

Country Status of Aquatic Emergency Preparedness and Response Systems for Effective Management of Aquatic Animal Disease Outbreaks in Myanmar

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Abstract

Myanmar is one of the OIE members and the Department of Fisheries (DoF) is highly concerned with transboundary aquatic animal pathogens. Therefore, the “Aquatic Animal Health & Disease Control Section” has already been formed not only for field diagnostic surveys but also for border control especially at international airport and border trade areas by checking and counter checking export and import of aquatic animals and products. At the moment, the DoF is stressing an issue of some transboundary diseases for finfish such as *Gyrodactylus* sp., *Dactylogyrus* sp., *Argulus* sp., *Trichodena* sp., *Streptococcus* sp., *Aeromonas* sp., and for crustacean are MrNV/XSV and WSSV. In addition, the DoF is facing challenges with parasitic disease and bacterial disease problems due to poor water quality management at culturing fish ponds. For the prevention and control of fish diseases within the country, the DoF is issuing “Health Certificates” by physical and microbiological examination of fishes and fisheries products. At the same time, “Quarterly report on fish disease” has being regularly submitted to NACA, OIE since 1998 until now. Although the DoF has no specific law and legislation on the control of quarantine pest and disease of aquatic animal, a good aquaculture practice has been implemented and code of conduct responsible for aquaculture is being followed in the country. The aquatic health management is a challenging issue in aquaculture development. Myanmar is still needing technical assistance to improve quarantine system especially for importation and exportation of live aquatic animals. Moreover, monitoring and surveillance programs with harmonized aquatic emergency preparedness and response system are required to boost up not only for Myanmar but also for effective management of transboundary disease outbreaks in Southeast Asia.

Introduction

Myanmar is one of the SEAFDEC, NACA and OIE members and the Department of Fisheries (DoF) is highly concerned with transboundary aquatic animal pathogens. Therefore, the “Aquatic Animal Health and Disease Control Section” has already been formed not only for field diagnostic surveys but also for border control especially at international airport and border trade areas by checking and counter checking export and import of aquatic animals and products. The DoF has established a total of three laboratories: central laboratory located in downtown of Yangon and the other two are in Yangon Region (located at Twante Township) and in Ayeyarwady Region (Nyaung Done Township). A competent Authority (CA) for Aquatic Animal Health Management is under the Aquatic Animal Health and Disease Control Section where “Health Certificate” (HC) is issued for Export-1 and “Registration.” Applicants need to provide “Sale Contract,” “Invoice & Packing Lists,” “Aquaculture License,” or “Collected Area’s License.” Mobile team does regular visits to premises for visual examination and suspected samples are collected to the nearest Disease Diagnostic Laboratory. Those are inspected by Competent Authority (CA) of DoF and finally, “Health Certificate” is issued when all necessary criteria are met. According to aquaculture law, DoF has to provide opinion comment for potential imported aquatic animals. The necessary documents for “Health Certification from CA of Oversea” are “Sale Contract,” “Invoice,” “Packing List,” and “sample” for quarantine. Applicants need to provide “Recommendation from Imported Aquatic Animals Farm” regarding disease status. In addition, fish samples need to be submitted for Disease Detection. After that, the approval letter will be issued for the farm.

Disease Control

Myanmar DoF has not yet set quarantine unit in airport and border areas. Nonetheless, Myanmar DoF is capable of disease diagnosis: level-I on field observation of both animal and the environment including clinical and post-mortem examinations; and level-II on laboratory examination for Parasitology, Mycology, Bacteriology and Histopathology. Therefore, DoF still needs training and advanced technology; for Level-III disease Diagnostic Lab can detect the OIE Listed Disease with Real Time PCR and Conventional PCR. Some

important fish disease are KHV, RSIV, VNN and SVCV and shrimp diseases are WSSV, TSV, YHV/ GAV, IHNV, HPV, IMNV, EMS/ AHPND and MrNV / XSV)

Imported seeds including fish fry and shrimp larvae are often of low quality and affected by disease. Hatchery and farm operations are undermined by poor management due to the lack of know-how and technology, diseases prompting to increase the use of antibiotics and other chemicals increasing environmental risks, and the lack of adequate biosecurity control due to the lack of governmental capacities. The current situation highlights the need for environmental and social standards to help mitigating the adverse effects of Myanmar’s aquaculture sector. As one of the intervention areas, MYSAP (Myanmar Sustainable Aquaculture Program) will increase the number of DoF services with improved quality on animal health and disease control. MYSAP organized a workshop to explore future support to improve Aquatic Animal Health and Disease Control in Myanmar and discussed with stakeholders from partner organization. So, MYSAP support the Aquatic Animal Health and Disease Control Sector Planning Workshop held on 22 May 2018.

Summaries of discussions in the workshop are as follows: (a) extension service for fish farmers is crucial to develop aquaculture sector in Myanmar, (b) capacity development for staff from DoF and universities to increase their capacities in laboratory works and aquatic animal disease control, (c) limited budget hinders for extension service in rural areas, (d) existing laboratories of DoF need to be upgraded, (e) limited staff in central laboratory in Yangon where only eight (8) staff are working and more staff needed for extension services, and (f) there is no SOP for aquatic animal movement and National Standard for GAQP in Myanmar.

Outcomes of the Workshop are as follows: (a) MYSAP will implement a 2-year plan (2019-2020) to support the Aquatic Animal Health and Disease Control Section in Myanmar, and the Diagnostic and Water Quality Management Laboratories Under Aquaculture Division of DoF will be upgraded to meet the requirements of an International Standard Laboratory; (b) there is no SOP for aquatic animal movement and National Standard for GAQP in Myanmar that MYSAP will consider technical support to develop these Standard

Procedures; (c) MYSAP will cooperate with DoF, Myanmar Fisheries Federation and University for capacity building programme and conduct training of trainers (ToT) for staff from partner organizations as well as the staff who attended ToT will carry out training and extension services to fish farmers; (d) DoF should set up quarantine unit to monitor live aquatic animals imported from abroad and assign the staff to work in Yangon airport and Myawaddy which is considered as main entry point from Thailand to Myanmar; and (e) MYSAP requested DoF to provide an office room for international and local consultants who will work in Thaketa, Main Laboratory during the program period and DoF agreed to it.

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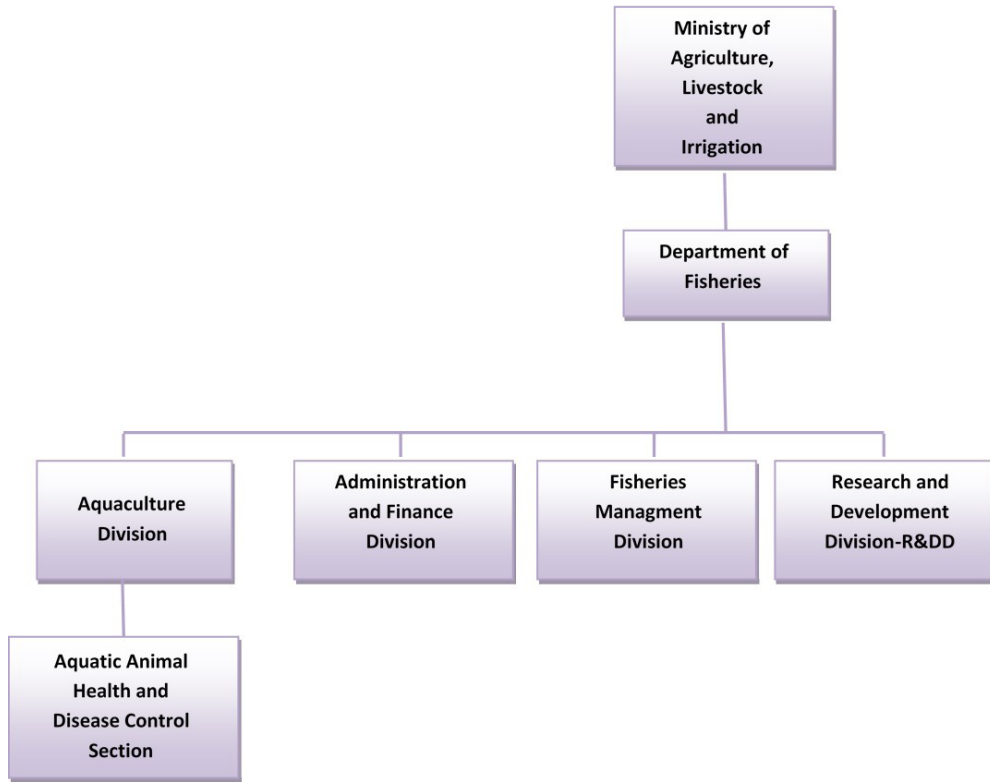
Way Forward

Although the DoF has no specific law and legislation on the control of quarantine pest and disease of aquatic animal, 10th Modified Draft of the new Union Fisheries Law covered on Laboratory Sector (Amendment on Myanmar Marine Fisheries Law 1990) and DoF Directive 2/2015 (issued on July 14, 2015). The final version has not yet been completed for the import of live fish and it does not include Pest Risk Analysis chapter. A good aquaculture practice has been developed and responsible code of conduct for aquaculture is practiced within the country. DoF established a national Task Force for implementation of GAqP application in Myanmar that will adopt the ASEAN's standard for shrimp farming. Myanmar learns and tries to follow the Strategic Plan on the Development and Implementation of ASEAN Shrimp GAqP support to GAqP. DoF has established the "Directives and Regulation for prohibiting the use of chemicals in aquaculture" recently and a total of cultured areas of 4439.55 hectares for fish, shrimp and soft-shelled crab farming have applied to get national GAqP certificates. For the trade promotion of the

aquaculture products, EU provided the awareness training of GAqP seven times to improve capacity building of DoF staff (n=41) and stakeholders (n=119) in 2015-2016. GAqP Extension Team was formed on 30th June 2016. They provided training in five regions and four states (19 courses) and a total of 669 trainees have attended.

The aquatic animal health management is a challenging issue in aquaculture development. Myanmar still needs technical assistance to improve quarantine system especially for import and export of live aquatic animals and monitoring and surveillance programs. It needs to harmonize with aquatic emergency preparedness and response system that can boost up not only for Myanmar but also for effective management of transboundary disease outbreaks in Southeast Asia.

**Organization of Aquaculture on
within the Ministry of Agriculture, Livestock and Irrigation**



Organization of Aquaculture Division – Aquatic Animal Health and Disease Control Section

