



Food and Agriculture
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EXCELLENCE



Centre for Environment
Fisheries & Aquaculture
Science

Bivalve Molluscs development Bangladesh: Recommendations of familiarisation workshop with the Department of Fisheries (DoF), Dhaka, 21-22 September 2022

Aims

DoF confirmed that the aim of this work was to develop commercial bivalve molluscs production in Bangladesh with the objectives of (1) broadening of fishery/aquaculture industries (2) increased revenue generation via international export, with particular emphasis on increasing/diversifying incomes in rural coastal communities.

DoF further confirmed that the target export market was the European Union (EU), and that the intended product for export was live, chilled, or raw frozen oysters.

Food Safety Context

Consumer safety of bivalve molluscs intended for raw consumption is directly related to the quality of the seawater in which they are produced. This is because as filter feeding animals, bivalve molluscs can accumulate and concentrate contaminants that are present in the environment in which they are grown. Thus good water quality = good quality product. Because of this, controls required for the EU (and many other international export markets) are predominantly applied at the primary production stage in growing areas.

Programme leadership

For success of this programme, it is critical that, at the Competent Authority level in Bangladesh a lead individual be identified to oversee this work (**Recommendation 1**). The designated programme lead in Bangladesh should work closely with the Cefas lead (Dr Michelle Stone) for the duration of the programme to ensure the best outcomes.

EU legislative requirements

All EU Regulations with relevance for bivalve molluscs can be accessed here [Seafood Safety Legislation and International Codes of Practice - Cefas \(Centre for Environment, Fisheries and Aquaculture Science\)](#) under the European Union section and also listed in Annex I of this document. Annex VIII of Commission Implementing Regulation (EU) 2021/405 lists countries meeting the export requirements for live, chilled, frozen or processed bivalve molluscs to the EU (**Recommendation 2**). Countries in Asia listed in Commission Regulation 2021/405 are The Republic of Korea, Japan, Thailand, and Vietnam.

Bivalve mollusc production in Bangladesh

Bangladesh has a wealth of marine and freshwater bivalve molluscs, and an extensive coastline. There is no commercial production of bivalve molluscs in the country and no consumption amongst most of the population. A recent demonstration project supported by the Indian Oceanic Rim Association (IORA) showed that oysters could be successfully grown to marketable size in the Cox's Bazaar region. No evaluation of the health or hygiene status of oysters or the growing area was undertaken in this pilot study. It is predicted, but not demonstrated, that pollution regulated at the EU level that

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is derived from human activity (faecal and chemical contaminants) and potentially from naturally occurring risks (marine biotoxins) will be present in coastal Bangladesh. Thus, identification of the cleanest possible growing area(s) will be required (**Recommendation 3**). Appropriate resources in Bangladesh will be required to support this activity (**Recommendation 4**).

Official Laboratory Services

Bangladesh has a strong track record in the export of fish and fishery products to the EU, particularly crustacea and products thereof. The DoF has well established Official Food and Feed Services, including three Official Control Laboratories (Dhaka, Khulna and Chattogram). In 2018 the EU Sante F audit for fish and fisheries products exported to the EU identified no major non-compliant findings. Two of the Official Control Laboratories have successfully completed the first Cefas/FAO proficiency testing assessment for *Escherichia coli* (as a faecal indicator organism) using the EU stipulated reference method for monitoring sanitary quality of bivalve molluscs (ISO 16649-3) (**Recommendation 5**). The laboratory in Dhaka has equipment suitable for the assessment of Diarrhetic Shellfish Poisoning (DSP) toxins, one of the three regulated marine biotoxin groups requiring monitoring within the EU (**Recommendation 6**).

Recommendations following technical training and laboratory visit September 2022

Recommendation 1 – It is recommended that a Bangladeshi lead at the Competent Authority level be identified to work with the Cefas FAO Reference Centre for Bivalve Sanitation on all aspects of developing a bivalve programme. The Competent Authority level lead is encouraged to undertake short duration secondments to the Cefas laboratory in the United Kingdom to assist in knowledge transfer¹.

Recommendation 2 - Further to the above, development of the programme should include development of a legal framework for Bangladesh Competent Authorities and other stakeholders to work within based upon the elements of existing EU legislation relevant to bivalve molluscs.

Recommendation 3 – Identification of potentially viable growing areas (with defined geographies) that represent the cleanest (regarding human derived pollutants and naturally occurring contaminants) possible areas for development of commercial bivalve production is a priority. In the first instance it is recommended that a desk-based risk profiling exercise be undertaken for up to two potential areas in Bangladesh. This exercise would be carried out according to Chapter 2 of the FAO/WHO Technical Guidance on Growing Area Risk Profiling ([Technical guidance for the development of the growing area aspects of Bivalve Mollusc Sanitation Programmes \(fao.org\)](https://www.fao.org/growing-area-risk-profiling/).)

Recommendation 4 – Further to the above, to provide the additional in-country resources needed to complete risk profiling, an approach should be made to an appropriate entity (as identified by DoF) for assistance. This may suit a MSc or post-graduate project of around 5-6 months in duration².

¹ It is anticipated that such secondments would be supported financially (subject to final confirmation) by the UK Department of Environment, Food and Rural Affairs' (Defra), Ocean Country Partnership Programme.

² It is anticipated that a studentship could be supported financially (subject to final confirmation) by the UK Department of Environment, Food and Rural Affairs' (Defra), Ocean Country Partnership Programme

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Recommendation 5 – Official Quality Control Laboratories in Dhaka, Chattogram and Khulna should continue to work with the Reference Centre to implement the EU Reference Method for enumeration of *E. coli* in bivalve molluscs through participation in proficiency testing distributions and through gaining experience of testing live bivalve molluscs where possible.

Recommendation 6 - Official Quality Control Laboratories in Dhaka should continue to work with the Reference Centre to implement methods to detect marine biotoxins, in the first instance with the focus on EU regulated toxins associated with Diarrhetic Shellfish Poisoning (DSP).

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Annex I

In each case the link below will take you to the first published version of the legislation. **To access the latest consolidated version**, incorporating all relevant amendments and corrigenda since first publication, use the link below and then follow the link shown as a data in the “Title and reference section” above the text of the legislation. **NOTE:** in many cases the amendments and corrigenda will be significant.

GENERAL FOOD LAW

- [Regulation \(EC\) No 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety](#)
- [Regulation \(EC\) No 852/2004 on the hygiene of foodstuffs](#)

HYGIENE AND OFFICIAL CONTROL RULES FOR BIVALVES (including criteria for microbiological contaminants and biotoxins)

- [Regulation \(EC\) No 853/2004 laying down specific hygiene rules for food of animal origin](#)
- [Commission Regulation \(EC\) No 2073/2005 on microbiological criteria for foodstuffs](#)
- [Regulation \(EU\) 2017/625 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products](#)
- [Commission Delegated Regulation \(EU\) 2019/624 concerning specific rules for the performance of official controls on the production of meat and for production and relaying areas of live bivalve molluscs](#)
- [Commission Implementing Regulation \(EU\) 2019/627 laying down uniform practical arrangements for the performance of official controls on products of animal origin intended for human consumption](#)

RULES ON CHEMICAL CONTAMINANTS

- [Commission Regulation \(EC\) No 1881/2006 setting maximum levels for certain contaminants in foodstuffs](#)
- [Regulation \(EC\) No 1333/2008 on food additives](#)
- [Commission Regulation \(EU\) No 37/2010 on pharmacologically active substances and their classification regarding maximum residue limits in foodstuffs of animal origin](#)

RULES GOVERNING IMPORTS

- [Regulation \(EU\) 2016/429 of the European Parliament and of the Council of 9 March 2016 on transmissible animal diseases and amending and repealing certain acts in the area of animal health](#)

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- [Commission Implementing Regulation \(EU\) 2019/2130 establishing detailed rules on the operations to be carried out during and after documentary checks, identity checks and physical checks on animals and goods subject to official controls at border control posts](#)
- [Commission Delegated Regulation \(EU\) 2020/692 supplementing Regulation \(EU\) 2016/429 of the European Parliament and of the Council as regards rules for entry into the Union, and the movement and handling after entry of consignments of certain animals, germinal products and products of animal origin](#)
- [Commission Implementing Regulation \(EU\) 2020/2236 laying down rules for the application of Regulations \(EU\) 2016/429 and \(EU\) 2017/625 of the European Parliament and of the Council as regards model animal health certificates for the entry into the Union and movements within the Union of consignments of aquatic animals and of certain products of animal origin from aquatic animals, official certification regarding such certificates and repealing Regulation \(EC\) No 1251/2008](#)
- [Commission Implementing Regulation \(EU\) 2021/405 laying down the lists of third countries or regions thereof authorised for the entry into the Union of certain animals and goods intended for human consumption](#)

RULES ON TRACEABILITY

- [Council Regulation \(EC\) No 1005/2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing](#)
- [Council Regulation \(EC\) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy](#)
- [Regulation \(EU\) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products](#)

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