Regulating the Humphead Wrasse (Cheilinus undulatus) Trade in Sabah, Malaysia

The Napoleon or Humphead Wrasse Cheilinus undulatus, from the family Labridae is of high value in the live reef fish trade (LRFT). Because of its high retail value and demand in Asia, the Humphead Wrasse (HHW) has been seriously overexploited (1). Because of its natural vulnerability to overexploitation and the intensity of harvest for international trade in Southeast Asia, this species was listed in Appendix II of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES) during the 13th Conference of Parties in October 2004 and listed as Endangered in the IUCN Red List of Threatened Species (2). The Humphead Wrasse is the first coral reef fish species to be listed in Appendices of CITES. Appendix II lists species that are not necessarily now threatened with extinction but that may become so unless trade is carefully controlled. International trade in Appendix II–listed species is allowed provided that the export or re-export permit is issued from the designated CITES Management Authority and in accordance with national legislation in all countries involved.

The HHW is particularly sensitive to fishing pressure because of certain characteristics. The fish's reproductive potential: slow to become sexually mature because sexual maturation occurs at about 5 years; it can live a long time (over 30 years), indicating slow population turnover rates; and it is a protogynous hermaphrodite, whereby adult females sometimes change sex into a male (1). Other than its biological characteristics, the species is threatened by unsustainable and illegal fishing methods, such as the use of potassium or sodium cyanide to stun the fish so that it can be easily caught (1) and fish bombing. Both methods result in the destruction of the corals surrounding the area where the cyanide was used or the bomb was thrown.

The state of Sabah is the main exporter of the HHW and other live reef fish from Malaysia (3). Sabah is the second largest of the 13 states in Malaysia and holds the greatest area of coral reefs in Malaysia, with a coastline of about 1500 km (3, 4).

The trade of HHW in Sabah is regulated by the Fisheries Act 1985 and by CITES. Section 40 of the Fisheries Act states that, “a person needs to get a permit to import into or export out of Malaysia live fish from the Director General of the Department of Fisheries.” In addition, because it is a CITES-listed species, CITES export permits are issued by the Sabah Fisheries Department, which is the CITES Management Authority (MA) for fishes, corals, and marine plants in Sabah. HHW as a species is not protected by any Malaysian law.

The Sabah Fisheries Department only received responsibility of managing the HHW in February 2007. As such, before February 2007, the CITES trade regulation of this species fell into a gray area and no CITES permits were issued for its export till 2007. From the UNEP-WCWC CITES Trade Database, the only reported export of the fish by Malaysia was in 2006, when two live HHW were exported to Japan. Nevertheless, it was common knowledge that the fish was exported in large volumes to Hong Kong Special Administrative Region in the People’s Republic of China between the years of 2005–2007, but the real quantity was never actually recorded because the Fisheries Department grouped the export of the species under a general group of “groupers and wrasse.” And the source for some of these HHW were said to be the Philippines, even though all CITES-listed species are prohibited from export in the Philippines. The unregulated reexport of HHW from the Philippines is a major loophole in the effectiveness of the CITES listing.

According to Article IV of CITES, exporting countries need to conduct a nondetriment finding (NDF) study for Appendix II–listed species. To date, no NDF study has been carried out in Sabah to determine whether harvest of the HHW from the wild is sustainable, or to establish a sustainable export quota. As an initial step to conducting a NDF study, the Sabah Fisheries Department, TRAFFIC, and WWF-Malaysia undertook a collaborative study to document the trade of HHW in Sabah. This paper provides information on the quantity of HHW exported between the years of 2005–2007 and the MA’s effort in managing the species according to CITES and national regulations.

At the time this paper was written, the CITES export quota for HHW in Sabah was 200 fish per month per exporter. With an estimate of 19 regular exporters, the rough number of HHW exported per year is 45 600 (19 exporters \(\times\) 200 fish \(\times\) 12 months). This quota was fixed on the basis of economic reasons and past exported numbers with no biological basis. When compared with Indonesia, which had an annual quota of 8000 fish in 2006 and 2007 and 7200 fish in 2008, Malaysia’s quota is extremely high based on the area of Sabah’s coral reefs.

Concerned over the conservation status of this species and that it is now a CITES Appendix II–listed species, the Sabah Fisheries Department decided to take steps to reduce the quota. Four meetings, two in 2007 and two in 2008, were organized with HHW stakeholders (exporters and fish-cage operators) and the objectives of the meetings were to educate the stakeholders on the endangered status of the fish and to provide an opportunity for HHW stakeholders to discuss the quota and other issues regarding the collection, trade, and sustainability of the species. In the second meeting that was held in August 2007, a trade monitoring protocol was introduced, which consisted of two forms; Grow-out Form and Export Form. All stakeholders were expected to fill the two forms every month and submit them to the Sabah Fisheries Department on a monthly basis. This trade monitoring protocol was intended to assist the MA in determining the number of individuals taken out of the wild and placed in grow-out cages, the numbers exported out of Sabah, the size of the HHW that were bought and sold, and the mortality percentage of the fish in the cages.

These forms were generally accepted by the stakeholders, but they expressed concern over the reliability and competence of reporting from their competitors, and they commented that the department will have to conduct continuous monitoring of the grow-out cages because many who hold this species do not have licenses to own fish cages and may falsify facts on the numbers caught, bought, and sold.

Initially, the Grow-out and Export Forms were completed by 16 HHW stakeholders for the months of September to December 2007. It was indicated in the Grow-out Forms that the minimum size range of fish bought for the grow-out cages was 8–17 cm, while the maximum size range was 14–50 cm. The average mortality percentage for 6 months (June–November 2007) given by the fish cage operators for the fish in the grow-outs was 12.17%. On the method of fishing, 11 responded using hooks, lines, and traps while three responded hooks and lines only. The stakeholders reported in the Export Form that the fish were exported at the minimum size range of 14–30 cm and at the maximum size range of 21–60 cm.