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Blue Revolution in Bangladesh

Abdul Bayes | Saturday, 9 November 2019

"The fish in the water is silent, the animals on the earth are noisy, the bird in the air is singing. But man has in him the silence of the sea, the noise of the earth and the music of the air."? Rabindranath Tagore
Until recently, the pretty old adage that Bengalis live on fish and rice ('mache bhate Bangalee') remained only as a reminiscence. There was a time when the race to grow rice, first and foremost, was at the expense of fish output. Constructed dams and embankments to control water flows to fields, over-use of fertilisers and pesticides by farmers to increase the yield of rice crops and existing policy supports for rice militated against the fish sub-sector. It is thus no wonder fish rarely poured into plates, especially of the poor. In fact, fish became so scarce that the adage 'mache bhate Bangalee' almost lost its relevance; only the solvent segment of society could access this protein-rich product in their daily diets.

The pendulum, however, began to swing in the last decade or so when fish started making a regular appearance on people's dining table. The fuelling factors of fish production are: (a) rice self-sufficiency and a declining per capita consumption of rice; (b) growing awareness related to health and nutrition via more protein-intake ; (c) per capita income growth generating more demand for fish (arguably, higher domestic demand driven by years of sustained economic growth was "the crucial factor in transforming the fish aquaculture value chain"); (d) introduction of new varieties of fish; and finally, (d) a well-developed communication network, connecting the nook and the cranny, smoothed the supply chain by reducing the transaction cost. There was massive expansion of fishery areas and along with it, intensive cultivation went to augment the supply of fish at affordable prices. We are happy to note that the adage 'mache bhate Bangalee' has seemingly staged a comeback when augmented supply shifted supply curve to the right, reduced prices of farmed fish and, in consequence, fish consumption went up from 13 kg in 2000 to 18 kg in 2010!

As far as fish production is concerned, we can probably draw upon a recently completed research on expansion of aquaculture in Bangladesh, done by the International Food Research Institute (IFPRI). It reveals interesting news to rejoice in. The Washington-based organisation dubs the development in the fishery sub-sector as a "blue revolution" in a book titled, "The Making of a Blue Revolution in Bangladesh: Enablers, Impacts, and the Path Ahead for Aquaculture". The book came out of the first ever comprehensive survey of the primary fish value chain in Bangladesh containing a number of articles by eminent scholars (edited by Shahidur Rashid and Xiaobo Zhang).

Let us pick up some pertinent points. First, a glimpse shows that, out of 20 million people having been lifted out of poverty during 2000-2010, aquaculture alone accounted for an estimated 2.0 million. "This implies that the growth in aquaculture has been responsible for almost 10 per cent of the overall poverty reduction in Bangladesh during the first decade of the 21st century." Second, the surge in fish production during the last two decades owes to aquaculture comprising primarily of pond culture or farming in ponds. Third, the share of aquaculture (fish production from ponds) increased from 30 per cent in 2000 to 47 per cent in 2015. This implies a growth rate of about 9.0 per cent and production of

pond-fish rose from about half a million tons in 2000 to 1.7 million tons in 2015 . Finally, there has been a significant impact on income distribution and poverty reduction although the impacts were modest for the marginal groups. "We estimate that aquaculture's contribution to income growth between 2000 and 2010 was 2.11 per cent, including both price and quantity effects, the income growth translated into an estimated poverty reduction of 1.7 percentage points nationwide...Although the estimates seem small, they represent a large share of overall poverty reduction between 2000 and 2010: from 48.9 percent to 31.5 per cent."

Since Bangladesh is very much concerned with food security of its people, the research results could possibly be taken as an excellent case study for the role of fisheries in food security. As Shahidur Rashid, IFPRI director for South Asia and study co-author remarks, "Contrary to assumptions that nutrient-rich foods will remain out of reach for the poor, the story of fish aquaculture in Bangladesh shows how nutrient-rich food can become more widely available for all." There are three important drivers behind the aquaculture's transformation in Bangladesh: improved technology, reduced transaction costs and value-chain innovation.

As we all know, commercial pond fisheries became a major source of fish production in the early 1990s, benefiting from new highly productive and profitable aquaculture fish varieties. The research reveals that the yields (measured by weight of some fish varieties) are as high as 13 times the yield of rice that could be grown on the same amount of land. This means that revenues from fish are also fat to attract farmers. "The farmed-fish market is reported to have increased 25-fold in three decades, with over 90 percent of farmed fish excluding shrimp consumed domestically." To reiterate, rising demand and falling transportation costs contributed to growth in the expansion of the domestic fish market. The study also projected that fish production would continue to grow through 2030 and would possibly exceed available demand to lower prices and benefit poor households in terms of nutrient intake.

However, some suggestions also wait in the wings. Sustaining the improved productivity will require continued investment, even targeted at times. Policymakers need to address the problems such as high prices of fish feed, timely availability and poor quality.

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