



Food and Agriculture
Organization of the
United Nations



Regional Consultation on Responsible Production and Use of Feed and Feed Ingredients for Sustainable Growth of Aquaculture in Asia-Pacific

7-9 March 2017

Bangkok, Thailand

Background

Aquaculture has been one of the fastest growing food production sectors in the past three decades globally. Aquaculture production has grown at the annual rate of 8 percent in the past three decades (1984-2014) worldwide. As the major contributor to the world aquaculture production, Asian achieved average annual growth of 8.4 percent in Aquaculture production in the same period. Asian aquaculture production reached 92.8 tonnes in 2014, which accounted for 91.7 percent. Currently, Asian aquaculture supplies some 60 percent of food fish for the people while contributing to the livelihood in the region significantly. The rapid production growth has been largely contributed by the intensification of production with increasing dependence on artificial feeding. Finfish and crustacean are two major groups of cultured aquatic animals that require artificial feeding, in the forms of commercial feeds, farm-made feeds, and fresh feeds. Their global production reached 56.8 million tonnes in 2014, which included, some 6.92 million tonnes of crustacean and 49.9 million tonnes of finfish. With silver carp, catla and bighead (filter feeder on plankton) excluded, it was estimated that 38.8 million tonnes of finfish out of the total 49.9 million tonnes were produced through entire or partial feeding based on the feeding habit and common culture practices. Therefore, aquaculture commodities produced through partial or complete feeding account for 45.2 percent globally in 2014, which was only 42.5 percent 10 years ago. The total of production of fed aquaculture species has increased by 97.9 percent in the past 10 years.

The rapid growth of production of fed species in aquaculture has resulted in drastic increased demand of aquaculture for commercial feed. As a result, the industrial aquaculture feed sector has grown rapidly in the past two decades. In 1995, the total production of industrial compound aqua-feed was only 7.6 million tonnes. By 2010, the total production had increased to 34.1 million tonnes, which was nearly 4.5 folds as of 1995. The total compound aqua-feed production reached 40.2 million tonnes in 2012, which was 18 percent higher than in 2010. Industrial aqua-feed production has increased at the average annual growth rate of 11 per cent since 1995, which has been significantly higher than the aquaculture production growth of about 8 per cent per annum only. The increased use of feed in aquaculture has greatly contribute to production efficiency and quality of products, which enable the farmer to better meet the market requirement and achieve sound economic return.

On the other hand, rapid increase in use of feed in aquaculture has also caused a number of issues, which may threaten the sustainable growth of the industry. The major issues associated with the use of aquaculture feed include the following.

- Increased feed cost has caused significant reduction of profit margin in production of many important aquaculture commodities. Feed cost often accounts for 70 percent for cultured commodities that entirely depends artificial feed. This problem is largely caused by high cost of feed that is often non-locally produced and poor efficiency in feed use in production. What has made the situation worse is the global price of aquaculture products has remained a declining trend since 2013 and the trend will remain until 2020 according to the prediction (FAO, 2016)
- In general, Asian aquaculture feed production has become overly dependent on externally sourced feed ingredients, which has resulted significant problem in supply and costs. For instance, fishmeal prices increased significantly from 2006 to 2013, peaking at US\$1 747 per tonne in 2013 and has remained high since then. This is also because the amount of the captured fish destined for non-food use has fallen, down from 34.2 million tonnes in 1994 to 20.9 million tonnes in 2014 (22.4 percent of total catches).
- In order to sustain capture fisheries and maintain marine ecosystem functions and services, there has been increasing effort to combat IUU fishing globally. Because it is considered that significant proportion of fish products from IUU fishing is currently used as direct feed or feed ingredients in aquaculture. In order to cut off the demand for IUU products, full traceability of aquaculture products that can prove responsible sourcing of feed ingredients (non-use of feed ingredients originated from IUU fishing) will soon be certification requirement in international trade. Export of aquaculture products from the region will be seriously impacted if appropriate actions cannot be taken timely.

With the foreseen population growth and expected economy recovery and growth, it is anticipated the demand for food fish will increase significantly in the coming decades. It is projected that World apparent fish consumption will increase by 31 million tonnes in the next decade to reach 178 million tonnes in 2025 (FAO, 2016, SOFIA). Therefore, it is important to maintain the sustainable growth of aquaculture to meet the global demand for food fish in the future considering the contribution of the region to the world fish production. The continued growth of aquaculture will also contribute to blue economic growth in the region. With the limited land and water resource in the region, aquaculture efficiency will need to be further improved, which means the use of feed in aquaculture will increase further. It is pressing for the Asia aquaculture sector to effectively addressing the issues with aquaculture feed and feed ingredients to ensure its sustainable growth.

Purpose

The objective of the regional consultation is to review the current situation of aquaculture feed production and use, particularly the issues, progress and gaps and develop regional strategy and plan of action to promote responsible utilization of feed and feed ingredients for sustainable growth of aquaculture in Asia-Pacific through sharing of available knowledge and innovative technology and scaling up successful practices and further research and technology development.

Expected outputs

The regional consultation is expected to deliver the following major outputs

- Available knowledge and successful technologies and good management practices related to responsible use of aquaculture feed and feed ingredients are well shared in the region;
- Major issues and technology gaps related to responsible use of aquaculture feed and feed ingredients are well identified;
- Appropriate strategy and follow up actions for promoting responsible use of aquaculture feed and feed ingredients are recommended for the member governments

Main themes of the consultation

- Development and use of alternatives of fishmeal and other high cost feed ingredients in aquaculture
- Traceability of aquaculture products in relation to feed and feed ingredients
- Promote cost-effective aquaculture feed with locally available feed ingredients
- Innovation in aquaculture farming and feeding practices for reduced feed costs and environment impacts at farm level

Organization

This regional technical consultation will be primary funded by FAO and organized through collaboration between FAO and the Network of Aquaculture Centres in Asia-Pacific and with support from Fisheries Development Centre and Department of Fisheries of Royal Thai Government and other partners.

The Network of Aquaculture Centres in Asia-Pacific will assist FAO in preparing and organizing the meeting and help with the logistic arrangement.

Participants

The consultation will be multi-stakeholder in nature. It will be participated by representatives from the country governments, relevant international and national organizations, aquaculture feed industrial sectors and experts.

It is expected the consultation will have some 35 participants representing 20 countries and 10-15 international and national organizations and prominent aquaculture feed enterprises in the region.

Conduct of the meeting

The consultation will be conducted in three major modalities:

- Session I: Plenary session for country presentations on status of aquaculture feed and feed ingredient production and utilization;
- Session II: Plenary session on thematic presentation by resource persons on issues and recent progress;
- Session III: Working group session followed by plenary presentation and discussion on issues and gap identifications and regional strategy and action plan development to promote responsible production and use feed and feed ingredients in aquaculture for sustainable growth of the sector.

Date and Venue

The meeting is tentatively scheduled on 7-9 March 2017.

The meeting will be held in a selected hotel, Bangkok, Thailand

Contact Information

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Program

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Bangkok, Thailand

7 March 2017	
09.00-10.00	Opening Session Welcome remark by Director General/Representative, Department of Fisheries, Thailand Welcome remark by Dr. Cherdsak Virapat, Director General of NACA Opening remark by Assistant Director General, FAO RAP
10.00-10.30	Group Photo & Coffee Break
10.30-12.30	Session I: Country presentations on status of aquaculture feed and feed ingredient production and utilization Bangladesh, Cambodia, China, India, Indonesia, Iran
12.30-13.30	Lunch Break
13.30-15.30	Session I: Country presentations on status of aquaculture feed and feed ingredient production and utilization (continued) Lao PDR, Malaysia, Maldives, Myanmar, Nepal, Pakistan
15.30-15.50	Coffee break
15.50-17.30	Session I: Country presentations on status of aquaculture feed and feed ingredient production and utilization (continued) Philippines, RoK, Sri Lanka, Thailand, Vietnam
17.30-17.45	Wrap Up for Day 1
18.00-19.30	Welcome Dinner

8 March 2017 Session II: Plenary session on thematic presentation by resource persons on issues and recent progress	
08.30-09.00	Presentation 1: Overview of Aquaculture Feed Production and Use in Asia-Pacific Region
09.00-09.30	Presentation 2: Development and use of alternatives of fishmeal and other high cost feed ingredients in aquaculture
09.30-10.00	Presentation 3: Promote cost-effective aquaculture feed made of locally available feed ingredients
10.00-10.30	Coffee Break
10.30-11.00	Presentation 4: Traceability of aquaculture products in relation to feed and feed ingredients
11:00-11.30	Presentation 5: Innovation in aquaculture farming and feeding practices for reduced feed costs and environment impacts at farm level
11.30-12.00	Presentation 6: Government policy and enabling environment supporting and managing aquaculture feed production and marketing for sustainable aquaculture development
12.00-13.00	Lunch Break
13.00-13.30	Presentation 7: Government policy and enabling environment supporting and managing aquaculture feed production and marketing for sustainable aquaculture development
13.30-14.00	Presentation 8: Efforts of private feed sector supporting sustainable aquaculture development
14.00-14.30	Presentation 9: Efforts of private feed sector supporting sustainable aquaculture development
14.30-15.00	Presentation 10: IFFO
15.00-15.30	Coffee Break
Session III: Issues and gap identifications and regional strategy and action plan development to promote responsible production and use feed and feed ingredients in aquaculture for sustainable growth of the sector	
15.30-17.30	Working group discussion 1: Major issues and gaps in feed production and use for sustainable growth of aquaculture sector in Asia-Pacific

9 March 2017 Session III: Issues and gap identifications and regional strategy and action plan development to promote responsible production and use feed and feed ingredients in aquaculture for sustainable growth of the sector	
08.30-10.00	Presentation of results of working group session 1 and plenary discussion
10.00-10.30	Coffee Break
10.30-12.30	Working Group Session II: Regional strategy and action plan development to promote responsible production and use feed and feed ingredients in aquaculture for sustainable growth of the sector
12.30-13.30	Lunch
13.30-14.30	Working Group Session II (continued)
14.30-15.00	Coffee Break
15.00-16.30	Presentation of outputs from Working Group Session II & Discussion
16.30-17.00	Wrapping up and closing of the consultation