Napoleon fish collectors and exporters must be licensed and registered at the Directorate General of Forest Protection and Nature Conservation in order to apply for CITES export permits. All shipments are verified and checked by the provincial office of PHKA (BKSDA) and officers are posted in the designated international ports. Any violation of this regulation is sanctioned based on the provisions of the Government Regulation No. 8 of 1999 concerning Wild Animals and Plants Species Utilization, which implements Act No. 5 of 1990 concerning Conservation of Biological Resources and Their Ecosystems. The Government Regulation No. 8 of 1999 provides penalties for smuggling or false declarations or trade that is not in accordance with the provision of the regulation and violators may be liable to imprisonment (in accordance with the Customs and Excise Law) (Faustina Ida Hardjanti, DKP, pers. comm.).

While it seems evident that the listing of Napoleon fish in CITES Appendix II has resulted in improvements in the control of fisheries for the international trade, there are justified concerns that the existing management and enforcement measures are not sufficient to regulate the domestic use to more sustainable levels. Controlling domestic use would involve some difficult facets, such as setting limits to the number of fishing permits, which would require further consideration about issues of use and access rights to fishing. Where domestic consumption is linked to traditional use with cultural significance, it will be important to consider awareness raising and environmental education programmes as supplementary activities to fisheries management. Measures such as bag limits (i.e. establishing a limit for number of fish allowed per fisher per day) could also play a role to limit the amount of fish taken for domestic use.

Compliance is a key factor for successful application of any management measures. It is compounded by the feasibility and legitimacy of the regulations in place and also by the capacity to enforce these regulations. Enforcement of regulations is obviously an important limitation in a country as vast as Indonesia and for the type of small-scale fisheries targeting Napoleon fish. Experiences in other coastal fisheries in the Asia-Pacific region indicate that the solution to the problems of unsustainable use and limited capacity to manage fisheries often involve building more participatory types of fisheries management (e.g. community-based management, co-management), where fishing communities have well defined rights to use the resources and are also fully involved in the process of regulation, monitoring and enforcement of the agreed rules (Pomeroy, 1995; Brown, Staples and Funge-Smith, 2005; Pomeroy and Rivera-Guieb, 2006). Key to the success of these systems is that they have the right incentives (economic, socio-cultural, etc.) for people to cooperate and comply. Several such experiences exist in Indonesia, based on both traditional (or customary) community-based fisheries management systems ("sasi laut"; Hakres, 1999) or resulting from recent government incentives for decentralization through fisheries co-management (Bachtiar, 2000; Nikijuluw, unpub.). The results from these experiences may show promising ways forward to improve fisheries management of threatened species such as the Napoleon fish.

5. REFERENCES


FAO. In prep. Assessment of reef habitat coverage suitable for the Napoleon fish, Cheilinus undulatus (CITES Appendix II) in Indonesia using remote sensing. Project Report FIMF/FAO, Rome.


