Mud crab production systems in Bangladesh are well suited for mud crab production. The geographical position and climatic conditions of Bangladesh make the coastal water bodies highly productive for mud crab production. Availability of brackishwater of optimal salinity and temperature conditions have made mud crab farming easier in Khulna and Cox’s Bazar regions. Mud crabs are less susceptible to disease and more resistant to adverse environmental conditions and climate change effects, causing many shrimp farmers to transfer to mud crab farming.

The present culture system of mud crab mostly involves fattening of immature (having underdeveloped gonads) and/or underweight (<80 g for female and <100 g for male) mud crab to produce market-size hard-shell crabs, which are then exported live. The fattening operation includes stocking crabs in brackishwater ponds/ghers (enclosures) for a very short period (around 7-10 days) with supplementary feeding. Different types of locally available trash fish are used as feed.

Another culture system includes producing soft-shell crabs.
(Fig. 1) that are exported frozen. Soft shell crabs are produced by keeping crabs individually in plastic boxes in brackishwater ponds (Fig. 2), applying locally available raw fish as feed and harvesting just after molting when the exoskeleton has been shed. Soft-shell crab production is very new in Bangladesh and is being done on a limited scale in Cox’s Bazar region.

Marketing is not a problem at present because the mud crab is in very high demand in the international market and there are some exporters in Bangladesh. However, the marketing channel (mud crab fatteners/catchers/collectors to depots to exporters) involves some intermediaries such that the fatteners, catchers and collectors do not get the best price. Because the market price is set by exporters, mud crab producers/catchers cannot fix the price according to their choice.

**Seed Supply**

Mud crab aquaculture in Bangladesh is totally dependent on crab seed collected from wild stock, mostly from Sundarbans and coastal mangroves, because no mud crab hatchery has been established in the country. Because of rapid expansion of mud crab fattening and an increased number of mud crab farmers, a huge quantity of mud crabs are being caught from the wild. A research effort revealed that about 375 t of mud crabs are collected from mangrove areas (Sundarban-Paraban) every year. Thus, mud crab extraction from the wild is putting intense pressure on the wild stock, for which the decline in natural stocks is of major concern. The present size of the mud crab wild stock and yearly increment are unknown. This is why it not possible to fix the maximum allowable catch of mud crabs from wild sources. It is not known whether natural wild stocks are over or under exploited. Discussion with crab collectors and traders, however, reveals that they are not able to collect as many crabs as in the past, which is an indication of declining wild stocks.

Like any other aquaculture species, hatchery produced seeds is the only option for sustainable development of mud crab aquaculture in Bangladesh. Hatchery production of mud crab has been done in India, Philippines, Vietnam, China, Japan and Australia. Considering the potential and sustainability of mud crab aquaculture, mud crab hatcheries should be developed in Bangladesh. World mud crab hatchery experts say mud crab hatchery production needs a high level of expertise, along a series of extremely sensitive development stages. Mud crab larvae have five zoal stages and one megalops stage, after which they become crablets or complete crab for nursery rearing and grow out.

**Development Initiatives**

A recent joint initiative by WorldFish and Bangladesh Fisheries Research Institute (BFRI) for producing crablets in laboratory condition has been successful as a first attempt in Bangladesh. This is a good initiative which provides hope that Bangladesh is on its way to gaining the needed expertise for development of a viable crab hatchery sector. Such an initiative needs to continue with several larval rearing cycles in laboratory and hatchery conditions to set optimal larval rearing parameters to increase survival rate to a sufficient level to make hatchery production profitable. The government needs to establish demonstrations to motivate private sector producers and support private sector hatcheries to produce mud crab seeds. At the same time, commercial nursery and grow out farms need to be developed through technical training and financial assistance.

When private sector producers succeed with mud crab seed production in hatcheries, it will reduce pressure on natural crab populations and ensure a regular and sustainable supply of crab seed for grow out, fattening and soft-shell farming for better production, export and income.

In conclusion, mud crab is a potential cash crop in Bangladesh and a very important source of income to support livelihoods in coastal communities. The government should take initiatives to ensure the availability of mud crab seeds and technical and financial support to involve coastal farmers in nursery and grow out of the crab.

**Notes**

Md. Sahidul Islam, Naseem Ahmed Aleem, Muhammad Meezanur Rahman, WorldFish Bangladesh and South Asia, House 22B, Road 7, Banani, Dhaka, Bangladesh

**References**


