



A CITES priority:

Humphead Wrasse and the Thirteenth Meeting of the Conference of the Parties to CITES, Bangkok, Thailand 2004



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At the Thirteenth Meeting of the Conference of the Parties to CITES (CoP13), Parties will consider a proposal to include the Humphead Wrasse *Cheilinus undulatus* in Appendix II. It is naturally rare and extremely vulnerable to overexploitation. There is evidence of targeted fishing of spawning aggregations, increasing the already high level of threat to this species. Demand for Humphead Wrasse already is high and expected to increase and, currently, illegal trade is difficult to control. An Appendix II listing can complement and strengthen current national management and monitoring initiatives and provides a valuable tool in moving towards the sustainable management of the species.

The Humphead Wrasse *Cheilinus undulatus*, a distinctive coral reef fish which can grow to over two metres in length, occurs broadly in the Indo-Pacific, from East Africa to French Polynesia, Australia to India. The species has a low natural mortality and adults, which are naturally uncommon and prefer outer reefs, reef channels and passes, can live for more than 30 years. Consequently, it is predicted to have a low rate of intrinsic population growth. Within the last 10 years, the species has become heavily targeted, especially for the international trade in live reef fish. Approximately 10 countries are involved in the export trade, which is estimated at several hundred metric tonnes annually. The species is specifically targeted as it is not typically taken in traditional multi-species fisheries.

The Humphead Wrasse has been proposed for listing in Appendix II because of marked declines in landings, and several local extinctions, brought about especially by pressure from the live reef fish export trade. For example, exports from south-east Asia declined by 22% over just one year (1995-1996). Adults are uncommon in most fished areas and 80-90% of individuals now in trade are large juveniles. Despite the introduction of management measures in a number of countries, illegal, unreported and unregulated harvest for international trade continues and the species has recently been reclassified by IUCN from Vulnerable to Endangered. Although the species does not form a significant economic component of the trade, the high retail value of the Humphead Wrasse (sometimes exceeding USD130/kg) is a considerable incentive to continue fishing even if fish become harder to catch as populations decline. The species cannot be hatchery-reared at commercial levels, demand is expected to grow and exploited populations are therefore projected to continue to decline in the absence of effective or co-ordinated regulation. An Appendix-II listing could complement and strengthen current national management and monitoring initiatives and would provide the legal framework to regulate imports of specimens that were exported illegally from the country of origin.



Humphead Wrasse *Cheilinus undulatus*
can grow to over two metres in length.

CITES CoP13 and Humphead Wrasse

CoP13 Prop.33: *Cheilinus undulatus* - Inclusion in Appendix II. [in accordance with Article II, paragraph 2 (a), of the Convention and Resolution Conf. 9.24 (Rev. CoP12), Annex 2 a, paragraph B.]

Issues for consideration

Management options:

There is no effective regional fisheries management organization that can address management of the Humphead Wrasse in support of existing national regulations. CITES is a powerful means of supporting national laws and addressing illegal trade. It can be a valuable tool in moving towards the sustainable management of high-value, small-scale and widely traded coral reef species, such as the Humphead Wrasse.

Voluntary trade standards are currently being developed under the auspices of the Asia Pacific Economic Cooperation (APEC) for the live reef food fish trade to address issues such as high mortalities in transport in this trade. However these do not specifically address the Humphead Wrasse and would therefore be complemented by the regulatory obligations under an Appendix-II listing for this species.

Declining sizes and landings in exporting countries:

Data supporting the proposal are derived from a combination of market landings data for dead fish, trade data for live fish and underwater visual census data and have been published in a comprehensive synopsis. The expert opinions of biologists, fishery officials and traders from at least 15 countries (including most of those involved in exporting Humphead Wrasse) were also obtained. These various independent data sources allowed for cross-checking of data quality. The findings across all data sources suggested similar patterns of decline in fish numbers and sizes, specifically associated with the live reef food fish trade.

A fishery of juveniles:

Most individuals in trade are in the mid- to late-juvenile phase. This is largely because of consumer market preference for juvenile (i.e. plate-sized) fish. Smaller juveniles are caught also for 'grow-out' to market size. Significant removal of juvenile fish will ultimately compromise the reproductive capacity of exploited populations of vulnerable species.

Non-detriment findings:

Implementation of two fishery management measures would allow Parties to make non-detriment findings as a first response to an Appendix II-listing. These measures are the:

1. protection of juveniles (fish below 40 cm total length) from capture, including for the purpose of 'grow-out'. N.B. This is the most important measure given the common fish size in trade.
2. protection of the species during the reproductive season, particularly when forming spawning aggregations.

Identification:

As demand for the Humphead Wrasse is largely for the live reef fish food trade, the species is generally traded as whole fish. Humphead Wrasse is a highly distinctive species that changes colour several times throughout its life but is readily recognizable to species level at all life history stages and in all colour forms. Some limited trade may occur also in filleted form, which may present challenges for identification; some range States already require that some skin be retained on the fillets to aid identification.



Juvenile Humphead Wrasse on display outside restaurants.



Frozen fish on sale at a retail outlet, for local use rather than export, Pacific Island 2003.

Poor mariculture potential:

The Humphead Wrasse cannot be hatchery-reared at commercial scales (i.e. where fish are reared from the egg to market-size). Despite considerable efforts to produce this species by full-cycle culture (e.g., Taiwan, Indonesia) it has not been possible to raise the larvae after hatching for very long. The major problem is the small size of the larvae and the resulting problems of feeding; growth rates are also slow. Aquaculture experts consulted in Australia and Indonesia do not believe that this species will be successfully hatchery-reared at commercial scales in the near- to mid-term. Claims that this species is being 'cultured' all refer to grow-out of individuals being taken from the wild, not to hatchery production. Thus, this practice does not reduce the pressure on wild population.

Rarity will not stop fishing:

The Humphead Wrasse is a high-value, low-volume species in the luxury live reef fish trade. Therefore there will continue to be considerable economic incentive to fish this species even after its numbers have been significantly reduced in the wild, especially in less developed countries where incomes are extremely low. The species can exceed USD130/kg at retail (e.g., southern China). There is clear evidence that value increases with rarity of this species and that the live trade is particularly focusing on high value fish such as Humphead Wrasse for economic reasons; higher value species tend to bring higher profits.

Socio-economic benefits to range States:

The Humphead Wrasse has significant cultural value and tourism-related economic benefits in many range States. Where the diving industry is developed, the value of Humphead Wrasse for diving tourism *in situ* is likely to be considerably higher than for the export market. Moreover, its social and economic value in restaurants/hotels in tourist areas and for traditional and ceremonial use is already (or potentially) high in a number of Pacific range States.

Although the species has a high retail value, its natural rarity means that it is not typically a target fish nor does it provide a significant proportion of income for individual fishers who take it as part of their fishery for groupers and other, more common, species. The high retail values do not tend to filter down to the level of the fishers, with highest profits being made at the retail level. Although perceived benefits of the trade in live fish, of which the Humphead Wrasse is a very small component, are high because of retail prices, most of this value is not returned to the fishers. On the contrary, the destructive fishing methods, such as the use of cyanide commonly associated with the targeted capture of live Humphead Wrasse, and overfishing often linked to the "boom and bust" nature of many live fish fisheries, can cause

long-term declines in local resources with serious negative impacts on the small-scale communities that depend on them for food and livelihoods.



Humphead Wrasse on sale to customers of nearby restaurants. Clients select the fish they want and it is prepared freshly steamed.



Humphead Wrasse *Cheilinus undulatus* on a plate ready for steaming.



Soup of Humphead Wrasse

For more information on Humphead Wrasse and live reef fish trade:

Y.Sadovy *et al.* (2003) The Humphead Wrasse, *Cheilinus undulatus*: synopsis of a threatened and poorly known giant coral reef fish; *Reviews in Fish Biology and Fisheries* 13:327 -364.

Nokome Bentley. (1999). *Trade Review: Fishing for Solutions: Can the Live Trade in Wild Groupers and Wrasses from Southeast Asia be Managed*. TRAFFIC Southeast Asia

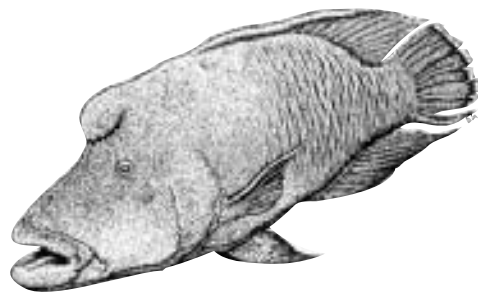
Patrick Lau and Rob Parry-Jones (1999). *The Hong Kong Trade in Live Reef Fish for Food*. TRAFFIC East Asia and WWF-Hong Kong.

Website on Humphead Wrasse:
www.humpheadwrasse.info.

FAO, Fisheries management and criteria for listing species in the CITES Appendices

No international protection or regional fisheries management measures currently are in place or planned for the species. Listing of Humphead Wrasse in Appendix II of CITES would complement and strengthen broader fisheries management objectives such as the FAO International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing (IPOA-IUU) and abide by the Code of Conduct for Responsible Fisheries.

The FAO ad hoc Expert Advisory Panel for the Assessment of Proposals to Amend Appendices I and II of CITES Concerning Commercially-Exploited Aquatic Species assessed this proposal and concluded that Humphead Wrasse meets Annex 2a criterion B, and possibly also criterion A, for inclusion in CITES Appendix II. The Panel also concluded that regulation of trade as a result of a CITES listing could make a significant contribution to the conservation of this species.



Drawing by Bruce Mahalski

IUCN - The World Conservation Union is an inter-governmental organization that influences, encourages and assists societies throughout the world to conserve the integrity and diversity of nature and ensure that any use of natural resources is equitable and ecologically sustainable.

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WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable resources is sustainable and promoting the reduction of pollution and wasteful consumption.

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