

Do Best Management Practices in Aquaculture Matter for Sustaining Production and Trade?



Aquaculture in Kolleru lake, India

Photo: S.S. Giri

Purpose

The aim of this policy brief is to:

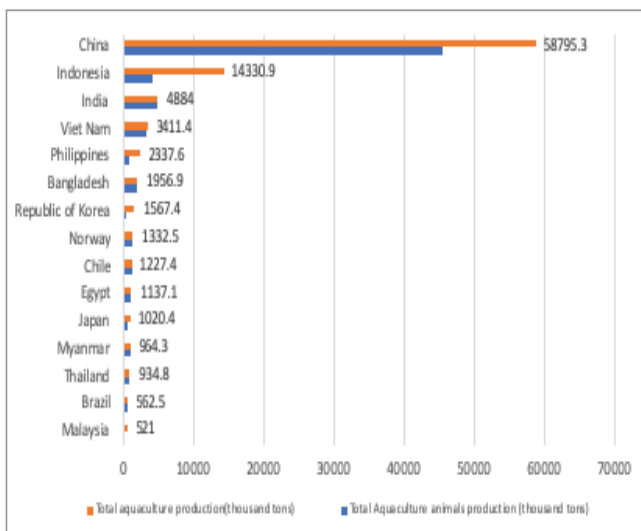
- highlight the importance of aquaculture in providing food and jobs in South Asia;
- sensitise South Asian governments and development partners for the need of setting SAARC level best aquaculture management standards to address its issues and challenges; and
- identify and manage the conflicts arise with aquaculture with other resource users for improving the growth of the industry.

Key messages

Aquaculture is not only the backbone of food and nutrition security and livelihood; the South Asian countries heavily rely on it for national economic growth through foreign exchange. The region contributes 27.3% of the global fisheries production and the two South Asian nations India and Bangladesh, respectively rank 2nd and 5th in aquaculture volume production in the world. In spite of huge production, fish farming is a highly disorganized activity and many times harvests fail to address the marketing and export related issues viz. products' safety, animals' health, origin through environmentally-responsible production methods, traceability and social awareness of the producers. As aquaculture is growing rapidly, conflicts with other resource users are also increasing. Investment risk in aquaculture varies with environmental risks. Sustainable products from well managed aquaculture production systems with less environmental impacts could be the future strategies of economically viable aquaculture in South Asia.

What roles South Asia's aquaculture plays in global food supply and job

The capture fisheries production is relatively static since 1980s and aquaculture has been responsible to meet the growing demands for fish. Aquaculture has emerged as a major contributor to the overall South Asian nations' fish production, 75.7% in Nepal, 57.0% in India, 56.2% in Bangladesh and 51.0% in Sri Lanka than that of the world average of 44%. The sector is expected to share 50% of the world fisheries to meet the greater demand for fisheries products, 189.1 million tonnes, by 2030. In past five decades, the global fish supply growth for human consumption has been double resulting increased average per capita fish availability beyond 20 kg, of which aquaculture supplied 10.42 kg. Fisheries and aquaculture remained as the largest export earning in Maldives and the second largest export earnings in Bangladesh. During 2016-17, fisheries sector earned foreign exchange of US\$ 5.78 billion in India, 3190.6 million (BDT 4,287.64 crore) in Bangladesh, 253.1 million in Pakistan, 196.2 million in Maldives and 162.8 million (26,801 LKR million) in Sri Lanka. In the past 40 years the growth rate of fisheries exports in developing countries has been significantly faster than that of developed countries. Globally 59.6 million people are engaged in the primary sector of capture fisheries and aquaculture, of which over 60% live in South Asia.



Top 15 Aquaculture producers in the World in 2014
Source: FAO 2016

What are the challenges and concerns?

Related to environment

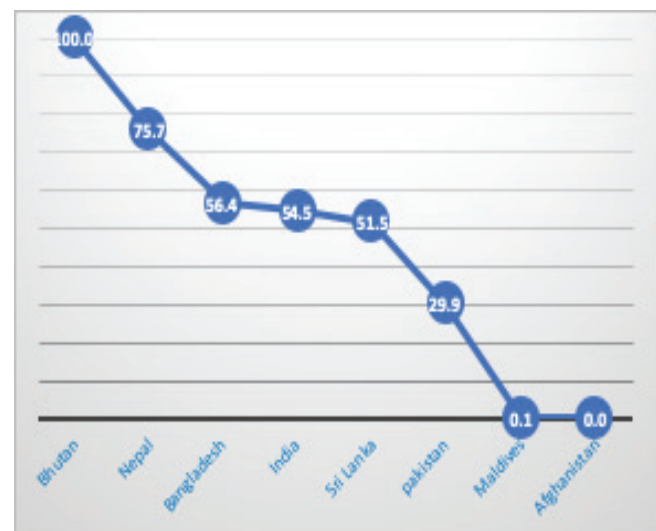
- Conversion of important ecosystems to aquaculture farms, salinization, pollution of land and water bodies and excessive use of ground water for aquaculture.
- Exotic species are the threats to the indigenous natural biodiversity and are the source of transboundary aquatic animal diseases.
- Inefficient utilization of inputs in aquaculture leads to water quality deterioration.

Related to fish-farmers community

- Conflicts over land, water and other natural resources uses in aquaculture. In many occasions, the poor and marginalized coastal communities are forced out of their lands by the aquaculture developers.
- Inadequate technical knowledge, capital inputs and construction of aquaculture farms without proper regulatory approvals lead to environmental damage; prevent traditional resource availability to the local communities.
- Inadequate insurance policies to cover up natural disasters and diseases outbreaks related losses in aquaculture.

Related to planning and management

- Slow transfer of technological advancements among small and marginal farmers within the country and the region.



Shares of aquaculture (%) in South Asian nations' total fisheries production

- At present, aquaculture diversification is limited to introduction of few new candidate species. Other important facets, diversification of aquaculture systems, sites, stocking density, crop rotation, aquafeeds, trad and farm mechanization are least adopted.
- Inadequate adoption of information and communication technology (ICT) to reduce the input cost, crop losses and to harvest healthy crops.
- Poor public-private partnerships in many areas of infrastructure development, such as market facilities, cold storages, processing sector etc.
- Lack of seed certification, health certification and aquaculture accreditation standards across the region.

Related to export and trade

Consumers expect the best quality product in terms of appearance, freshness, nutritional value, size, price, safety and other characteristics. The products exported to international markets are very often rejected by the importing countries due to,

- indiscriminate use of antibiotics and lack of sanitary facilities,
- inadequate technology adaptation and training to handle the products,
- deficiencies in the infrastructure and hygiene in processing establishments, and
- insufficient guarantees of quality control by the government inspectors.

Why the best management practices make economic sense?

Aquaculture in South Asia is to continue its growth in spite of farmings are done on a variety of scales and the sector is highly disorganised. The major concerns of South Asia's aquaculture export market are, the stringent quality standards, HACCP regulations, and social and economic guidelines related to fisheries products. Also, the governance of fisheries and aquaculture need orientation to the 2030 agenda of Sustainable Development Goals (SDGs) of the United Nations. Globally, a number of aquaculture management practices are initiated for improving environmental and social responsibility of aquaculture, but even more

remains to be done if management practices are to be effective. The best management practices can cover a wide range of issues including environmental impact assessment of aquaculture, development of package of practices from the existing information, verification of on-going management practices and interest to implement the best practices. As the SAARC integration in place, it becomes important that a mutually agreed management standard must be framed to address the issues and challenges in aquaculture, across all the eight-member states. Not only this will facilitate intra SAARC nation's trade but will go a long way to satisfy export requirements and facilitate exports as the aquaculture in the region flourishes.



Fish seed trade, India

Photo: P.V. Rangacharyulu

What should policy makers do?

To better motivate, prioritise and design needed reform

- Framing policy to lease public water bodies, registration of aquaculture and setting up of farmer-producer organizations (FPOs).
- Creating brood banks, setting seed certification and health certification standards.
- Developing institutional linkages, capacity building and continuous awareness campaign at primary producers' level for the sustainability of aquaculture.
- Creating mechanism for better information sharing on the latest developments in aquaculture among the SAARC nations.
- Insurance coverage for the producers for crop losses.

To ensure the sustainability of aquaculture production

- Framing of biodiversity and environment compatible stringent aquaculture policy for the South Asian region.
- Strict guidelines for the disposal of wastes generated from aquaculture .

To encourage research and development

- Diversification of aquaculture, identification of economically potential aquaculture species and their exchange among the member states.
- Setting up of guidelines for disease surveillance, quarantine and disease management.
- Preventing use of hormones, drugs, antibiotics and chemicals in aquaculture and aquaculture products.
- Recognizing nutritive value of small indigenous species and developing policy towards promoting nutrition sensitive aquaculture.
- Enabling information and communications technology (ICT) and smart technology in aquaculture.

To enhance foreign exchange earnings

- Developing and harmonizing quality standards for aquaculture, aquaculture products and their handling.
- Creating investments opportunities in aquaculture and its entire value chain.

Recourses

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Where has this come from?

The policy brief is prepared from the outcome of the SAARC Regional Consultation on 'Best Management Practices in Aquaculture: Capacity Building and Policy Development', held in Sri Lanka in 2017. The SAARC member states' expert representatives shared their experiences and discussed the need for framing a harmonizing SAARC regional policy on aquaculture best management practices for the aquaculture sustainability and enhance the foreign exchange earnings. The governmental, non-governmental organisations and academia also participated in the meeting and discussed the issues.

Shiba Shankar Giri is Senior Program Specialist (Fisheries) at SAARC Agriculture Centre (SAC), Dhaka, Bangladesh, and is the Head of Fisheries unit of SAC.

Shaikh Mohammad Bokhtiar is Director of SAARC Agriculture Centre, Dhaka, Bangladesh

SAARC Agriculture Centre (SAC)

South Asian Association for Regional Cooperation

BARC Campus, Farmgate, New Airport Road, Dhaka-1215, Bangladesh

| T. +88-2-8141140 | F. +88-2-9124596 | Email: director@sac.org.bd | www.sac.org.bd