

Aquaculture in West Africa: *A Sustainable Source of Food and Income?*

The sustainable development of Africa's natural resources is today increasingly linked to human security. As we have seen, food security is the foundation for human security in the region and as such, it has become an imperative for investments in natural resources such as water, fisheries or extractives - both public and private sector-driven - to take into account the longer-term goals of sustainable development and food security. This is particularly true in the fisheries and aquaculture sector for a region like West Africa, where the majority of the population depends on fish-based resources for their daily sustenance.

Fisheries: a decreasing activity

With the West African population estimated to increase to 430 million by 2025, the pressures on economies, natural resources and the entire society cannot be underestimated. More than half of the region's population consumes fish products on a daily basis and for some countries (e.g. Benin, Gambia, Ghana, Mali, Mauritania, and Senegal) it accounts for up to 3-5% of total GDP¹. In addition, the sector employs about 5 million fishers, fish processors and fish traders in the region, along with other associated jobs. The post-harvest sub-sector, for example, provides women with many jobs, playing an essential role in economic and social development.



Against this backdrop, Sub-Saharan Africa is the only region where the consumption of fish has actually dropped² despite the population increase, a trend we cannot afford

to see continue or worsen, especially when the decline in fish consumption has not been offset by the increase in consumption of other forms of animal protein. In the case of Mali, a landlocked country benefiting from important inland fisheries, average fish consumption is higher than meat, 5.4 kilos vs. 4.7 kilos per person. The drop in fish consumption can be attributed to numerous factors, including poor infrastructure limiting access, lower incomes, illegal, underreported and unregulated fishing (IUU) as well as to a general increase in poor management of artisanal and commercial fishing.

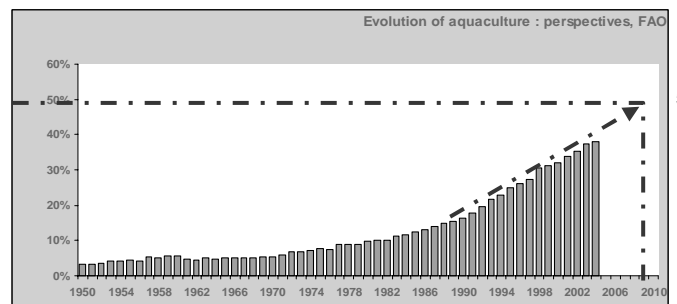
¹ SFLP National studies carried out in 2005, www.sflp.org

² Prospective Analysis of Future Aquaculture Development, COFI/AQ/III/2006/Inf.7 FAO Fisheries Department, Rome, FAO, 2006

Increasing demand of seafood products

Local demand for fish products in the region will continue to increase. At the same time commercial fishing vessels supplying international markets in Asia and Europe will see higher demand. This pressure is generating a need for seafood dealers to diversify their fish sources, including turning to aquaculture. With the fast evolution of the world seafood market in terms of trade, especially for "eco-labeled" products, aquaculture has become the major player in the seafood industry. From 1989 there was global stagnation of fisheries production, but as fisheries demand increased, the result was a fast increase in aquaculture production starting in 1992.

Evolution of aquaculture as % of total production



According to the FAO³, aquaculture will constitute 50% of world seafood production by 2010 – 2012, or about 90 to 100 millions tons compared to about 3,1% to 7.1% millions of tons per year between 1992 to 2004. The annual rate of aquaculture consumption has increased by 2 % since 1992. In addition, due to environmental concerns and consumer pressure, sustainable practices have mostly won-out over non-sustainable practices as strict trade rules on origin and labeling have become indicators for marketing success. Thus, aquaculture has diversified and grown enormously over the last decade, fine-tuning with new technologies its best management practices, including in the area of shrimp farming which is known for having negative environmental impacts (see SWAC study, www.oecd.org/sah/devperspectives/shrimpfarming).

West Africa in the Aquaculture Marketplace

Unlike in Asia where the tradition of "farming fish" dates back thousands of years, it is only in the last few years that the development of aquaculture as a source of income and food has begun to be exploited in West Africa.

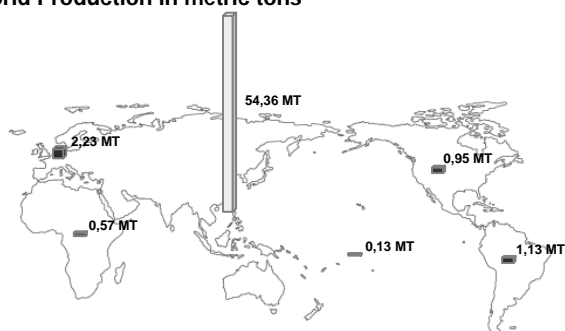
Recent FAO studies along with the NEPAD Action Plan (2005) recognize the potential which aquaculture production holds for the region yet which remains largely untapped at 0.15% of world production in 2002. With a suitable natural environment and a relatively stable political climate in most countries, West Africa offers an attractive investment destination for aquaculture because of its rich coastal ecosystem and inland rivers and estuaries spanning all the way from Mauritania to Equatorial Guinea and inland to Mali, Niger and Chad with diverse local species of high market value, such as tilapia, catfish and

³ State of World Aquaculture: 2006. FAO Fisheries Technical Paper. No. 500. Rome, FAO, 2006.

Atlantic tiger shrimp - all of which are currently being farmed and exported.

In terms of world aquaculture production, West Africa is not yet a player. China is the leader in world aquaculture production with 41.3 millions tons (70 % of world production) and 30 % of their aquaculture production is exported.

World Production in metric tons



Although West Africa constitutes less than 1% of global aquaculture production, improved trade relations between the EU, US and Asia reinforced by a series of national strategies and multi-lateral development financing (e.g. World Bank's ProFish and DFID's Trust Fund of 35 Million USD for FAO-Africa) for developing the sector have made it a high priority region for aquaculture development, as evidenced by recent investments from Asia (e.g. Taiwan and China).

Like any activity involving large investments in natural resources, aquaculture can have high returns as well as high risks. It is of utmost importance, then, that *in the short-term* West Africa adopts international guidelines on best practices (www.enaca.org), especially in the area of shrimp farming, to avoid - and mitigate - negative environmental consequences. This will require tenacious public sector and private sector cooperation.

On the local level, integrated approaches such as 'integrated irrigation aquaculture' could become a key component in the process of West African family farm transformation in response to food security needs, market and livelihoods development. Commercialization schemes (e.g. linking industrial fish farms to smallholder farms) to adapt integrated approaches to all levels and to different local contexts are needed to guarantee their financial and environmental sustainability over the long-term. South-South Cooperation with Asia is a rising opportunity to learn from existing best management practices applicable to the West African context. Some outreach efforts are already underway in this area with the Network of Aquaculture Centres of the Asia-Pacific (NACA) and a group of West African countries with FAO and SWAC/OECD support.

The challenge facing the region today is how to accompany these positive trends with environmental safeguards to ensure they optimize the region's comparative advantage while protecting and diversifying local livelihoods and contribute to food security of the poor.

Climate change, water-based income and aquaculture

Changes in climate variability will directly affect future food and water availability for the region's rapidly growing population, according to the U.N. FAO Climate

Change Conference held in December 2006 in Nairobi. The FAO stressed that greater attention must be given to the impact of climate change on fisheries and aquaculture, and on mitigation and adaptation measures.

In addition, the OECD recently published a review on the potential impact of climate change on fisheries and aquaculture including implications for non-OECD countries. The emphasis for West Africa is on the additional stress that climate variability will place on already existing vulnerabilities in the region's fisheries and aquaculture sectors like poor infrastructure, markets, social services and most importantly, lack of political stability and governance to deliver basic needs such as water.

Regional efforts to promote sustainable aquaculture for food security and income in West Africa

Outcomes of the NEPAD Fish for All Summit

In September 2005 the NEPAD organized at ECOWAS Headquarters in Nigeria the first *Fish for All Summit* to galvanize regional and international resources and bring public attention to fisheries management and aquaculture development. President Obasanjo, highlighting the importance of political will and technical research, noted that "African fishery products have an export value of 2.7 billion USD yet these benefits are at risk as the exploitation of African natural fish stocks is reaching its limits and aquaculture production has not yet realised its full potential". An investment of 30 million USD in the recently launched NEPAD-WorldFish Program for Sustainable African Aquaculture was announced which alone would increase Africa's production by 10% per year creating employment for an estimated 5 million people by 2020 and provide food security for many more.

Conference on Commercial Aquaculture

Past experience has shown the emphasis should be on private sector investments in aquaculture in West Africa. Private sector efficiency should be facilitated by a public sector enabling environment combined with regional strategies to development within the limits of available resources. Following-up to the SWAC's Regional Roundtable on "Economic Opportunities in Sustainable Shrimp Farming in West Africa", held in June 2006 in Guinea (Conakry), a joint FAO/SWAC conference is being planned for September 2007 in The Gambia to build upon existing private sector initiatives, to identify business opportunities through South-South Cooperation and to help set the framework for the adoption of regional guidelines on sustainable practices (see SWAC Concept Paper).

"Looking at the current situation one could argue that Africa has missed the green revolution... Let's make sure we don't miss the 'BLUE' one."

- Dr. Hall, Director General, World Fish Center, Abuja, 2005

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