrastructures and invest in new ones, both in rural and urban coastal areas
- Improve access to enduring financial institutions for the fishing sector and access to credit at single-digit rates

Investment Area 3. Improving fisheries governance and participatory management

Improved governance in fisheries will provide the context for long-term economic growth and better management of the resources. To achieve this, laws and legislative tools which allow for better representation of the different stakeholder groups in the decisionmaking processes are required. These legislative processes should be combined with mechanisms which increase the transparency of decisionmaking at all levels and the accountability of those individuals and institutions whose actions impact the livelihoods of fishing communities. Specific efforts will be needed to pursue greater participatory fisheries management through comanagement reforms at national and local levels. This should include the strengthening of institutional mechanisms supporting decentralization reforms and, in particular, building up capacity for stakeholder consultation and participatory planning. As part of a larger capacity building scheme, the development and implementation of plans for information transfer, communication and education at all levels is essential. These plans should include mechanisms for sharing learning between countries and integrating lessons from other regions.

Action points:

- Institutionalize and reinforce participatory management approaches in both national and local fisheries agencies
- Strengthen institutional and legal mechanisms for comanagement and build capacity for consultation and participatory planning
- Develop and implement plans for information transfer, communication and education
- Improve governance processes through supportive laws and legislative frameworks and through the establishment of mechanisms to increase transparency and strengthen accountability of both public and private institutions
- Conduct audits of institutions and align them with management and conservation realities

Environmental Sustainability

Investment Area 4. Improving management of the coastal and marine environment

The sustainability of coastal and marine fisheries is dependent on maintaining the integrity and productivity of the coastal and marine environments on which these fisheries depend. In order to achieve this, future investments in coastal and marine fisheries need to be supported by investments in integrated coastal zone and marine management that take account of the interactions within the sector between small-scale and larger-scale fisheries, and between the fisheries sector as a whole and other domains impacting the resources such as tourism, land and water management, urbanization and industrial development. In doing so, non-governmental organizations (NGOs) and community-based organizations, and other key stakeholders need to be integrated into the planning and implementation stages of these new integrated management plans. This should also include the establishment and legal strengthening of rights-based management systems to address issues of access and ensure that those systems remain equitable for all users. This needs to be supported by increased capacity for MCS, which will help enforcing rights and fish management regulations and reduce the use of destructive fishing practices. The contribution of MPAs also needs to be considered and promoted where appropriate.

Action points

- Develop and implement integrated coastal zone management plans (including the use of MPAs)
- Implement multidisciplinary ecosystem-based assessment and develop integrated data management systems
- Strengthen the capacity of tertiary and research institutions in Africa to provide science and training services required for better planning and management of coastal and marine resources
- Promote participation by non-government and civil society organizations in the preparation and implementation of integrated coastal zone management
- Create and strengthen equitable right-based management systems including limited access/permits
- Develop management instruments and tools including effective MCS and promote the use of less destructive fishing practices
- Strengthen linkages among finance and management institutions in fisheries and environment

Market Development and Trade

Investment Area 5. Strengthening the access of African fisheries to regional and international trade in fish products

If Africa is to harness the full development benefits of its marine fisheries considerable investment is required to develop regional and international trade in fish products. This will require the further negotiation of fair and equitable fishing agreements, and more effective consideration of African fishery priorities and constraints within global trade negotiations processes such as those led through the World Trade Organization and Codex Alimentarius. This should be facilitated by the development of more closely harmonized positions on issues of

fisheries agreements and fish trade, as well as a stronger institutional and policy environment that supports fish trade within the region. At the technical level, capacities for quality control and certification need to be developed and strengthened. In this effort to develop fish trade, it will be essential to improve access of small-scale coastal fishers to regional and international fish trade.

Action points

- Accelerate regional integration initiatives through stronger collaboration between national institutions and the support of RECs
- Negotiate favorable fisheries access agreements under various conventions
- Strengthen individual and collective negotiation power through a harmonization of African positions in global trade negotiation fora such as the WTO and Codex Alimentarius
- Strengthen control capacities for sanitary, certification and labeling at national level (for legislative issues) and at provincial level (for implementation issues)
- Develop a more enabling and stimulating institutional environment to strengthen regional fish trade and ensure a fair redistribution of these trade benefits
- Design policy frameworks that support investment by Africans in the processing and trade of Africa's fish products

Investment Area 6. Supporting post-harvest activities through adequate investments and policies

If trade of fish from Africa's marine waters is to be increased and contribute to both national and local economies, an efficient post-harvest sector needs to be developed. This will require the development of improved infrastructure and equipment (roads, ice, landing sites, cold rooms) and public sector investment will need to provide this in most cases. The private sector also has a crucial role to play in the investment and management of post-harvest operations and public-private partnerships should be encouraged to expand research and development, in particular in relation to technology innovation and dissemination and technical support (extension) services. To allow the vast majority of fish traders and processors (amongst which are a large proportion of women) to benefit from the economic wealth created by fish trades at local, national and regional levels, mechanisms need to be established to facilitate access to financing facilities, in particular credit and microfinance.

Action points

- Increase the private sector's support and involvement in research and extension services while ensuring the competitiveness, accountability and quality-driven nature of the process through an adapted and flexible legislative framework
- Improve infrastructure and equipment through appropriate public and private investments (e.g. roads, ice, landing sites, cold rooms)
- Provide support to artisanal fish processors and traders, in particular women entrepreneurs, to further develop their enterprises
- To reduce the rate of discard and improve utilization of by-catch
- Expand research and development for post-harvest technology through public-private partnerships
- Strengthen financing mechanisms, in particular credit and microfinance, with particular attention to the specific legal and institutional constraints faced by women

Investment Area 7. Promoting enterprise development through enabling institutions and policies

African coastal fisheries, and in particular artisanal fisheries together with the small-scale processing and trading enterprises that are associated with these fisheries, display a number of comparative economic and social advantages, which provide the sector with a particularly strong opportunity to drive poverty alleviation and local economic development. However, in order to seize these opportunities, there is an urgent need for investment from both the public and private sectors. This will need to recognize that most of the small-scale operators involved in fisheries or processing and trade lack education and many of the basic skills to run and manage their enterprise. Programs and initiatives which will help and support those operators to acquire indispensable managerial skills and capacities are urgently required for a pro-poor investment in fishery enterprise development. This needs to be supported by the development of more reliable, low cost input supplies and services.

Action points

- Promote the development of public-private partnerships in support of investments in coastal and marine fisheries, and develop tools and capacity for monitoring their economic development and food security impact
- Develop policy frameworks which support and protect the comparative economic and social advantages of small-scale coastal fisheries
- Develop training programs that strengthen fishers and traders' capacities for enterprise management
- Promote public and private investments in the fisheries sector and develop investment codes which specifically address constraints faced by small-scale entrepreneurs
- Expand and support research and development for improved supply of processing inputs and services

Food Security and Nutrition

Investment Area 8. Strengthening consideration of coastal and marine fisheries in national and regional policies and actions on food security

Coastal and marine fisheries play a central role in the food and nutrition status of many African countries. This needs to be recognized and policies developed and enforced to ensure that this role is sustained. Despite increasing quantities of fish traded in the world, per capita fish consumption in Africa is projected to decline from 6.7 to 6.6 kg by 2020, driven by increasing population and declining incomes. To reverse this trend, the contribution of marine fisheries to food and nutritional security needs to be better appreciated by senior decisionmakers and supported through more adequate and coherent policies, both at national and regional levels. In this context, the substantial volume of 'low-value' fish that is traded within Africa, and its role in the nutrition of poor (especially urban) communities, needs to be recognized. In the face of growing global demand for fish, it is urgent that ways are identified to manage this trade in 'low-value' fish for the continued benefit of Africa's poor.

Action points:

- Design and enforce national and regional level policies and legislation that promote and support the contribution of fish to food and nutrition security

- Support the development of intra-Africa commercialization and trade of low-value fish products
- Promote fish consumption in areas where it can provide a source of cheap protein
- Support market research and better use of existing information sources on national and regional fish trades

3.3 Aquaculture

Context

Aquaculture has grown strongly in most regions of the world where the potential exists. This has not happened in sub-Saharan Africa, and Egypt is the only African country to have achieved the scale of change observed elsewhere. However, there is now growing recognition that aquaculture in Africa can develop under specific conditions and contexts, and that the prospect of market-led growth and broader regional integration, together with more realistic understanding of the technical potential, provides substantial opportunities for growth.

This realization has promoted considerable development investment and sectoral promotion at both regional and national levels. The availability of natural resources and the opportunities for entering valuable export markets have also led to private investment initiatives, often with external capital, in wholly owned enterprises or joint ventures. In many circumstances, local private investment has also been considerable, often by artisanal farmers, community development associations and local businesses, with expectations of meeting local demand and diversifying household income. The challenge being addressed now in many countries is how best to foster this growth.

Improved Productivity

Investment Area 1. Developing sector-wide strategies at national level for expansion and intensification of aquaculture

The importance of having a viable sector strategy at national level is increasingly realized. Based on a better understanding of the structure of the sector, this involves targeting support to the different needs and strengths of small, medium and large-scale aquaculture enterprises. The role of private sector investments in pursuing such a strategy is a key issue that will decide the level of growth and sustainability of support services. In doing so, it is essential that available experience and lessons from other regions are being utilized to drive the development of aquaculture in Africa. This applies in particular to other developing country experience in areas of production, environmental management, trade relations, market development and public-private partnerships. One of the limitations of past approaches in Africa has been the neglect or ineffective use of this knowledge base. On the basis of regional cooperation through RECs and NEPAD, African countries and aquaculture stakeholders can strengthen their international linkages in these areas and use available expertise to build up their own capacity.

Action points

- Develop national aquaculture sector strategies based on economic planning and value-chain approaches, including targeted strategies for small and medium scale, as well as large-scale industry
- Review international lessons on the aquaculture sector, in particular from Asia, and their implications for Africa
- Agree among stakeholders on a phased approach to sector development, with immediate action taken up over the next months
- Adopt current standards of valuation and investment planning for the sector at national level
- Establish a regional network of aquaculture policy practitioners, supported by other leading government planning sectors, to accelerate the development of aquaculture strategies and their integration into wider economic strategies at national level

Investment Area 2. Supporting priority aquaculture zones

Aquaculture is not developing evenly across the continent; instead, priority areas with high natural, economic and social potential are beginning to emerge. These include priority resource systems (such as particular lakes or coastal areas), peri-urban zones, areas with existing processing capacity, and clusters of rural aquaculture. These need to be further assessed within the context of regional and ecosystem planning and immediate support needs to be focused on these areas. Links and synergies with commercial agriculture development need to be pursued, for example, supplying crop-based feeds in large quantities. A process will need to be established for addressing governance issues around competing resources uses and access rights, and monitoring of longer-term impact of such priority zones.

Action points

- Immediately identify priority zones through rapid assessments, taking into account natural, economic and social factors of growth and innovation
- Supplement this through surveys of further potential growth areas based on geographical information systems (GIS)
- Assess current and future demand for raw materials for feed and fertilizers and pursue linkages with agriculture development for establishing supply chains for aquaculture
- Review governance and resource access implications of priority zones

Investment Area 3. Encouraging private sector investment across the sector

In response to growing demand for fish products, private sector investment interest has substantially increased in the region. This interest needs to be supported and private investments guided towards sustainable growth. Public-private partnerships offer a variety of options to deliver support services and management functions that are critical for sector development, including information, research and development, monitoring, regulatory and financial support. Strategic public investments are justified to improve the policy and legal framework and facilitate exchange and lesson learning across the continent. In advancing and expanding aquaculture, however, the private sector needs to take the leading role, and this needs to be recognized in strategy development and investment planning.

Action points

- Link aquaculture investors at all levels to national and regional enterprise development programs
- Review lessons and experiences of public-private partnerships from other sectors and regions
- Review policy, regulatory and legal frameworks with a view to supporting private sector opportunities, particularly for small and medium-scale enterprises
- Encourage public-private partnerships in support of research, training and technology development

Investment Area 4. Applying proven technologies to increase production

Technologies for increasing productivity at different levels of investment, expanding aquaculture zones and improving product quality are available from many regions, including Africa itself. Constraints exist in access and application, including purchasing and operating costs, technical skills, disease and other risks in intensive systems, and biosafety concerns in the case of new species. Support is needed to improve information, dissemination, application and risk management capacity in the region. This support area offers significant opportunities for private sector investments.

Action points

- Immediately identify technologies available in the region with potential for wider dissemination and application, including advances in commercial production in Egypt and in integrated smallholder systems in Malawi
- Establish and support private sector-led technology dissemination and application services
- Support regional networks of aquaculture service providers, including research and technology dissemination, for scaling-up local and national successes
- Support private sector capacity to deliver advanced monitoring and risk management services
- Strengthen the capacity of tertiary and research institutions in Africa to provide science and training services required for longer-term technology development, and strengthen their linkages with private sector initiatives

Environmental Sustainability

Investment Area 5. Maintaining the competitive advantage that Africa's environment provides for aquaculture production

The relatively intact natural environment in most African countries offers a comparative international advantage for Africa as an aquaculture production region. This advantage needs to be fully assessed in terms of resource value, production options and marketing strategies for African aquaculture products. It is important that this 'capital' is further supported through good governance of aquatic and land resources, and that lessons from other regions in the developing world (in particular Asia) are effectively applied to avoid mistakes and achieve sustainable growth.

Action points

- Assess competitive advantage of different African environments and product ranges
- Review lessons and experiences of aquaculture resource degradation from other regions, in particular Asia
- Identify policy needs and institutional linkages with environmental, water and related sectors at national level

Market Development and Trade

Investment Area 6. Harnessing the opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including growing urban demand

The widening supply and demand gap for fish in most domestic markets in Africa offers growing opportunities for aquaculture production. There is an immediate need to assess the range of products, seasonality and price elasticity, and substitution effects in these markets and to target aquaculture production, harvesting and marketing strategies, accordingly. In many cases, aquaculture products are not differentiated from capture fisheries products and may, therefore, miss out on marketing advantages and price premiums. Market information, marketing skills and logistics need to improve significantly for aquaculture enterprises to fully utilize this area of opportunity.

Africa is the most rapidly urbanizing region in the world, and urban populations have an increased demand for fish. To meet this demand, small and medium-scale aquaculture enterprises are emerging in peri-urban zones, and rural producers are marketing their products increasingly in urban markets. There is a growing need, therefore, to assess the full potential and structure of urban fish and food markets and accordingly support peri-urban zones as priority aquaculture areas. Enterprise development in production, support services and marketing, regulatory framework and market infrastructure development are key constraints at this time. Correspondingly, market access for rural producers needs to improve. As urban demand becomes more differentiated, it will become increasingly important to see what segment of the market aquaculture – and fish supply more generally – can target effectively.

Action points

- Assess the longer-term trends and current structure of domestic supply and demand, including urban demand, product range and price elasticity
- Support the development of practical market information mechanisms
- Support small and medium-scale enterprises through technical advice and financial services to access local, urban and wider domestic markets with a targeted product range
- Provide enterprise development support to small and medium-scale operators to further develop their businesses towards market integration
- Review policy, regulatory and legal frameworks with a view to supporting further opportunities for small and medium-scale enterprises in production and service industries

Investment Area 7. Supporting the emerging regional trade in aquaculture products

There is an immediate need to assess the current structure, volume and economics of fish trade between countries in the region, addressing in particular the 'informal' trade of low-value fish that appears to be a substantial sector supplying food to millions of people and providing strong business opportunities for women entrepreneurs. Aquaculture products are increasingly

entering these trade routes as processed or fresh products, in some cases to be further processed and re-exported in the region and beyond. These market opportunities need to be supported through better cross-border information systems, conducive regulatory and policy frameworks, and enterprise development support targeting women in particular. The RECs will play an important role as coordinating agencies.

Action points

- Assess and document the current structure, volume and economics of intra-regional trade of low-value food fish
- Support women entrepreneurs in this sector through technical advice and financial services to further invest in post-harvest and trade of aquaculture products in regional markets
- Review policy, regulatory and legal frameworks with a view to further strengthening opportunities for women in small and medium-scale enterprises

Investment Area 8. Harnessing the opportunity of expanding export markets for high-value aquaculture products to increase investment in African aquaculture production and processing

The emerging success of African aquaculture exports needs to be further supported through investments in policy, legal frameworks and support services. In particular, capacity has to be strengthened in the region for quality control to meet the changing food safety and traceability requirements of import markets. Public-private partnerships provide viable options for financing such investments. There are opportunities emerging for small and medium-scale enterprises to participate in the aquaculture export trade at various stages in the production and marketing chain, and these need to be supported through enterprise development and linking into niche markets. Options for labeling and certification schemes – including ‘organic’ production – need to be assessed and experience from other sectors and regions utilized to gain a realistic and workable perspective on these instruments. Links with existing export marketing of capture fisheries products are being pursued by individual enterprises. There is also further need to improve information flow on markets, prices and standards to enterprises and investors in the region.

Action points

- Assess options for public-private partnerships for management and financing of this sector, using experiences from other export sectors and regions
- Where possible, support associations of small and medium-scale enterprises to participate in this sector, based on lessons from other regions and sectors
- Establish a regional aquaculture industry association to facilitate coordination, research and development, and market development
- Encourage investments in value-added industries through conducive trade and market access conditions for value-added products from Africa

Food Security and Nutrition

Investment Area 9. Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security

Successful examples of integrated aquaculture-agriculture, raising farm productivity and incomes by combining fish farming with crop, livestock and small-scale irrigation, are available from southern Africa and need to be scaled-up and adapted for the region. This will be a

significant contribution to food security among smallholder farmers. To achieve this, scaling-up tools and approaches need to be improved and linked with rural development agencies outside the aquaculture sector, such as NGOs. At a commercial level, options for further intensification of such integrated systems, in particular in combination with irrigation, need to be explored. In addition, opportunities and viability of stocking dams and small water bodies, in particular in food insecure dry regions, need to be assessed and workable approaches developed.

Action points

- Immediately identify and apply approaches for scaling-up successful integrated aquaculture practices from Malawi in other countries in southern Africa
- Support further research and development to intensify these integrated systems and adapt them to new water and land environments
- Support integration of aquaculture and agriculture research and planning in the context of growing investments in irrigation schemes
- Assess the viability of stocking and stock enhancements of dams and small water bodies in food insecure regions

Investment Area 10. Exploiting the potential of aquaculture production to contribute to food security programs

The nutrition benefits from aquaculture – and fish consumption more generally – need to be fully documented and promoted through education and health programs focusing, in particular, on women as key decisionmakers. Benefits for vulnerable populations, including children, women and people affected by HIV and AIDS, need to be targeted and small-scale aquaculture production and marketing strategies adjusted accordingly. To spread food security benefits more widely, aquaculture needs to be linked better with food security and school feeding programs at national or regional level, including NEPAD's programs. Strategically, aquaculture development may be viewed as a long-term investment in food security by increasing levels of control and management of fish and aquatic resources.

Action points

- Assess and document the nutrition benefits of common fish consumption among vulnerable populations, including women, children and people affected by HIV and AIDS
- Support health and rural development agencies to include the promotion of fish consumption into their community programs
- Link small and medium-scale aquaculture enterprises as suppliers with national school feeding programs to improve child health and nutrition

APPENDIX 2

The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa

**Adopted by the
Heads of State Meeting of the
NEPAD-*Fish for All* Summit
Abuja, Nigeria**

25 August 2005

The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa

We, the Heads of State and Government, meeting in Abuja, Nigeria, on the occasion of the NEPAD-*Fish for All* Summit, on 25 August 2005,

Embracing the principles of the NEPAD vision of Africa's development, its objectives to eradicate poverty, achieve food security and build the foundations of sustainable development in the region;

Noting the strategic guidance provided by NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP);

Recalling the provisions of international and regional declarations and instruments on fisheries, food security, ocean governance, trade, the aquatic environment and transboundary waters, in particular the 2000 United Nations Millennium Declaration and Millennium Development Goals, the 2002 Johannesburg Declaration on Sustainable Development and the Johannesburg Plan of Implementation;

Recognizing the dependence of millions of our people on fisheries and aquaculture for their livelihoods, for food and nutrition and for economic wellbeing and commerce, and recognizing the importance of fisheries in the social fabric of our communities and in poverty alleviation;

Conscious of the potential for increased benefits from sustainable fisheries and aquaculture and the opportunities to meet the ever-increasing demand for food fish in our countries, our region and globally;

Gravely concerned by the depletion of fisheries resources, the degradation of aquatic environments and the threats to sustainable fisheries and aquaculture;

DO HEREBY RESOLVE, without prejudice to the sovereign rights, obligations and responsibilities of our countries under relevant international law and relevant treaties and agreements to:

Support regional cooperation in fisheries and aquaculture through NEPAD, regional economic bodies and regional fisheries management organizations, including the management of transboundary and shared aquatic resources and ecosystems;

Support national actions to accede to, ratify, and implement international conventions for the sustainable use and protection of the living aquatic resources and the aquatic environment of the region;

Implement the provisions of the FAO Code of Conduct for Responsible Fisheries, in particular through improved governance of fisheries; ensuring the environmental sustainability of fisheries; examining means to progressively replace 'open access' to fisheries resources with 'limited access regimes' and introduction of rights-based fisheries; taking steps to control fleet and

fishing capacity; and ensuring an equitable balance of resource allocation between small-scale and industrial fishers;

Empower fishing and fish-farming communities, civil society and stakeholder organizations to effectively participate in policymaking, planning and implementation processes, with particular reference to the equitable allocation of resources, and the rights of the poor and disadvantaged;

Ensure that fisheries and aquaculture are adequately reflected in the national and regional economic policies, strategies, plans and investment portfolios, including poverty reduction and food security strategies;

Foster the development of an appropriate investment climate for fisheries and aquaculture, including legal and institutional reform and enforcement where required, improved incentives and access to capital for private investors, and strategic public sector investments;

Direct particular attention to harnessing the potential and entrepreneurship of small-scale fishers, fish farmers, fish traders and service providers and their associations, including women entrepreneurs who have been leading the development of fish processing and trade in much of the continent;

Foster small, medium and large-scale aquaculture production in a sustainable and environment-friendly manner compatible with the rational use of land and water resources and evolving market opportunities;

Build human and institutional capacity at national and regional levels with particular emphasis on training institutions, transferring appropriate technologies and knowledge to small producers and ensuring a rational and scientific basis for management decisions and design of programs;

Conserve and rehabilitate aquatic environments and habitats essential to living aquatic resources and aquatic biodiversity; and take measures to prevent or mitigate adverse impacts of aquaculture on the aquatic and coastal environment and communities;

Promote trade in artisanal and industrial fish products to respond to regional and global market opportunities for African fish products, including the removal of intra-regional trade barriers, developing common approaches and positions on international trade in fish and fishery products, and harmonizing standards on products traded in the region;

Pursue these objectives through NEPAD and Regional Economic Communities, in collaboration with international partners in science and development;

Contribute to the creation of an enabling environment for sustainable fisheries and aquaculture development by facilitating the adaptation of existing regional, national and local institutions and regulations to the changing requirements of the sector and its challenges and opportunities;

Call upon the international community to provide the financial and technical support required to implement sustainable African fisheries and aquaculture through aligned and harmonized partnership arrangements and in pursuance of NEPAD's vision and principles for action;

AND DO HEREBY DECIDE, that the Resolution be implemented as soon as possible and that the Plan of Action prepared and adopted as a part of the NEPAD-*Fish for All* Summit process be used as a guideline for formulating and implementing policies, programs, projects and strategies at national, regional and continental levels.

APPENDIX 3

Regional Working Group Recommendations

Appendix 3.1: Regional priority areas for implementation of the NEPAD Action Plan

1. Common Market of Eastern and Southern Africa (COMESA)			
NEPAD Objectives	Inland Fisheries	Marine Fisheries	Aquaculture
Improved Productivity		Building capacity of African countries to harness the full benefits of marine and coastal fisheries	Encouraging private sector investment across the sector Developing sector-wide strategies at national level for expansion and intensification of aquaculture Applying proven technologies to increase production
Environmental Sustainability	Sustaining production through integrated water resource management		
Market Development and Trade	Improving market access, in particular for small-scale producers, processors and traders	Strengthening the access of African fisheries to regional and international trade in fish products	Harnessing the opportunity of expanding export markets for high-value aquaculture products to increase investment in African aquaculture production and processing Supporting the emerging regional trade in aquaculture products
Food Security and Nutrition			Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security
<p>Notes: Building capacity is a broad area which needs to be linked between the three production systems. In marine fisheries, the issue of strengthening the access of African fisheries to regional and international trade in fish products is cross-cutting.</p>			

2. Economic Community of Central African States (ECCAS)			
NEPAD Objective	Inland Fisheries	Marine Fisheries	Aquaculture
Improved Productivity	Enhancing productivity and availability through post-harvest management	Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production, notably through the implementation of sub-regional monitoring and control systems	Developing sector-wide strategies at national level for expansion and intensification of aquaculture Supporting priority aquaculture zones through encouraging private sector investment and the application of proven technologies

2. Economic Community of Central African States (ECCAS)			
NEPAD Objective	Inland Fisheries	Marine Fisheries	Aquaculture
Environmental Sustainability	Sustaining production through integrated water resource management Supporting transboundary management		
Market Development and Trade	Promoting enterprise development through enabling institutions and policy frameworks	Strengthening the access of fisheries and aquaculture to regional trade in fish products	
			Harnessing the opportunities for small and medium enterprise development provided by expanding domestic markets for fish, including growing urban demand
Food Security and Nutrition			Facilitating the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security

3. Economic Community of West African States (ECOWAS)			
NEPAD Objective	Inland Fisheries	Marine Fisheries	Aquaculture
Improved Productivity	Building capacity of African countries to harness the full benefits of marine and coastal fisheries Improving fisheries governance and participatory management		Encouraging private sector investment across the sector
Environmental Sustainability	Sustaining production through restoration of ecosystems, and integrated water resource management		
	Management of coastal and inland environment		
Market Development and Trade	Improving market access, particularly for small-scale producers, processors and traders Promoting enterprise development through enabling institutions and policy frameworks Supporting post-harvest activities through adequate investments and policies		Supporting the emerging regional trade in aquaculture products

Food Security and Nutrition			Expanding the adoption of integrated small-scale aquaculture as a means of increasing rural productivity and food security
------------------------------------	--	--	--

4. Southern African Development Community (SADC)			
NEPAD Objective	Inland Fisheries	Marine Fisheries	Aquaculture
Improved Productivity	Improving fisheries governance and defining resource access, particularly for the poor Improve post-harvest management	Preparation and implementation of long-term fisheries management plans and supportive policies for sustained production	Applying proven technologies to increase production
	Building capacity of African countries to harness the full benefits of marine and coastal fisheries		
Environmental Sustainability	Improving management of inland, coastal, marine and aquaculture environment		
Market Development and Trade	Improving market access, particularly for small-scale producers, processors and traders Promoting enterprise development through enabling institutions and policy frameworks	Supporting post-harvest activities through adequate investments and policies	Promoting enterprise development through enabling institutions and policies
Food Security and Nutrition			Strengthening consideration of aquaculture in national and regional policies and actions on food security

Appendix 3.2: Regional opportunities and challenges for fast-track implementation

1. Common Market of Eastern and Southern Africa (COMESA)			
Existing or Required Processes and Initiatives	Critical Actions to be Taken	By Whom?	Opportunities for Immediate Progress
Existing private sector associations Need to include private sector initiatives in existing regional fora	Strengthening the existing private sector initiatives NEPAD and COMESA should facilitate the formation of strong private sector associations	NEPAD National governments Private sector	The existence of fish markets
Existing national strategic plans	Strengthening, harmonizing and supporting those plans	National governments Regional bodies NEPAD COMESA	Existence of good political will among countries
Existing programs for integration and management of the resources in the region (e.g. irrigation schemes and water use)	Incorporating aquaculture and fisheries within the existing scheme	National governments Private sector	Existence of schemes and experience
Existing protocols and agreements on fisheries	Synergies between protocols and agreements	National governments COMESA	Existence of protocols and agreements Political good will
Existing initiative on development of fisheries and aquaculture in reservoirs and river basins	Prepare integrated management plan for the basins	Member countries NEPAD	Existence of experience, examples and accumulative knowledge
Existing initiative for capacity building for the conservation of marine fisheries by the World Wide Fund for Nature (WWF)	Develop aquatic protected areas for <i>in situ</i> conservation	National governments WWF NEPAD FAO	Existence of WWF programs Existence of MPAs in the region
Existing resource assessment capability through research	Support resource monitoring and evaluation Strengthen existing institutions	FAO NEPAD USAID National institutions	Existence of institutions and related international bodies
Existing protocol for the management of Lake Victoria Basin	Develop management plans for other watersheds	NEPAD COMESA FAO EAC National governments	Existence of protocols Good will for governments to carry forward this initiative
Existing national legal framework	Harmonization of such frameworks within the region	NEPAD COMESA FAO	Build on the existing framework
Existing national action plans	Strengthen the existing plans and develop such plans where they do not exist Develop regional plans	National governments FAO	Build on the existing action plans

1. Common Market of Eastern and Southern Africa (COMESA)			
Existing or Required Processes and Initiatives	Critical Actions to be Taken	By Whom?	Opportunities for Immediate Progress
Existing Nile Basin Initiative	Strengthen the existing initiative	Member states	Existence of the initiative Political good will
Existing CCRF (FAO) for fisheries and aquaculture	Creation of awareness among stakeholders Governments should include CCRF principles in their national plans	National governments NEPAD COMESA FAO	Existence of the code
Existing regional plan for IUU in Lake Victoria	Develop similar plans for the region	FAO COMESA	Existence of the plan for region integration
Existing COMESA initiative to encourage regional trade	Remove non-tariff trade barriers Improve intra-regional communication	COMESA National governments Private sector	Enhancement of extra-trade Process of regional integration is underway
Need for the creation of centers of excellence on fisheries, aquaculture, research, database and training	Identify the capabilities of the existing institutions Select and strengthen the identified institutions to cater for the region	NEPAD COMESA FAO USAID National governments	Existence of the institutions which deserve strengthening

2. Economic Community of Central African States (ECCAS)			
Existing or Required processes and Initiatives	Critical actions to be Taken	By whom?	Opportunities for Immediate Progress
COREP (Comité régional des pêches du Golfe de Guinée) strategic action plan	Implement COREP strategic action plan	COREP Member states Partners	Action plan available (capacity building in the fields of management, planning, training and research Technical and financial assistance from partners)
ECCAS Regional Food Security Program (RFSP)	Implement the fisheries component of the project	ECCAS CAEMC Partners	Program of support to RFSP (AfDB) ACBF Institutional Support Program
Sustainable Fisheries Livelihoods Programme (SFLP)	Step up support for integrated participatory management in continental and maritime fisheries	FAO Member states Partners	Policy paper on poverty relief in fishing communities Institutional and regulatory framework
Economic Commission on Cattle, Meat and Fish Resources (CEBEVIRHA)	Increase support for post-catch management Improve product access to regional markets	CEBEVIRHA Member states Partners	Current Continental Fisheries and Aquaculture Project
Lake Chad Basin Commission (LCBC) (Cameroon, Niger, Nigeria, CAR, Sudan, Chad)	Project to transfer Oubangui river basin (Congo-CAR) waters to Lake Chad	Lake Chad Basin Commission Member states Partners	Environmental impact assessments to be carried out
Gulf of Guinea Large Marine Ecosystem Project (GOGLME)			Environment
Central Africa Forests Commission (COMIFAC) Convergence Plan	Implement water and fisheries resources component of the convergence plan	COMIFAC ECCAS Member states Partners,	COMIFAC treaty Convergence Plan
Ministerial Conference on Fisheries Cooperation among African States Bordering the Atlantic Ocean (COMHAFAT)	Build capacity Support work currently underway in the area of development support to enterprises and regional market access for fisheries products, and drafting of master plans	COMHAAT Member states Partners AFIEX	
INFOPECHES	Strengthen INFOPECHES in the ECCAS region	InfoPêches FAO network, Member states Partners	Existing market information system (MIS)
WorldFish Cameroon Project: Developing integrated agriculture-aquaculture systems for small operators in rural tropical areas	Extend experience gained to other countries in the region (support to private farmers in priority peri-urban areas, Research Action in Partnership between Farmers and Researchers approach, aquarium species-based poverty relief action, etc.)	WorldFish Member states Partners	Regional WorldFish Bureau in Yaoundé Report available on project now ending
Strategic framework for the development of aquaculture in Cameroon	Implement the framework	FAO Cameroon ECCAS Member states Partners	Draft framework available

3. Economic Community of West African States (ECOWAS)			
Existing or Required Processes and Initiatives	Critical Actions to be Taken	By Whom?	Opportunities for Immediate Progress
Abidjan Convention for sustainable management and pollution of the coastal and marine environment of West and Central Africa	Taking inventory and cognizance of existing relevant initiatives and giving them the necessary support	RECs	ECOWAS to liaise with secretariats of existing programs and initiatives with the view of integrating ongoing and planned projects and initiatives in the framework of the present initiative
UNEP Regional Seas Program for West and Central African Region Action Plan (WACAF) and World Bank Initiative	Development and enforcement of policies to protect and ensure food security	Member states	Granting of incentives to exporters to encourage repatriation of funds
The large marine ecosystem programs, e.g. Guinea Current LME (substantial fisheries components)	Develop networks and communications for linking existing interventions	NEPAD	Take advantage of planned meetings of Environment and Fisheries Ministries under the auspice of the CaCLME and CCLME projects
Law of the seas	Ministries responsible for fisheries resources, i.e. Environment, Water Resources and Fisheries, need to have regular meetings to exchange views, strategies and policies		
London Dumping Convention	Utilize the fisheries potential of reservoirs		
Convention on Hazardous Wastes	Strengthen competitiveness and comparative advantages of the sub-region through increased specialization of production		
Action Plan on Freshwater by the African Ministerial Conference/Council on Water	Create a conducive environment for the development of domestic and regional markets for fish products		
Regional River Basin Commissions, e.g. Volta Basin, Niger Basin, Lake Chad Basin, Senegal Basin, Gambia Basin	Formulate aquaculture development strategies		
Coastal, marine and freshwater components of the Agenda 21 of the World Summit for Sustainable Development	Document and exchange successful experiences in fisheries and aquaculture in the region and Africa-wide		
Sustainable Fisheries Livelihoods Programme	Prioritize the development of pilot projects		
FAO Initiative on Integrated Irrigation and Aquaculture			
Programmes and projects of regional and			

sub-regional bodies and NGOs, e.g. SRFC, ECOWAS, UEMOA, CILSS, ADB, IUCN			
National programs, i.e. support to agricultural services and farmers' 'egalization'; rural infrastructure; food security			
National experiences of comanagement			

4. Southern African Development Community (SADC)			
Existing or Required Processes and Initiatives	Critical Actions to be Taken	By Whom?	Opportunities for Immediate Progress
Regional training and capacity building	Establish a regional training and capacity building network Establish a regional coordinating committee with a coordinator	SADC Secretariat	Expand existing networks and capacity available in the region Strengthen SADC Secretariat capacity
Regional approach to aquaculture development	Develop regional aquaculture policy to guide national aquaculture policy, strategies and programs Assistance to national governments to develop 'egalization', policies and strategies Promote commercial aquaculture development	SADC Secretariat Member states	Build on existing successes in Africa Build on existing investments in the region Adoption of proven technologies Utilize trade fairs for outreach Promote the implementation of existing investment guidelines
Improve pre- and post-harvest handling, processing and storage	Increase investments in landing sites Information, education and communication on fish quality	Member states International cooperating partners	Wider use and access to available technologies
Market access and development	Develop market information systems Trade negotiation facilitation at national and regional levels	Member states	Utilize the INFOSA office and network available Utilize available African and international expertise Support existing trade negotiation frameworks nationally and regionally

APPENDIX 4

Summit Program

Monday 22 August 2005

OPENING CEREMONY

- 8.30 Arrival of Delegates/Registration of Delegates
- 9.00 Arrival of Dignitaries
- 9.20 National Anthem
- 9.30 Welcome Address
Hon. Minister of Federal Capital Territory Administration, Mallam Nasir El-Rufai
- 9.40 Goodwill Message
Senior Special Assistant to the President on NEPAD, Chief (Mrs) Chinyere Asika
- 9.50 Opening Address
Hon. Minister of State for Agriculture and Rural Development, Bamidele F. Dada
- 10.05 Workshop Introduction
Deputy Director General of the WorldFish Center, Dr Patrick Dugan
- 10.20 Vote of Thanks
Permanent Secretary, Federal Ministry of Agriculture and Rural Development
Ms. Ammal I. Pepple
- 10.25 National Anthem
- 10.30 Photo Session and Coffee/Tea Break

TECHNICAL WORKSHOP: NEW DIRECTIONS FOR FISHERIES AND AQUACULTURE IN AFRICA

- 11.00 Session 1: Setting the context and explaining the process
- 11.30 Session 2: Presentation, discussion and refining of the NEPAD Action Plan
- 12.30 Lunch
- 13.30 Refining the Action Plan continued
- 14:45 Session 3: From continent-wide plan to regional and national action
- 18.30 Reception – Government (Federal Capital Territory Administration)

Tuesday 23 August 2005

- 9.00 Session 5: Review of regional/national action
- 10.00 Session 6: Identifying enabling factors and barriers to delivery
- 12.15 Lunch
- 14.00 Session 7: Overcoming barriers and moving forward
- 16.30 Session 8: Review and closing address
- 18.30 Reception – WorldFish Center

Wednesday 24 August 2005: NIGERIAN FISHERIES DAY

Thursday 25 August 2005

NEPAD-FISH FOR ALL HEADS OF STATE SUMMIT

OPENING CEREMONY

- 8:30 Arrival of Invited Guests and Dignitaries
- 9:00 Arrival of His Excellency, The President, Federal Republic of Nigeria, Chief Olusegun Obasanjo, GCFR, and Heads of State and Government
- 9:15 National Anthem
- 9:20 Opening Address
His Excellency, President Olusegun Obasanjo, GCFR
- 9:30 Welcome Address
Chief Executive of NEPAD, Professor Firmino Mucavele
- 9:35 Welcome Address
Hon. Minister of Agriculture and Rural Development, Mallam Adamu Bello
- 9:50 Presentation of the Symbolic Key to the City Gate of Abuja
Hon. Minister of Federal Capital Territory Administration, Mallam Nasir El-Rufai
- 9:55 Vote of Thanks
Hon. Minister of State for Agriculture and Rural Development, Otunba Bamidele Dada

THE SUMMIT

- 10:30 Keynote Addresses
- FAO: *Enhancing the Contributions of Fisheries and Aquaculture to Africa's Development Agenda*
Delivered by Dr Ichiro Nomura, Assistant Director General, FAO
- Fish for All: African Fisheries, Aquaculture and the Millennium Development Goals*
Delivered by Dr Stephen Hall, Director General, WorldFish Center
- 11:30 Addresses to the Summit
- World Bank
Delivered by Warren Evans, Director of Environment, the World Bank
- WorldFish Center: *Strengthening Research and Capacity for Sustainable Fisheries and Aquaculture*
Delivered by Dr Stella Williams, Board of Trustees, WorldFish Center
- 12:15 *The Abuja Declaration on Sustainable Fisheries and Aquaculture in Africa*
Delivered by His Excellency Chief Olusegun Obasanjo, GCFR
- 12:30 Closing Ceremony
- 13:00 Lunch/Reception
- 14:30 Tour of Exhibition Stand by His Excellency Chief Olusegun Obasanjo, GCFR, President, Federal Republic of Nigeria accompanied by Heads of State and Governments and other Dignitaries

APPENDIX 5

List of Participants

Name	Position	Organization	Country
Eddie Kofi ABBAN	Research Scientist	Water Resources Institute	Ghana
Hussein ABEGAZ	Senior Fisheries Expert	Ministry of Agriculture	Ethiopia
Usama Khalifa AHMED	Senior Researcher	National Institute for Oceanography and Fisheries	Egypt
Stephen AMAYO	Assistant to Minister	Ministry of Agriculture, Animal Industry and Fisheries	Uganda
Felicia ANDREWS	Assistant to Chief Executive	NEPAD Secretariat	South Africa
Olajide AYINLA	Assistant Director	Nigerian Institute for Oceanography and Marine Research	Nigeria
Moctar BA	Fisheries Consultant		Mauritania
Ousman BABA MALLOUM	Director of Fisheries	Ministry of Livestock, Fisheries and Animal Industry	Cameroon
Ahmadu BABAGANA	Director for Rural Economy and Agriculture	African Union Commission	Ethiopia
Hon. Henry Chimunthu BANDA	Minister	Ministry of Mines, Natural Resources and Environment	Malawi
Khamarunga BANDA	Executive Director	Nov Africa – Center for Innovation in Development	South Africa
Joel BEASSEM	Coordinator, Regional Program on Food Security and Environment	Economic Community of Central African States (ECCAS)	Gabon
Hon. Alhadj Adamu BELLO	Minister	Federal Ministry of Agriculture and Rural Development	Nigeria
Christophe BENE	Portfolio Director, West and Central Africa	WorldFish Center	Egypt
Lunga BENGU	Third Secretary	South African High Commission to Nigeria	South Africa
Kirsten BJØRU	Senior Fisheries Advisor	NORAD, Norwegian Agency for Development Cooperation	Norway
Philip BOREL	General Manager	Greenfields Ltd	Uganda
Tim BOSTOCK	Senior Fisheries and Aquatic Resources Adviser	Department for International Development	United Kingdom
Sloans CHIMATIRO	Director of Fisheries	Ministry of Mines, Natural Resources and Environment	Malawi
Seydou COULIBALY	Technical Adviser on Fisheries	Ministry of Livestock and Fisheries	Mali
Hon. Otunba Bamidele DADA	Minister of State for Agriculture and Rural Development	Federal Ministry of Agriculture and Rural Development	Nigeria
Jeremiah DAFFA	Program Coordinator	Tanzania Coastal Management Partnership	Tanzania

Name	Position	Organization	Country
Famara DARBOE	Principal Fisheries Officer	Fisheries Department, Ministry of Agriculture and Natural Resources	The Gambia
Sandy DAVIES	Fisheries Adviser	SADC Secretariat	Botswana
Hon. Yaye Kene Gassama DIA	Minister for Scientific Research	Ministry of Scientific Research	Senegal
Mody Hady DIALLO	Assistant Director of Research	Ministry of Fisheries and Aquaculture	Guinea
Ndeye Tike DIOP	Director of Marine Fisheries	Ministry of Fisheries	Senegal
Matar DIOUF	Director of Inland Fisheries and Aquaculture	Ministry of Fisheries	Senegal
Bomoko DJONYO	Fisheries Officer	Ministry of Agriculture, Livestock and Fisheries	Republic of Congo
Patrick DUGAN	Deputy Director General	WorldFish Center	Egypt
Kristyn EBRO	Communications Officer	World Bank	USA
Catrin EGERTON	Program Assistant	WorldFish Center	Egypt
Daniel EKLU	Director for Agriculture	ECOWAS Secretariat	Nigeria
Hon. Ahmed EL LEITHY	Minister	Ministry of Agriculture and Land Reclamation	Egypt
Warren EVANS	Director, Environment Department	World Bank	USA
Wayne FRANK	Country Representative, Nigeria	USAID	USA
Nancy GITONGA	Director of Fisheries	Ministry of Livestock and Fisheries Development	Kenya
Lidvard GRONNEVET	Senior Fisheries Specialist	World Bank	USA
Ndiaga GUEYE	Chief, International Institutions and Liaison Service	FAO	Italy
Stephen HALL	Director General	WorldFish Center	Malaysia
Talatou HAROUNA	Head of Fisheries and Aquaculture Division	Ministry of Water Resources, the Environment and Combating Desertification	Niger
Yehia HASSAN	Professor	Ain Shams University	Egypt
Simon HECK	Portfolio Director, Eastern Africa	WorldFish Center	Egypt
Nathanael HISHAMUNDA	Fisheries Planning Officer	FAO	Italy
Benoît HOREMANS	Program Coordinator	Sustainable Fisheries Livelihoods Programme (SFLP) of the FAO	Italy
Gilles HOSCH	Marine Program Officer	IUCN – The World Conservation Union	Mauritania
Eriko HOSHINO	Consultant	World Bank	USA

Name	Position	Organization	Country
Ezzat IBRAHIM	Chairman	General Authority of Fish Resource Development	Egypt
Naseegh JAFFER	Director	Masifundise Development Trust	South Africa
Alhaji JALLOW	Secretary, Regional Office for Africa	FAO	Ghana
Daniel JAMU	Portfolio Director, Southern Africa	WorldFish Center	Malawi
Ken JOHM	Agricultural Economist	African Development Bank	Tunisia
Jón Erlingur JONASSON	Counsellor	Ministry of Foreign Affairs	Iceland
Monty JONES	Executive Secretary	Forum for Agriculture Research in Africa (FARA)	Ghana
Brehima KASSIBO	Economist	Institute for Rural Economy	Mali
Hon. Billy KAUNDA	Member of Parliament	Parliament of the Republic of Malawi	Malawi
Hon. Symon Vuwa KAUNDA	Member of Parliament	Parliament of the Republic of Malawi	Malawi
Moustapha KÉBÉ	Policy Adviser	Sustainable Fisheries Livelihoods Programme (SFLP) of the FAO	Benin
Kieran KELLEHER	Senior Fisheries Adviser	World Bank	USA
Philip KIRIRO	Director	East African Farmers Association	Kenya
Daniel KOIKROI	High Commissioner to Nigeria	Kenyan High Commission to Nigeria	Kenya
Gabriel KOMBOZI	Director	National Aquaculture Service (SENAQUA)	Democratic Republic of Congo
Kwame KORANTENG	Regional Representative, East Africa	WWF – World Wide Fund for Nature	Kenya
Mamba KOUROUMA	Project Manager, Participatory Coastal Management Project	Ministry of Fisheries and Aquaculture	Guinea
Bernard LADU	Director	National Institute for Freshwater Fisheries Research	Nigeria
Hon. Mohand LAENSER	Minister	Ministry of Agriculture, Rural Development and Sea Fisheries	Morocco
Simeão LOPES	Director	Institute for Development of Small-scale Fisheries	Mozambique
Mohamed LOUATI	Adviser to Minister	Ministry of Agriculture, Rural Development and Sea Fisheries	Morocco
Jean Mabeka MANTUIKA	Principal Fisheries Officer	Department of Fisheries	Democratic Republic of Congo
Thomas MAEMBE	Executive Secretary	Lake Victoria Fisheries Organization (of the East African Community)	Uganda
Famadou MAGASOUBA	Vice Minister	Ministry of Fisheries and Aquaculture	Guinea

Name	Position	Organization	Country
Jimmiel MANDIMA	Conservation Scientist	African Wildlife Foundation	Zimbabwe
Daroomalingum MAUREE	Fisheries Officer	Ministry of Fisheries	Mauritius
Yamar MBODJ	Agriculture Adviser	ECOWAS Secretariat	Nigeria
Jim MILLER	Aquaculture Adviser	FAO Nigeria Office	Nigeria
Richard MKANDAWIRE	Agriculture Adviser	NEPAD Secretariat	South Africa
Martin MONONGA	Principal Secretary	Ministry for Mines, Natural Resources and Environment	Malawi
Edson MPYISI	Head, Food Security and Agriculture Division	African Union Commission	Ethiopia
Firmino MUCAVELE	Chief Executive of NEPAD	NEPAD Secretariat	South Africa
James MUIR	Professor of Aquaculture	Stirling University	United Kingdom
Hon. Janet MUKWAYA	Minister	Ministry of Agriculture, Animal Industry and Fisheries	Uganda
Hon. Joseph Konzolo MUNYAO	Minister	Ministry of Livestock and Fisheries Development	Kenya
Cosmas MUNYEKE	Assistant to Minister	Ministry of Livestock and Fisheries Development	Kenya
Valeria MUSHI	Fisheries Officer, Aquaculture	Fisheries Division, Ministry of Natural Resources and Tourism	Tanzania
Nancy MUSHOTA	Program Officer	Environment Council of Zambia	Zambia
Hon. Cadmiel MUTHEMBA	Minister	Ministry of Agriculture and Fisheries	Mozambique
Wilson MWANJA	Head, Aquaculture Unit	Ministry of Agriculture, Animal Industry and Fisheries	Uganda
Faustin MWAPE	Agricultural Economist	NEPAD Secretariat	South Africa
Essau MWENDO-PHIRI	Program Officer	World Vision International	Malawi
Stephen MWIKYA	Executive Officer	Association of Fish Producers and Exporters of Kenya	Kenya
Pape Gora NDIAYE	Program Officer	Environment Development Action in the Third World (ENDA)	Senegal
Baptême François NDOUNGA	Executive Secretary	Regional Fisheries Committee for the Gulf of Guinea (COREP)	Gabon
Arthur NEILAND	Fisheries Economist	Institute of Sustainable Development and Aquatic Resources (IDDRA)	United Kingdom
Tshepo NEITO	Communications	NEPAD Secretariat	South Africa

Name	Position	Organization	Country
	Officer		
Ibrahima NIAMADIO	Head of Program	IUCN – The World Conservation Union	Burkina Faso
Madiodio NIASSE	Coordinator	IUCN – The World Conservation Union	Burkina Faso
Jean-Calvin NJOCK	Aquatic Resource Management Officer	Sustainable Fisheries Livelihoods Programme (SFLP) of the FAO	Benin
Ichiro NOMURA	Assistant Director General, Fisheries Department	FAO	Italy
Beatrice NYANDAT	Senior Fisheries Officer	Ministry of Livestock and Fisheries Development	Kenya
Dick NYEKO	Commissioner for Fisheries Resources	Ministry of Agriculture, Animal Industry and Fisheries	Uganda
Magaret NYIRENDA	Director, Food, Agriculture and Natural Resources	SADC Secretariat	Botswana
Sylvia NZEKWU	Correspondent	Sahel and West Africa Club, OECD	France
Isabel OMAR	Director of Aquaculture	Ministry of Agriculture and Fisheries	Mozambique
Victor POUOMOGNE	Scientist	Institute of Agricultural Research for Development	Cameroon
Lucia QUACHEY	Chairwoman	Ghanaian Association of Women's Entrepreneurs	Ghana
Ismail RADWAN	Chairman	Kafr el Sheikh Fish Farmers Association	Egypt
Harry REA	Aquaculture and Fisheries Adviser	USAID	USA
Eric REYNOLDS	FishCode Programme Coordinator	FAO	Italy
Mohamed ROUCHDI	Agriculture Adviser to the Minister	Ministry of Agriculture, Rural Development and Sea Fisheries	Morocco
Qurban ROUHANI	Research Scientist	Rhodes University	South Africa
Shamseldin SALIM	Agricultural Economist	COMESA Secretariat	Zambia
Sidi SANYANG	Consultant	Forum for Agriculture Research in Africa (FARA)	Ghana
Hon. Aboubakary SARKI	Minister	Ministry of Livestock, Fisheries and Animal Industry	Cameroon
Aubin SAWADOGO	Livestock Program Officer	ECOWAS Secretariat	Nigeria
André SHARE	Chief Director	Marine Resource Management and Allocations	South Africa
Gogwin SHIMANG	Director of Fisheries	Federal Ministry of Agriculture and Rural Development	Nigeria
HE Bangumzi SIFINGO	High Commissioner to Nigeria	South African High Commission to Nigeria	South Africa
Lincoln SINGINI	General Manager	Maldeco Ltd	Malawi

Name	Position	Organization	Country
Petronella SPLIETHOFF	Head of Environment and Water Department	International Agriculture Center, Wageningen	Netherlands
Rashid SUMAILA	Professor	University of British Columbia	Canada
Ibrahima Sory SYLLA	Director of Marine Fisheries	Ministry of Fisheries and Aquaculture	Guinea
Zenebe TADESSE	General Manager	National Fisheries and Aquatic Life Research Center	Ethiopia
S.O. TALABI	Director	Talon Agro Ltd.	Nigeria
Alfred TETEBO	Director of Fisheries	Ministry of Food and Agriculture	Ghana
Gloria TETTEH	Consultant	Forum for Agriculture Research in Africa (FARA)	Ghana
Samba Bocary TOUNKARA	Fisheries Adviser	African Development Bank	Tunisia
Hon. Ibrahima Sory TOURE	Minister	Ministry of Fisheries and Aquaculture	Guinea
George TWALA	First Secretary	South African High Commission to Nigeria	South Africa
Ard VAN DER VORST	Counsellor	Royal Netherlands Embassy in Nigeria	South Africa
Hon. Marthinus VAN SCHALKWYK	Minister	Ministry of Environmental Affairs and Tourism	South Africa
Ben VAN ZYL	Deputy Director of Fisheries	Ministry of Fisheries	Namibia
Shaun VORSTER	Adviser to Minister	Ministry of Environmental Affairs and Tourism	South Africa
Stella WILLIAMS	Professor	Obafemi Awolowo University, Ile-Ife	Nigeria

Acronyms

CAADP	Comprehensive Africa Agriculture Development Programme
CCRF	Code of Conduct for Responsible Fisheries
CGIAR	Consultative Group for International Agricultural Research
COMESA	Common Market for Eastern and Southern Africa
COREP	Comité régional des pêches du Golfe de Guinée
DFID	Department for International Development
ECCAS	Community Economic Community of Central African States
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GIS	Geographical Information System
HACCP	Hazard Analysis and Critical Control Point
IFPRI	International Food Policy Research Institute
IUU	Illegal, Unregulated and Unreported
MCS	Monitoring, Control and Surveillance
MPA	Marine Protected Area
NEPAD	New Partnership for Africa's Development
NGO	Non-governmental Organization
NSPFS	National Special Program for Food Security
REC	Regional Economic Community
SADC	Southern African Development
SFLP	Sustainable Fisheries Livelihoods Programme
SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
UNEP	United Nations Environment Program
USAID	United States Agency for International Development
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wide Fund for Nature