

Brief: Aquaculture and fish consumption in Bangladesh



The WorldFish Center conducted a review in Bangladesh funded by IFAD in 2011 on the present status of aquaculture production and fish consumption. This brief summarizes the key findings of the review.

Aquaculture

Fish (including shrimp and prawn) is the second most valuable agricultural crop in Bangladesh. Official statistics estimate total fish production of 2.56 million tonnes, of which aquaculture accounts for 39%, or 1.06 million tonnes. However, it is likely that recent changes in the sector have been under-reported. Using consumption data from the Household Income and Expenditure Survey (HIES), triangulated with information from a range of other sources, we estimate that aquaculture and, in particular, commercially oriented forms of the activity, play a much more important role in meeting national fish consumption needs and alleviating poverty than previously understood. Our estimates suggest that at least 1.39 million tonnes of fish are produced by aquaculture each year (325,000 tonnes, or 27% greater than reported in official statistics). Of this, we estimate roughly equal quantities are produced in three systems - around 395,000 tonnes each from traditional homestead ponds, commercial semi-intensive culture of carps, and pellet fed intensive systems (mainly pangasius and tilapia).



Inland pond culture accounts for 86% of total recorded aquaculture production and is dominated by production of carps. The next two most important species cultured in ponds are tilapia and pangasius catfish. Our analysis suggests that combined production of these two species comfortably exceeds 335,000 t. Based on data from the Agricultural Census and other sources we calculate that 4.27 million households in Bangladesh (20% of rural inhabitants) operate a homestead pond, covering a combined area of 265,000 ha. Commercial semi-intensive carp culture covers an estimated area of 110,000 ha, and intensive forms of entrepreneurial pond culture cover just 15,000 ha.

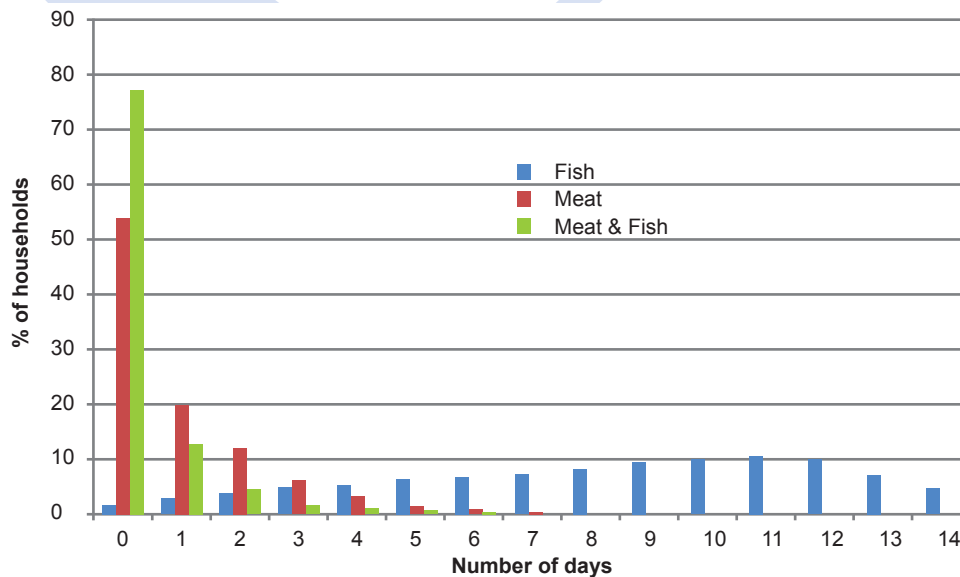
Other inland aquaculture systems are less important than pond farming, although they may play significant roles in the future. Our estimates suggest that fish culture in floodplains, rice fields, cages, and oxbow lakes collectively account for around 2% of total aquaculture production. Shrimp and prawn production take place mainly in south and southwestern Bangladesh in converted rice fields known as 'ghers'. These cover a reported area of 244,000 ha. Combined production of shrimp and prawn for 2010 stood at close to 98,000 t, worth US\$412 million, making it the second biggest contributor to Bangladesh's export earnings after readymade garments.



Growth of aquaculture has been supported by development of input businesses and suppliers, in particular those related to production of seed and feed. More than 800 private hatcheries produce at least 98% of seed supplies. 'Raw' unformulated feeds are widely used in homestead and commercial carp aquaculture. The use of commercially manufactured pelleted feeds predominates in entrepreneurial fish culture. Forty major feed mills were thought to produce 0.67 million tonnes of formulated feeds, worth around US\$220 million in 2010. However, whilst seed and feed supply has grown rapidly in recent years, quality remains a major concern for both inputs.

Fish Consumption

Fish remains by far the most important and frequently consumed animal source food in Bangladesh, as shown by the graph to the below, which indicates that the national average consumption frequency of food of animal origin over the two week period during which HIES 2005 data collection took place. Our analysis of HIES data also shows national fish consumption trending strongly upward during the period 2000–2005. However, the gap in fish consumption between rural and urban areas widened markedly over this period. From 2000-2005 per capita fish consumption in urban areas increased by 17.5% to 18.1 kg against a national average of 15.4 kg, while consumption in rural areas climbed 4.8% to 14.5 kg.



Expenditure on fish among consumers in major cities is close to twice that of those in rural areas. Surveys conducted for this review suggest a growing division between rural and urban fish consumption patterns. Low value wild fish and cultured carps remain the most common fish consumed in rural areas, whereas species produced by entrepreneurial aquaculture (i.e., pangasius, tilapia and climbing perch, etc) are increasingly dominant in Dhaka and other urban markets, along with higher value wild fish. Small indigenous wild fish species such as mola and darkina are particularly rich in micro-nutrients and thus have an important role to play in reducing micro-nutrient deficiency, but their availability is increasingly constrained. Excluding shrimp and prawn, Bangladesh is a net importer of fish, thought to receive 44,000 tonnes of mainly Indian major carps from Myanmar and India in 2010. However, these large sized imported fish are destined primarily for the restaurant trade, and the net imports account for only 1.1% of total fish consumed.



A full version of the review can be found at: http://www.worldfishcenter.org/resource_centre/WF_2970.pdf

