

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA

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Interpretation and implementation of the Convention

Species trade and conservation

MEETING REPORT FROM WORKSHOP ON IUU, CONSERVATION PLANNING AND NDF  
OF NAPOLEON (HUMPHEAD) WRASSE, DECEMBER 2015

This information document has been prepared by the IUCN SSC Groupers and Wrasses Specialist Group and submitted by the Secretariat in relation to agenda item 49 on Humphead wrasse (*Cheilinus undulatus*)

**Meeting report from workshop on IUU, conservation planning and NDF of  
Napoleon (Humphead) wrasse, *Cheilinus undulatus*  
Jakarta, Indonesia 8-10 2015**

Co-hosted by IUCN SSC Groupers and Wrasses Specialist Group and Directorate of  
Conservation and Marine Biodiversity, Director General of Marine Spatial  
Management, Ministry of Marine Affairs and Fisheries, Indonesia

Note: This report was written by Dr. Yvonne Sadovy, Chair of the IUCN SSC Groupers and  
Wrasses Specialist Group, and reviewed and commented upon by the government of  
Indonesia, FAO and the CITES Secretariat

A workshop on the Napoleon (Humphead) wrasse was conducted in Jakarta for 2.5 days from 8-10 December 2015 to address (1) Non-Detriment Finding (NDF) for the species and associated survey results from 6 reference field sites, (2) issues around some illegal, unregulated and unmonitored trade (IUU) of the species and (3) to conduct conservation planning for the species as a process complementary to the ongoing development of an Indonesian National Plan of Action for Napoleon wrasse initiated 3 years ago. The workshop and related activities were funded by the CITES Secretariat to the IUCN SSC Groupers and Wrasses Specialist Group and conducted as part of the work identified in CITES Decision 15.87 at CITES CoP15 in relation to IUU in Napoleon wrasse, and to assist in implementing the follow-up decisions 16.139 and 16.140 on the same issue from CoP 16. Funding for this workshop was also supported by the Indonesian Ministry by providing transport for participants from outside Jakarta

The meeting was jointly organized by the **IUCN SSC Groupers & Wrasses Specialist Group** (GWSG) and the **Indonesian Ministry of Marine Affairs and Fisheries**. Among the participants and assisting in the meeting were Dr. Kim Friedman (FAO, aquaculture and fishery modelling), Dr. Philip McGowan (Newcastle University and IUCN, SSC Conservation Planning Sub-Committee) and Daniel Kachelriess, Marine Species Officer, of CITES. From Indonesia, key government attendees were present as well as 4 trader/ farmers from Anambas/ Natuna islands (see **participant list** and **agenda** below). English-Bahasa translation was provided for the full 2.5 days of the meeting.

**At the Jakarta meeting at least 40 participants attended to discuss three main issues:**

- (a) given that exports of Napoleon wrasse (from capture-based aquaculture operations) are ongoing from Anambas that are not part of the CITES export quota of Indonesia, there was interest to (i) develop an NDF for Anambas Islands given the unusual nature of the grow-out (capture-based aquaculture or 'ranching') production of wild-caught Napoleons, (ii) stop the illegal export trade out of these islands, (iii) deal with the current 'stockpile of c. 300,000 caged fish held at the islands of Anambas and Natuna as a one-off export and (iv) ensure ongoing income from Napoleon exports for the communities of these islands (western Indonesia) and healthy Napoleon wrasse populations to support these communities;
- (b) the National Plan of Action for the species intended to address nationwide planning for the species to maintain healthy populations and the ecosystem it depends on while maintaining livelihoods from the species. This was supplemented by an IUCN conservation planning procedure, and
- (c) the results of 6 years of work (underwater visual census surveys, UVC, for population abundance) during which field surveys were conducted at sites of low, medium and high fishing pressure (total of 6 sites) around Indonesia to assess Napoleon fish

numbers. Initially, these surveys were conducted shortly after the CITES listing of the species in 2004 and then between 4 and 7 years later such that each site was surveyed twice to see the effects of management or ongoing fishing.

**Key meeting outcomes:**

- (a) A major discussion involved the exports of tens of thousands of Napoleon fish out of the Anambas (and Natuna) Islands, Riau Province, western Indonesia; approximately six to ten tonnes (about 15,000-20,000 fish as reported during a presentation) exported annually in recent years. Although the Indonesian government has implemented an air-only export policy for this species, exports by boat continue to Hong Kong and/or Mainland China although the traders present at the meeting reported that the frequency of exports had become less in recent years. Indonesia is investigating this situation..

The fish are caught while still very small (shortly after settlement out of the plankton and up to a few cm in length). The source of the post-larval fish is not known since there are few adult Napoleons remaining in the wild in these islands, according to a UVC survey conducted. While Napoleon fish tend to be more wary of swimmers where heavily fished, it is still possible to see them if they are present and survey distances are long enough. Moreover small fish are also brought in the Anambas for grow-out from other places according to one trader (such as the location Keijung [spelling?]). While some of the traders at the meetings suggested that the caged fish are the source of the collected settlement phase fish, there is no evidence for this, DNA evidence was not conclusive according to one presentation and very few adults are present in grow-out cages (Sadovy pers. obs). The low numbers of this species in the wild around the Anambas Islands seem unlikely to support a productive local source of larval production and is consistent with the interpretation that few fish are likely to be spawned in the islands; however larval provenance is unknown. Work is needed to determine sustainable levels of post-larval capture for this species to support an NDF (non-detriment finding).

The small fish are grown out to market size (about 500 – 1,000 g) for as many as 5 or 6 years and then shipped out of the islands by vessels registered in Hong Kong/Mainland China. The vessels reportedly come multiple times a year and take the fish back to Hong Kong or Mainland China, according to reports from Anambas traders and interviews with traders in Hong Kong. None of these fish are legally exported from Indonesia as part of the 2,000 fish CITES export quota of Indonesia and none are reported to have CITES permits to enter Hong Kong or Mainland China or to be transhipped through Hong Kong. The numbers are entirely inconsistent with the zero official imports into mainland China, either as recorded in the UNEP-WCMC database by Hong Kong or Mainland China or in Hong Kong's own records (AFCD reporting to Sadovy) . In Mainland China market surveys, trader interviews, on-line adverts suggest that tens of thousands of fish (at least) are on sale in recent years (TRAFFIC report and independent WWF and GWSG surveys to be posted on GWSG website).

In general in Indonesia, the government has tried to control international trade in the Napoleon fish by applying a quota and providing some support (with staff) for the repeat UVC surveys conducted over multiple years and study sites (presented under item (c)) as well as by introducing an air-only export policy to assist implementation of CITES because of the challenge of ongoing illegal exports. Napoleon fish exports support many livelihoods (over 1,000 households) in the fairly remote and impoverished islands of Anambas and Natuna, and may be important for community income elsewhere in the country and so there is interest to maintain healthy populations and conduct legal trade. The Indonesian government has established an marine protected area (MPA) for Anambas and Natuna Islands: Anambas is a national MPA and Natuna is a District MPA. Indonesia is also conducting a project called Coral reef rehabilitation and management (Coremap) for 24 MPAs including Anambas and

Natuna. Part of Coremap activities include management of Napoleon wrasse with the objective to have its population stable in the wild; the species can only be harvested at 1000-3000 g.

As part of a presentation on Napoleon fish NDF and how this FAO approach could be adapted for the Anambas/Natuna Islands situation, Dr. Friedman identified a need to limit the death rates of juveniles to balance between removal volumes of juveniles and ensuring enough remain in the wild to allow wild populations to persist. A range of possible management options were discussed from input controls of effort limitation (collection area, collection time, number of registered collectors), to output controls (catch quotas, size slot fisheries, catch rates for limited number of fishers). Dr. Friedman also presented various relevant FAO publications on NDF, CBA, estimation of reef area, etc. (see bibliography-*to be added with final published report*).

(b) The National Plan of Action for the Napoleon fish was initiated three years ago but with the emergence of the Anambas situation has become more heavily focused in this area. It was presented in addition to a conservation planning exercise that sought to identify the key vision and goals for Napoleon wrasse in the country through a consultative process. The draft conservation plan is now under review but the vision identified by the December meeting, consistent with that identified at an earlier meeting in 2012 when the conservation planning process was initiated, was **'The long-term survival of Napoleon fish in a diverse marine ecosystem for people to enjoy and use'**. Two specific goals under the vision were identified as (1) **'The Napoleon fish occurs throughout its natural distribution in Indonesia'**, and (2) **'The Napoleon fish is available as a source of pride and a resource for local communities to improve and sustain their livelihoods'**.

The conservation planning exercise continued by identifying actions and discussing specific objectives for achieving these two goals. Working group discussions explored the merits or otherwise of restocking to awareness-raising (Napoleon as an iconic species, 'Napoleon week'), and identification of the information needed for sustainable use and how this might be collected. The importance of juvenile habitat was discussed, as was monitoring of catches and the idea of an association of fishers/farmers for live reef fish in areas where this trade is particularly active. The need to diversify export trade of Napoleons beyond solely on Hong Kong and China was identified.

(c) The results of the UVC surveys unequivocally show that, in Indonesia, where the species is not protected or fishing pressure continues to be high, densities are extremely low for the species (i.e. < 0.5 fish per hectare), or decreasing, with very few of those fish in the adult size range; almost all fishes observed in the wild were juvenile to very small adult size range. This is clearly a conservation-dependent species that depends on some level of protection to maintain viable populations. Only where fishing pressure was low or zero (e.g. Banda and Bunaken) were adults encountered in surveys. Encouragingly, where fishing pressure was initially (first survey) judged to be medium and then was subsequently reduced (before second survey), the start of recovery (more juvenile fish) was seen within 4 years (the location was Fakfak, western Papua). The latter results strongly suggest that management can bring about the start of recovery of the species within a relatively short period of time.

The UVC results also showed that in protected areas fish densities were stable or increased (Banda Islands, Bunaken MPA). In Fakfak, initially medium fishing pressure but where fishing stopped, fish densities increased. In Raja Ampat (medium fishing pressure) densities stayed constant). However, in areas of initially high and ongoing high fishing pressure (Maratua and Komodo), Napoleon densities remain extremely low or further reduced. Anambas, an additional site, was surveyed once and has very low natural density of Napoleon fish currently (although there were reported to be many wild Napoleons in the past) following a long period of exploitation and no management. Kangian, outside of Bali, was also surveyed

once; this site is intensively collected, had very low fish numbers and was considered to be too dangerous to be resurveyed.

### **Additional presentations and major outcomes/issues**

Two additional presentations were made. In relation to invitees from mainland China and Hong Kong, Yvonne Sadovy met with AFCD (Agriculture Fisheries and Conservation Department of the Hong Kong Special Administrative Region) staff on 27<sup>th</sup> November to request updated CITES trade data to October 2015. A member of AFCD staff was invited to join the Jakarta workshop (with travel and accommodation to be paid by this project) but AFCD was unable to spare the staff to attend; however AFCD provided a powerpoint presentation of the current situation of Hong Kong trade and regulation of this species and confirmed that there is little monitoring of Hong Kong registered vessels entering Hong Kong (note that these are likely to be a major source of trade in this species). A mariculture researcher (Dr. Guohua CHEN ([chquh3240@aliyun.com](mailto:chquh3240@aliyun.com)) of Hainan University, Hainan Province, China, was invited from China but was unable to attend. He (together with colleague Jian LUO: [luojianfish@aliyun.com](mailto:luojianfish@aliyun.com)) provided a powerpoint to update the meeting on hatchery production of the species; the powerpoint describes successful larval rearing and feeding of this species but further work may not continue at present because of economic inviability due to slow growth to market size.

### **In relation to NDF and Indonesia**

- The Indonesian government is now investigating violations of the CITES at Anambas islands and considering how to maintain a fishery with legal exports from there in accordance with the Appendix II listing of this species in future. The Minister of Marine Affairs and Fisheries has considerably tightened up on IUU vessels in Indonesian waters which might affect HK vessels collecting Napoleons and could account, at least in part, for the lower numbers of Napoleons exported in recent years. Control of the Anambas exports could be strengthened by successful implementation of additional measures (see below). There are both immediate and long-term challenges to safeguarding viable Napoleon populations and ensuring legal exports. Both were discussed – see Annex – specifically addressed were (a) **Exporting existing fish in cages as one stock pile (exempt from quota)** and (b) **Setting up system for (legal) Napoleon trade and management.** *Immediate challenge:* there is a large ‘stockpile’ of approximately 300,000 Napoleons in cages in the islands (consolidated and raised over many years) that are waiting for export from Anambas/Natuna islands. The Indonesian government will, in liaison with the CITES Secretariat, explore options to export the fish already in these cages in line with Article IV of the Convention. Discussion was conducted on further stocktaking of Napoleons and data collection (including number of fishers, fish mortality rates in cages, etc., responsible agencies, export modes and documentation and oversight of grow-out operations). *Long-term challenges:* planning for NDF work to determine the number of Napoleon fish that can be sustainably exported annually, with the possibility to develop an NDF and/or quota specifically for Anambas/Natuna was discussed and various management options (spatial measures, quota, fishing effort, seasonal, etc) explored for their feasibility taking into account the CBA (capture-based aquaculture or ranching) nature of the fishery/culture operations and the reduced numbers of adult Napoleons in the area (relative to previously indicated levels). Studies to determine sustainable catch rates, critical post-larval settlement habitat (from where the fish are currently collected), and evaluate growth and mortality (both natural and in captivity) rates were discussed. Specifically addressed were legality, sustainability, traceability and outreach in relation to Napoleon export trade.
- It was clarified by the CITES representative that the Napoleon fish being grown-out from small juveniles (up to a few cm) is considered under CITES as being ‘ranched’

which in contrast to "bred in captivity" requires an NDF to be established for the species to ensure sustainable levels of capture and export.

- If there were a separate NDF or quota just for the Anambas Islands there could be a possibility of 'laundering' of small Napoleons into the Anambas islands coming from elsewhere in Indonesia (e.g. Keijung – spelling?), that are then grown out in Anambas and sold from the islands. Hong Kong vessels also collect mixed shipments of groupers and Napoleons for export. Hence, traceability of tiny Napoleons is important to consider. The government is aware of this and is considering how to address these issues.
- Planning between government and local communities will be discussed to address illegal trade and to determine how to export the fish (once NDF has been determined) legally. The possibility of forming an association of traders/farmers/government, etc., in Anambas to plan for future sustainable use was discussed. The current air-only export policy of Indonesia for this species is not considered to be very practical from this location so changes to legislation might be needed.
- The planned transition of CITES MA authority from the Ministry of Forestry to Ministry of Marine Affairs and Fisheries should assist with oversight and enforcement of commercial marine species. Education/outreach for communities producing Napoleon fish through ranching about the CITES listing and its implications as well as the need for sustainable management of a capture-based fisheries is needed, as well as general education on the Napoleon fish in general.

#### **In relation to imports of Napoleon fish from Indonesia and Hong Kong/Mainland China**

1. Regarding communication between management authorities, there is communication between the Indonesian Management Authority (MA) and the Chinese MA but little from the Hong Kong MA (AFCD of the HKSAR) according to Indonesian CITES MA.
2. An update from AFCD on internal import and re-export records of Napoleons on CITES permits provided to Sadovy showed that re-exports were not or rarely recorded to mainland China in recent years and that few (a couple hundred fish) had been recorded as imported under CITES permit over the last few years with 150 in 2014 and none in 2015 until end December. This is contrary to >1,000 fish counted by a Hong Kong University project doing monthly surveys from November 2014 to December 2015. About 25 shops were surveyed by this project and none were clearly exhibiting their permit to possess Napoleons as required by the government. Inspections of some premises occur each year according to AFCD staff (6 shops in 2015).
3. There appear to be no legal imports of Napoleons into mainland China in recent years according to WCMC-UNEP records, despite many observed on retail sale and advertised according to separate studies by WWF, IUCN and TRAFFIC. The government has recently completed some training of customs officers to identify the species (see Annex).
4. One comment that occurs in mainland China occasionally is that some of the fish could be from Chinese waters and, while this may be true for a few fish, these waters are considerably overfished and there is no evidence of large numbers of Napoleons remaining. At the recent workshop in Beijing (see Annex) participants indicated that they did not know where the HHW come from that are sold in mainland China.

***Annex of PPT presentations and bibliography to be provided with final report***

Time	Name/title	AGENDA TOPIC	Time Allocation
<b>November 8 (9 am – 5.00 pm)</b>			
9.00 – 09.30	1. Firdaus Agung (MMAF) and 2. Dr. Yvonne Sadovy (HKU/IUCN)	<ul style="list-style-type: none"> <li>• Welcome and introduction to meeting</li> <li>• History of work on Napoleon in Indonesia and of CITES App II listing</li> <li>• Objectives of workshop</li> <li>• Self- introductions</li> </ul>	30 minutes
9.30 – 10.00	Mr. Agus Dermawan MSi (Director for Marine Conservation and Biodiversity)	Recent policy on Napoleon Wrasse (protection status and trade)	30 minutes
10.00 – 10.30	Dr. Yvonne Sadovy and Santi Suharti (LIPI)	Brief biological profile of the Napoleon wrasse and need for management. Presentation of 6 years of field studies on abundance of Napoleon wrasse following the CITES App II listing	30 minutes
10.30-11.00	Dr. Kim Friedman (FAO)	Demonstration of model of NDF as currently used for Napoleon fish in Indonesia as developed by IUCN/FAO and relevance for other marine species	30 minutes
<b>Coffee break</b>			
11.30 – 11.45	Dr. Yvonne Sadovy (on behalf of Professor Guohua CHEN, Hainan University)	Situation of mariculture of Napoleon fish in China – PPT submitted from China on status of hatchery production of the species – Professor could not attend personally-PPT translated by Dr. Liu Min (GWSG).	15 minutes
11.45-12.00	Dr. Yvonne Sadovy (provided by Boris Kwan from Hong Kong Agriculture, Fisheries and Conservation Department)	Situation of IUU with Napoleon fish between Indonesia and Hong Kong/Mainland China and presentation provided by Hong Kong government on implementation in Hong Kong; relevance for CITES	15 minutes
12.-12.30	Dr. Philip McGowan	Introduction to IUCN SSC conservation planning: what it is and how it can help with sustainable management	30 minutes
<b>Lunch Break 12.30 – 13.30</b>			
1.30 – 2.30	Dr. Philip McGowan	Presentation and discussion of the key aspects of the draft strategy developed at 2012 workshop	1 hour
2.30 – 4.30	Dr. Philip McGowan	Analysis of current information on threats to Napoleon fish and constraints sustaining populations. Consideration of new information on status and management opportunities	2 hours
4.30 – 5.00	Dr. Yvonne Sadovy	Discussion and wrap-up day 1	30 minutes
<b>November 9 (9 am – 1.00 pm)</b>			
9-9.15	Dr. Yvonne Sadovy	Introduction to special discussion on NDF for Napoleon fish in Anambas	15 minutes
9.15-10.15	Dr Fayakun (MMAF R&D)	Recent research results (situation and challenge for NDF for Napoleon fish) and proposed sea ranching of Napoleon in Anambas.	1 hour
10.15-11	Dr. Kim Friedman and Dr. Yvonne Sadovy	NDF approach for Anambas Napoleon fish grow-out	45 minutes
11-12	All	Discussion on NDF for Anambas and next steps for data collection and NDF modelling	1 hour
<b>November 10 (9 am – 5 pm)</b>			
9.00 – 11.00	Dr. Philip McGowan	Assessment of actions needs to achieve conservation strategy	2 hours
<b>Coffee break</b>			
11.30-12.30	Dr. Philip McGowan	How the conservation strategy can support the NPOA	1 hour
<b>Lunch Break 12.30 – 13.30</b>			
1.30-3.30	Dr. Philip McGowan	Implementing the conservation strategy	2 hours
3.30-4.30	Mr. Didi Sadili (Deputy Director for Species Conservation)	Introduction to NPOA and discussion	1 hour
4.30-5.30	Yvone Sadovy Firdaus Agung	Workshop wrap up, next steps, and closing	30 mins