



TODAY'S NEWS

Updates | News | Information

Did You Know?

- ◆ Aquaculture now accounts for nearly 50 percent of the world's food fish?
- ◆ Worldwide, 567 aquatic species are farmed.
- ◆ In the 1970s Aquaculture produced 3 million tonnes of fish.
- ◆ In 2012 world aquaculture production reached 66.63 million tonnes of food fish at a farm-gate price of US\$138 billion.
- ◆ Global Aquaculture production employs an estimated 23 million people- 16 million directly and 6.5 million indirectly.
- ◆ The American Bullfrog has been cultivated from as far back as 1960s. Thai farmers have been cultivating the frogs since the early 1990s.
- ◆ Artemia or brine shrimp is produced in Jamaica but the largest producer is the US.



A fish pond in Haiti, where the sector has taken off in recent years.

Aquaculture: an opportunity for economic growth in the Caribbean

The Caribbean Regional Fisheries Mechanism (CRFM) has identified aquaculture as one sector with the potential to stimulate economic growth, provide thousands of jobs and provide food security in member countries across the region. However, aside from commercial production in Belize and Jamaica, aquaculture remains an underdeveloped industry in the Caribbean.

With the support of the Technical Centre for Agricultural and Rural Cooperation (CTA) the CRFM has developed a Five-Year Action Plan for the development of aquaculture. The plan is supported by a state-of-the industry study which confirms the potential of aquaculture to contribute significantly to the economic and social development of the Caribbean.



Commercial packaging of aquaculture products

Aquaculture can grow economies...

- ◆ By increasing employment opportunities for thousands of unemployed and under-employed youth between the ages of 15 and 35.
- ◆ Increasing the level and variety of skills in farm-workers,
- ◆ Improve and increase research and innovation in the sector,
- ◆ Increase employment for women in farming communities,
- ◆ Improve the quality of farm work as Aquaculture is also considered to be less labour intensive than crop or livestock production and
- ◆ Expansion of secondary and supporting industries

The study identified the factors that restricts the development of aquaculture in the most developed aquaculture in the countries, and has also outlined strategies for its sustainable development.

The success of aquaculture as an industry in the region however, must be linked to the implementation of appropriate frameworks and incentives that will allow farmers to produce in a competitive environment. Given the potential of the sector, the Secretariat is seeking cooperation of member countries to promote and develop sustainable growth in the aqua-culture sub-sector.

THE POTENTIAL OF AQUACULTURE

Worldwide, there has been a significant growth in the amount farmed and the demand for aquaculture products. The State of World Fisheries and Aquaculture (2014) reported that global production of food fish grew at an average rate of 6.2 percent per year between 2000 and 2012.

But even as the world production grows, full scale commercial production in the region's top producing countries has been on the decline since 2005. The downturn in production was made worse by the global economic decline which eroded markets and pushed many farmers out of production.

*“Based on its dynamic performance over the last 30 years, with the fairly stable catches from capture fisheries, it is likely that the future growth of the fisheries sector will come mainly from aqua-culture”
...FAO*



*Catching fish from a pond on one of several farms in the Caribbean.
CRFM Photo.*

The CRFM is Working....

The **CRFM Secretariat** has worked with several donors to support the development of policies and laws to improve the management of aquaculture and fisheries in member countries. The ACP Fish II Programme assisted in the development of national policies on aquaculture in some member states.

These include:

- ◆ An assessment of the potential for aquaculture in Haiti,
- ◆ CRFM's work to increase production in a climate that has the legal framework, policies and that supports the efforts of investors, farmers and the workers.
- ◆ A development plan for land and water use in Jamaica
- ◆ A strategy for the development of aquaculture for St. Kitts and Nevis
- ◆ The development of a fisheries and aquaculture policy for Dominica, Grenada and St. Vincent and the Grenadines and
- ◆ Support for the formulation of a fisheries and aquaculture policy for the Dominican Republic.

In 2012 CRFM member states established a Working group on aquaculture made up of private sector stakeholders and representatives of member countries to:

- ◆ Intensify efforts to increase production,
- ◆ Create a strategy to increase the supply of farmed fish,
- ◆ Adopt an eco-system approach to aquaculture,
- ◆ Establish regional working group to develop policies and guidelines
- ◆ Enable policies and legal frameworks and
- ◆ Establish guidelines, standards and best practise standards.

Facts About Global Aquaculture Production

- ◆ Aquaculture grew by 9.5 per cent per year between 1990 and 2000, from 32.2 million to 66.6 million tones,
- ◆ African aquaculture grew by 11.7 percent per year during the 10 year period,
- ◆ Latin America and Caribbean recorded 10 per cent growth
- ◆ Caribbean has seen 0 percent growth in 10 years.
- ◆ Aquaculture includes the production of aquarium fish.
- ◆ Shrimp, seaweed and oysters are also farmed in the Caribbean.



Tilapia

The global economic decline pushed down market prices in the region, even as farmers saw increases in production costs and the impact of diseases of their stocks. Faced with rising cost of energy, feed, transportation and security, low prices because of cheap imports from Asia, many farmers went out of business or stopped production.

Peak production of 18,879 metric tonnes from a handful of countries in the region in 2004, is evidence that there are big possibilities for the growth of the sector.



WHAT ARE THE ISSUES?

The growth and development of aquaculture in the region has been marginally successful and on the decline for a number of reasons. These include:

- ◆ The high cost of inputs such as feed, land and energy
- ◆ The high cost of money-loans are expensive and difficult to get,
- ◆ Competition from Asia and South America where large scale production and cheap labour costs have reduced the overall production costs,
- ◆ Issues with Health and Food Safety
- ◆ Inadequacy of Research and Development
- ◆ Low support in the form of extension and other support services,
- ◆ Lack of skilled labour for several specialised roles
- ◆ Lack of water management policies
- ◆ Lack of overall policies and legislation governing all areas of production and marketing
- ◆ The Frequency of weather events and the sub-sector's vulnerability to the storms and hurricanes that impact the region annually and
- ◆ Lack of secure water supplies makes the sector vulnerable to droughts.

This is further supported by research conducted by the CRFM which provides evidence that aquaculture has the potential to:

- ◆ Contribute to economic development,
- ◆ Provide a livelihood for the women of the region,
- ◆ Create employment opportunities from the farm to the shelves,
- ◆ Increase the local supply of fish,
- ◆ Improve the nutrition and food security of the communities,
- ◆ Reduce poverty in various communities,
- ◆ Revitalise the coastal and rural communities that have been impacted by a fall off in agricultural production resulting from external competition,
- ◆ Diversity economies and build resilience
- ◆ Earn much needed foreign exchange for communities and states

Aquaculture production in Jamaica, at one time the largest producer in the region, has plummeted. Production in Belize, presently the region's largest producer has also nose dived and production in other countries have not lived up to expectations.

Overall aquaculture production for the region fell from around 11,000 metric tonnes in 2010 to just over 7,700 in 2011. Farmers complain of growing production costs, theft and shrinking markets, primary competition from Asian countries.



CRFM estimates that with help, regional Aquaculture can grow significantly once again.
CRFM Photo

AQUACULTURE CAN PROVIDE BIG BENEFITS

Aquaculture has the potential to generate foreign exchange from exports, increase the supply of fish for local consumption, reduce poverty and provide employment and skills in poor communities across the region.

The region's fishing sector currently employs an estimated 182,000 people but Experts believe that aquaculture growth will significantly increase this number, providing opportunities for more women to enter the sector and increase the skill levels for workers in aquaculture and its support sectors.

The top five aqua-farming countries of the Caribbean produce mainly marine shrimp, tilapia, colosseum (pacu), oysters, carp, some freshwater shrimp as well as marine algae (seaweed or sea-moss) and several aquarium species. Other species in production on an experimental scale include the Cobia, Pompano, the Dolphinfish and the Red Drum.

The top production countries in order of quantities are Belize, Jamaica, the Dominican Republic, Guyana, Haiti and Suriname. Other CARICOM countries involved in fish farming on a small scale are Dominica, Trinidad and Tobago, the Bahamas, St. Lucia, Barbados, Grenada and St Kitts/Nevis.

The CRFM aims to promote the growth and development of the aquaculture industry to satisfy the current and growing demand for fish.



*The FAO states that aquaculture is production expected to overtake wild capture in a few years.
Photo Courtesy Belize Fisheries Office, Belize City*

WHAT WE NEED

- ◆ Increased investments,
- ◆ Improvements and technological innovation in breeding, genetics,
- ◆ Improvements in disease control and nutrition,
- ◆ Implementation of planning and zoning guidelines,
- ◆ Development of incentives to increase production and earnings,
- ◆ The strengthening of governance frameworks to level the playing field for regional producers,
- ◆ Strengthening aquaculture support services for farmers,
- ◆ Reducing the cost of electricity, water and land for aquaculture,,

Continues on Pg 6

***“In 2012, the Asia-Pacific region dominated world aquaculture production accounting for 88.5 percent of the production.”
[FAO]***



Shrimps graded according to size

WHAT WE NEED cont'd

- ◆ The provision of low cost financing to support the industry
- ◆ Assistance with access to regional and international markets,
- ◆ The development of efficient and effective food safety systems
- ◆ Diversification of the systems used and the species currently farmed in the sector.



Access to Research and Development to reduce the impact of diseases and improve the quality of fish is important to the growth and development of Caribbean Aquaculture. CRFM Photo

The expansion of the regional aquaculture industry is therefore expected to play a significant role in increasing the overall food fish production and availability in the region and contribute to a reduction in the very high food import bill.

Growth of this industry must, however be considered against the background of environmental, social and economic considerations, and must be sustainable.

It must also take into consideration capacity building among the work-age groups within the populations. Consideration must also be given to capacity building within the regional and individual state institutions in an environment with a workable governance structure and effectively managed resources. There must also be the political will to implement supporting laws and policies to support growth and expansion of the sector.

It is expected, however that any growth in the region must be considered within the context of sustainability and with regards to the environmental, social and economic impacts. It is also expected that as other member countries begin to farm more of the over 500 aquatic species that are currently being farmed worldwide, the region will see more foreign exchange earnings, more employment among the poor and improved performances in the region's fishing industry.



Farmed fish in a net.

Aquaculture in the Caribbean



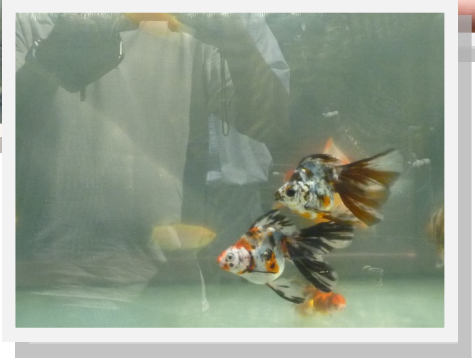
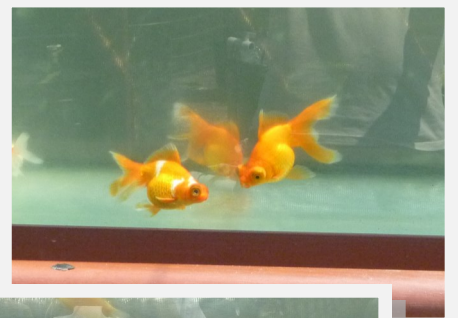
Aquaculture is growing in Haiti



Producing quality, disease free fingerlings is important to the survival of the sector.



The ornamentals sector is a small but lucrative business in the region



Photos shows processed catfish, shrimp, and prawn, a few of the, marine species being farmed in the region.

ABOUT THE CRFM

The Caribbean Regional Fisheries Mechanism (CRFM) was officially inaugurated on 27 March 2003, in Belize City, Belize, where it is headquartered.

The CRFM was established following the signing of the “Agreement Establishing the CRFM” on February 4, 2002 and is an inter-governmental organization.

The CRFM’s mission is to “To promote and facilitate the responsible utilization of the region's fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region”.



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