

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



Seventeenth meeting of the Conference of the Parties  
Johannesburg (South Africa), 24 September – 5 October 2016

NAPOLEON (HUMPHEAD) WRASSE  
*CHEILINUS UNDULATUS* TRADE INTO AND THROUGH HONG KONG

This document has been submitted by the Secretariat, in relation to agenda item 54 on *Humphead wrasse* (*Cheilinus undulatus*)\*.

---

\* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

**TRAFFIC  
IUCN**

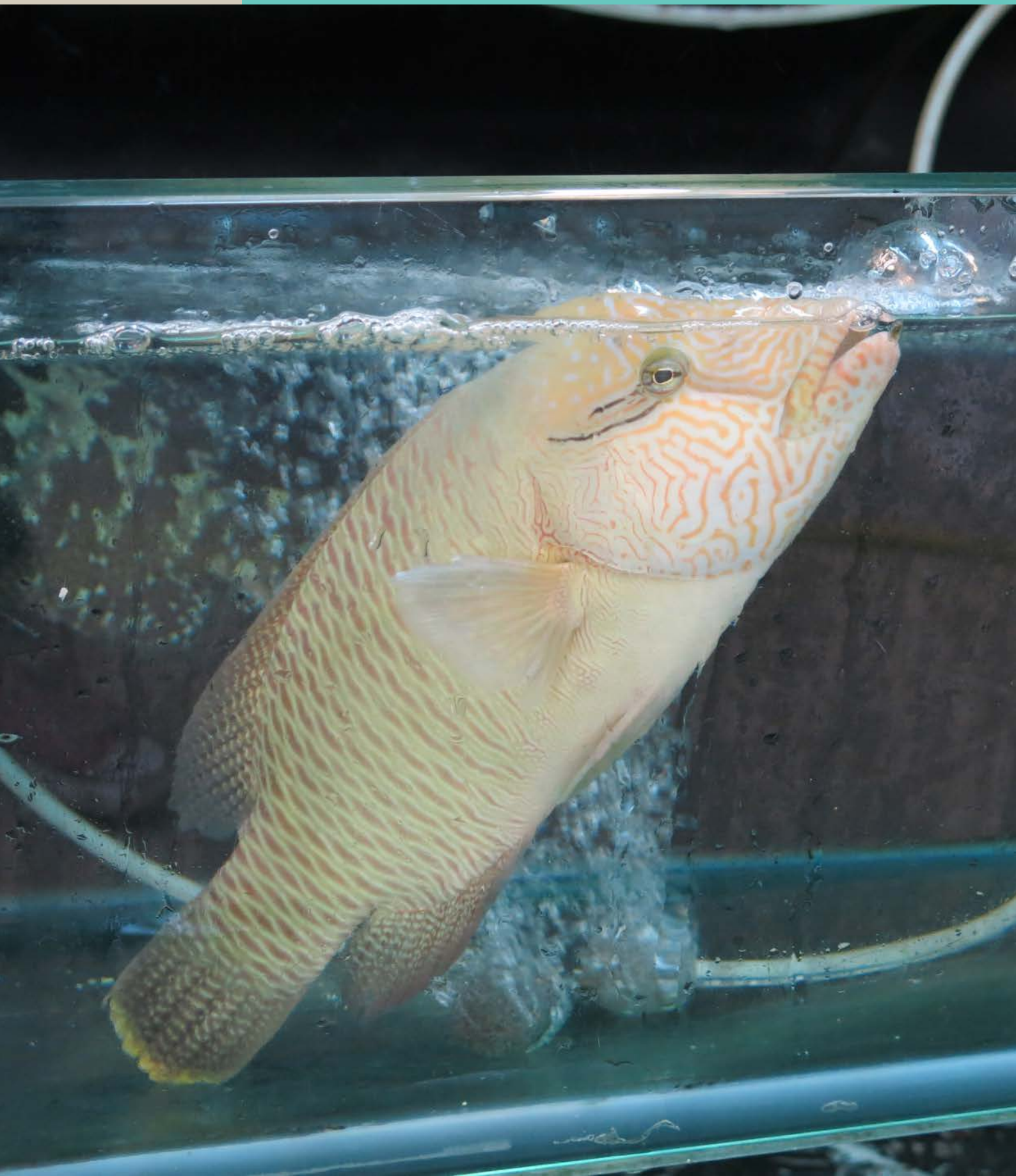
**JOINT REPORT**

JANUARY 2016

# HUMPHEAD (NAPOLEON) WRASSE

*Cheilinus undulatus* trade into and through Hong Kong

Joyce Wu and Yvonne Sadovy de Mitcheson





## TRAFFIC & IUCN JOINT REPORT

TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development. TRAFFIC is a strategic alliance of WWF and IUCN.

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges.

IUCN's work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, food and development. IUCN supports scientific research, manages field projects all over the world, and brings governments, NGOs, the UN and companies together to develop policy, laws and best practice.

IUCN is the world's oldest and largest global environmental organization, with almost 1,300 government and NGO Members and more than 15,000 volunteer experts in 185 countries. IUCN's work is supported by almost 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world. [www.iucn.org](http://www.iucn.org).

Reproduction of material appearing in this report requires written permission from the publisher.

The designations of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of TRAFFIC or its supporting organizations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The views of the authors expressed in this publication are those of the writers and do not necessarily reflect those of TRAFFIC, WWF or IUCN.

Published by TRAFFIC.  
East Asia Regional Office  
c/o WWF Hong Kong  
15/F, Manhattan Centre 8 Kwai Cheong Road Kwai  
Chung N.T. Hong Kong, SAR.

© TRAFFIC 2016. Copyright of material published in this report is vested in TRAFFIC.

ISBN no: 978-1-85850-390-5

UK Registered Charity No. 1076722

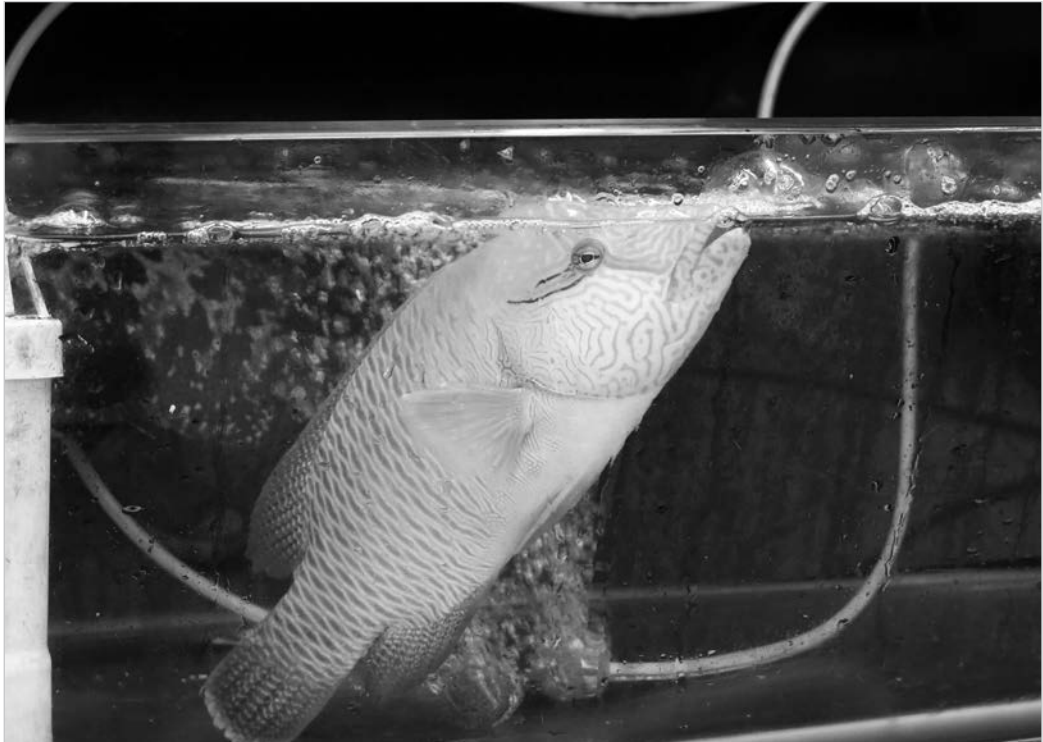
Suggested citation: Wu, J. and Sadovy de Mitcheson, Y. (2016). *Humphead (Napoleon) Wrasse Cheilinus undulatus trade into and through Hong Kong*. TRAFFIC. Hong Kong, SAR.

Front cover photograph and credit:  
Humphead (Napoleon) Wrasse *Cheilinus undulatus* in  
Hong Kong. ©Joyce Wu

# HUMPHEAD (NAPOLEON) WRASSE

*Cheilinus undulatus* trade into and through Hong Kong

Joyce Wu and Yvonne Sadovy de Mitcheson



© Joyce Wu

Humphead (Napoleon) Wrasse *Cheilinus undulatus* in Hong Kong.



**TRAFFIC**  
the wildlife trade monitoring network



# TABLE OF CONTENTS

---

Acknowledgement	v
Abbreviations	v
Executive Summary	vi
Background and Introduction	1
Methodology	1
Legal Control of Humphead Wrasse Fishery and Trade	3
Legal control in Hong Kong	3
Legal control in mainland China	3
HHW export quotas in source countries	5
Results	7
Humphead Wrasse trade	7
Humphead Wrasse trade in Hong Kong (market surveys)	12
Humphead Wrasse trade in Shenzhen (market surveys)	13
Humphead Wrasse trade through e-commerce	14
The transportation of Humphead Wrasse to Hong Kong and mainland China	16
Discussion and Conclusions	19
Recommendations	20
References	22
Annexes	23

## ABBREVIATIONS AND ACRONYMS

AFCD	Agriculture, Fisheries and Conservation Department, CITES Management Authority in Hong Kong SAR
CITES	Convention of International Trade in Endangered Species of Wild Fauna and Flora
China CITES MA	The Endangered Species Import and Export Management Office, CITES Management Authority in People's Republic of China
China CITES SA	The Endangered Species Import and Export Management Office, CITES Scientific Authority in People's Republic of China
CNY	Chinese Yuan
CSD	Census and Statistics Department, who keep Hong Kong SAR Customs import and export data
FAO	Food and Agriculture Organization of the United Nations
GWSG	Grouper and Wrasse Specialist Group (IUCN Species Survival Commission)
HHW	Humphead Wrasse <i>Cheilinus undulatus</i>
HKD	Hong Kong Dollar
IUCN	International Union for Conservation of Nature
LRFF	Live Reef Food Fish
MFN	Most-Favoured-Nations
UNEP-WCMC	World Conservation Monitoring Centre, United Nations Environment Protection
USD	United States Dollar

## ACKNOWLEDGEMENTS

The report is made possible with financial support to the IUCN Groupers & Wrasse Specialist Group from the CITES Secretariat and The University of Hong Kong.

Many people provided support to this report. The authors would like to express thanks to all those who helped to make this report possible by providing advice as well as sharing their knowledge on the subject.

The authors gratefully acknowledge the Agriculture, Fisheries and Conservation Department, Hong Kong SAR, Allen To from WWF Hong Kong, Stan Shea from Bloom Association in Hong Kong, and many traders and shop keepers in Hong Kong and Shenzhen for providing information and advice, as well as being open and patient. The authors would also like to thank Sandra Chow, as well as Ling Xu from TRAFFIC, Joey Heung from Ocean Park Hong Kong for their help on market survey and data collection. Thank you also to Liu Min of Xiamen University for surveys in mainland China, Gomen See for data collection in Hong Kong and to Rachel Wong of the University of Hong Kong for technical support. Yvonne Sadovy also received support from The University of Hong Kong, School of Biological Sciences.

The authors especially thank the following reviewers from TRAFFIC: Glenn Sant, Yannick Kuehl, Richard Thomas and Julie Gray for their comments and advice on improving draft versions of this report, as well as Sean Lam, Ryoko Nishino and Rita Chang for their great support.

# EXECUTIVE SUMMARY

The Humphead Wrasse *Cheilinus undulatus* is a naturally rare coral reef fish species, whose biological characteristics—being hermaphroditic, with high longevity and being slow to mature, combined with its high market value—make it vulnerable to overfishing and mean that population recovery is difficult to achieve without effective management. Since the species is mainly threatened by international trade for the live reef food fish (LRFF) trade (CITES A22-Inf05, 2006), control of this trade is essential for its sustainable use.

The Humphead Wrasse (HHW) is predominantly traded live as food for the LRFF trade, along with other groupers and wrasses, particularly from Indonesia, Malaysia, the Philippines but also from other range countries, with the main destination being Hong Kong Special Administrative Region (SAR, hereafter simply “Hong Kong”) and the People’s Republic of China (hereafter “mainland China”).

The HHW was classified as “Endangered” according to IUCN Red List criteria and categories in 2004, and has been listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since January 2005. Indonesia has only permitted the export of live HHW, although the export quota has decreased from 8,000 tails (=animals) in 2006 to 2,000 tails from 2012 onwards.

At the completion of the 15th Meeting of the Conference of the Parties (CoP15) to CITES in early 2010, CITES Decisions 15.86 – 15.88 urged all Parties to consider stricter domestic measures for regulating HHW trade, including the limitation of international trade to shipments by air only; improving monitoring through inspection of boxes of mixed live reef fish; increased exchange of law enforcement information; and increased awareness and identification capacity for law enforcers.

Hong Kong requires CITES export permits for legal HHW imports; import permits/licences are also required for live specimens. Mainland China requires CITES export and import permits for legal HHW for any type of specimen. Possession or sales licences are required for commercial sale, regardless of whether the specimen is live fish or chilled, or parts thereof. Both import and domestic sale regulations in mainland China and Hong Kong are compliant with CITES requirements for Appendix II species trade regulation, and due to the requirement for import permits (except for non-live fish for personal use) the domestic measures are stricter than required by CITES.

According to UNEP-WCMC CITES trade data, HHW were traded in the following specimen type categories: live and as bodies, meat, and derivatives. In terms of quantity and frequency, live HHW were the most frequently traded specimen, at least 64,826 tails between 2006 and 2013. The global reported trade volume peaked between 2007 and 2009, and has significantly decreased since 2010. The trade volume dropped to around 550 tails of live (the major form of import) HHW in 2013. According to these data, the actual export quantities never reached the export quotas set by Indonesia. Indonesia, Malaysia and Papua New Guinea were the main exporters of HHW between 2005 and 2013, and Hong Kong was the largest importer. Hong Kong did not implement the CITES measures for HHW until 2006, yet Hong Kong Customs data for 2005 records imports of live HHW from the Philippines and Singapore which do not appear in those countries’ export records. The conclusion is that any live HHW exported from Singapore and the Philippines to Hong Kong in 2005 must have taken place in violation of CITES regulations in force at the time.

Mainland China has not reported any import of HHW following the CITES listing since 2005, however Malaysia reported the export of 700 live HHW to mainland China in 2007. It is possible

that the discrepancy may be a result of reporting based on the number of permits issued rather than the actual trade taking place. Both mainland China and Hong Kong did not report to UNEP-WCMC for any HHW trade after 2005. Hong Kong Customs data also never recorded any HHW re-export to Mainland China after 2005.

During this study, the researchers found live HHW for sale in physical and e-commerce seafood markets in mainland China. Although only one live HHW was observed in a seafood restaurant during two surveys in Shenzhen, mainland China, twelve advertisements offering live or frozen HHW for sale were found on two Chinese language e-commerce websites. Three more advertisements offering live and frozen HHW from Indonesia and the Philippines were also found on a China-based English language website. In early 2013, around 300 live HHW were found in Beijing, Shanghai, Fujian, Guangdong and Hainan, according to a snapshot market survey (Liu, 2013). Traders from many of the observed markets claimed that live HHW arrived regularly. It seems that live HHW were available on the physical and/or e-commerce markets in mainland China, even though legal CITES import was never approved. Taking the low levels of HHW availability in the South China Sea into account, this raises questions about the legality of these HHW.

Seventy-three live HHW were observed by the authors in holding aquariums in 17 restaurants and stores in three retail markets in Hong Kong in April 2015. Although possession licences are required for anyone who holds HHW for commercial purposes, licence holders are only required to record their sales within three days of business transactions but do not have to report these records to the Agriculture, Fisheries and Conservation Department (AFCD), the CITES Management Authority in Hong Kong. Monthly market surveys by Hong Kong University found 1,197 live HHW available from three main retailing seafood markets in Hong Kong from November 2014 to December 2015. In total, 157 live HHW were observed in November and December 2014. According to the AFCD only 150 tails of live HHW were imported into Hong Kong in 2014, which indicates at least 7 live HHW were illegally imported in 2014. Such illegal trade is presumably fuelled by demand and perhaps persists because of insufficient patrolling and enforcement of existing trade regulations.

The authors observed no transport of HHW from Hong Kong to the nearest market, Shenzhen, in mainland China. However, other live fish and LRFF were observed in speedboats heading to Shenzhen, probably originating from Crooked Island in Hong Kong. Traders in Hong Kong and mainland China also claimed that LRFF tend to be re-exported to mainland China illegally to avoid high import tariffs, value added tax (VAT) and stricter import requirements. By avoiding the waiting time to obtain official documents, the risk of HHW mortality is also reduced.

In the past five years, only one instance of illegal trade in live HHW has been detected and enforced in Hong Kong. In 2010, a shipment of 53 live HHW from Indonesia was found with a valid export permit for only 50 fish (AFCD, *in litt.* to Joyce Wu, May 2015). Three fish were seized and the remainder was allowed to be imported. In December 2007, the Quarantine Bureau in Guangzhou Baiyun airport seized ten boxes of unauthorized HHW which were smuggled in amongst 40 boxes of legitimate LRFF from Malaysia (Huang, 2007). The ten boxes of HHW were confiscated and destroyed and the company fined CNY1,000 (USD135 in December 2007). This case indicated that HHW were traded alongside other LRFF and also revealed that at least some HHW and other LRFF had been imported to mainland China without transit through Hong Kong.

The above findings indicate that more work needs to be done to improve the legality of HHW trade, both into and through Hong Kong and compliance with CITES requirements, such as increasing the number of import inspections of mixed boxes of species containing LRFFs, domestic market monitoring, information exchange with source countries, raising the awareness and capacity of law enforcers and, importantly, recording imports into mainland China and enforcing the law regarding re-exports from Hong Kong.

The following recommendations are made to HHW stakeholders in Hong Kong and mainland China:

For HHW from source countries:

- The responsible authorities in Hong Kong and mainland China should enhance awareness of all regulations and species identification issues for all relevant authorities (including Customs, quarantine, marine police, aquatic management officials as well as industry and commerce officials) and the industry about HHW trade in relation to the CITES compliance.
- The intensity and frequency of import monitoring of mixed LRFF boxes or shipments needs to be increased.
- Information on export regulations and annual export quotas of the main HHW exporters, such as Indonesia and Malaysia, should be made public and accessible to the industry, relevant authorities and others in the main markets, such as mainland China and Hong Kong.
- The relevant authorities in Hong Kong and mainland China should liaise with their counterparts in source countries (such as Indonesia and Malaysia) over every seizure case and ensure all relevant trade is reported to the CITES Secretariat.

For HHW available in domestic markets in Hong Kong and mainland China:

- Information on legal import quantities and the need for possession licences for legal sales should be communicated to the industry and general public to increase regulation compliance and reporting of any non-compliance.
- Domestic sales information on possession licence holders' recording sheets should be collected and analysed by AFCD to understand the scale of trade and whether illegal trade is occurring or not.
- Licences of HHW legal possession should be posted in a visible location. AFCD also has to consider whether to change the quota stated on the possession licence for those seafood shops since the current quota on the licence only records the number of fish that can be held at any one time, not the number of HHW retail outlets can have during the 5-year validity of the licence.
- Patrolling of domestic markets/high-end restaurants/hotels should be increased to verify if any illegally traded HHW is available. The patrolling is especially recommended during seasons of high demand, such as the Chinese New Year holiday, wedding and tourist seasons. The authorities should ensure that every HHW available in the market is clearly of legal origin.

For the HHW shipment between Hong Kong and mainland China:

- Hong Kong should monitor and report re-exports of HHW to mainland China as part of the official CITES database for trade. Hong Kong should also check with the CITES Secretariat on the data discrepancy of its HHW re-export data. Authorities should co-operate to ensure the legality of live fish transportation.

For the HHW arriving by vessels in Hong Kong and mainland China:

- Authorities need to inspect the fishing vessels for the legality of harvest for HHW, and to record all HHW carried by the vessels in import or harvest statistics.



Frozen Humphead Wrasse on sale in Malaysia airport, 2014.

## BACKGROUND AND INTRODUCTION

The Humphead Wrasse *Cheilinus undulatus* is a naturally rare coral reef fish species, whose biological characteristics—being hermaphroditic, with high longevity and late sexual maturation, combined with its high market value—make it vulnerable to overfishing and means population recovery is difficult to achieve; it is considered to be conservation-dependent (Gillett, 2010). The Humphead Wrasse (HHW) has been traded as live reef food fish (LRFF), as are other groupers and wrasses, from Indonesia and other Southeast Asian countries, mainly destined for Hong Kong Special Administrative Region (SAR, hereafter simply “Hong Kong”) since the 1970s (Anon. 2006a, Bentley, 1999 and Sadovy, 2003) and the People’s Republic of China (hereafter “mainland China”) (via Hong Kong) (CITES CoP15 Doc. 51). Most HHW are retailed in their sexually immature to subadult stage. The species was classified as Endangered on the IUCN Red List in 2004<sup>1</sup>, and listed in CITES Appendix II in January 2005. Indonesia limited the export quota (for live fish only) at 8,000 tails (=individual animals) in 2006 which was gradually decreased to 2,000 tails by 2012 (Table 1). Based on the UNEP-WCMC CITES species trade database, Indonesia’s export quota for HHW has never been filled. Malaysia also set its export quota as “zero” in 2010 for live HHW, and further extended the zero quota to all types of HHW specimens (meat, derivatives, chilled fish etc.) in 2015.

HHW continues to be the most expensive and sought-after LRFF species in consumer markets, especially in Hong Kong and mainland China. At the completion of the 15th Meeting of the Conference of the Parties (CoP15) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in early 2010, CITES Decisions 15.86 – 15.88 urged all Parties to consider stricter domestic measures for regulating HHW trade, including the limitation of international trade to shipments by air only; improving monitoring through inspection of boxes of mixed live reef fish; increased exchange of law enforcement information; and increased awareness and identification capacity for law enforcers. Under the regulations of CITES, source, importing and transit countries/territories have the same responsibility to confirm the shipment is complying with CITES regulations. It is vital to understand the regulations and the enforcement effectiveness in importing countries/territories in order to gain an insight into compliance and gaps in implementing CITES regulations.

This study was designed to understand further the regulations in Hong Kong and mainland China, both major consumer markets, for HHW import, re-export and domestic sale; as well as the level of implementation of national laws, including inspection and enforcement practices for shipments made between Hong Kong and mainland China.

## METHODOLOGY

Information was collected from field interviews with stakeholders from relevant government agencies, as well as traders of HHW in Hong Kong and mainland China. Interviews were conducted in April 2015, in Hong Kong, Shenzhen and Kunming. Three retail markets<sup>2</sup> (with live/fresh seafood retail outlets and restaurants) and one wholesale market in Hong Kong were visited as well as one seafood street<sup>3</sup> (with several seafood restaurants) and one wholesale market (no shop but live fish holding aquariums) in Shenzhen (Fig. 1) in late April. Key stakeholders of HHW trade in Hong Kong and mainland China were interviewed; they included two exporters, 17 retailers, the Hong Kong CITES Management Authority (AFCD, Agriculture, Fisheries and Conservation Department), China CITES Management Authority (The Endangered Species Import and Export

1 <http://www.iucnredlist.org/details/4592/0>.

2 One wholesale market in Aberdeen and three retail markets in Lei Yue Mun, Sai Kung and Tuen Mun, Hong Kong in April.

3 “Seafood Street” and Yantian Wholesale Market in Yantian, China.

Management Office), China CITES Scientific Authority (The Endangered Species Scientific Commission) and Fisheries Agencies.

One wholesale market in Aberdeen and three retail markets in Lei Yue Mun, Sai Kung and Tuen Mun, Hong Kong were visited in late April. Aberdeen is the largest seafood wholesale market in Hong Kong, with some important LRFF wholesalers. Lei Yue Mun, Sai Kung and Tuen Mun are popular retail markets for seafood (including LRFF), shops and restaurants. Local consumers and tourists visit the markets for seafood consumption. Also, a seafood market in Yantian, mainland China was visited.

Questionnaires were developed and served as a guide for structuring interviews, but these were not shown to the interviewees. The questionnaires were used for researchers to ensure that questions about different aspects on HHW trade were covered.

Interviews were conducted in Cantonese, English or Mandarin for the convenience of interviewees. The interviews were conducted at the interviewees' place of work. Interviews with Chinese authorities were conducted during a CITES training workshop to take advantage of a gathering of officers from various relevant agencies. Notes from each interview were taken in writing or typed into a smart phone. Some information documents, such as licences issued for legal possession and sale of HHW, were shown to interviewers.

CITES species trade data on HHW, from 2005 to 2013, were accessed on 8th May 2015<sup>4</sup>. CITES HHW trade data, covering imports and exports by Hong Kong in 2014 were obtained from AFCD. Earlier CITES HHW trade data from the AFCD (up to 2013) were provided by the IUCN Groupers and Wrasses Specialist Group (GWSG). HHW trade data recorded by Customs and Excise Department in Hong Kong from 2005 to 2014 were maintained by and purchased from Hong Kong's Census and Statistics Department (CSD). Only the trade of live HHW, with a separate Customs code, were recorded by the CSD. In mainland China, HHW products were included under the category of "other endangered live fish"<sup>5</sup> and separate trade data were not available. There is a possibility that some countries, such as Indonesia, have not yet submitted all their annual CITES trade data for 2013. AFCD also collected the import and (re)export of live HHW via Hong Kong registered vessels (which are exempted from reporting to CSD), however the (re)export volume was zero since 2001, and the import was also zero since 2010.

Four e-commerce websites (which mainly target businesses and consumers in mainland China) were searched in June and July 2015 to understand the availability of HHW in mainland China. Those surveyed were three popular Chinese language B2C (business to consumer) and a leading English language B2B (business to business) websites.

The average monthly exchange rate in April 2015 between Hong Kong dollars and US dollars as well as the average monthly exchange rate from April to June 2015 between Chinese Yuan and US dollars were obtained from an exchange rate website<sup>6</sup>.

---

4 CITES species trade data are maintained by UNEP-WCMC, could be accessed via CITES website <http://trade.cites.org/>.

5 China Customs gave separate codes for some specific species of live fish and fries, at the same time also assigned codes for endangered vs non-endangered live fish and fries which are not specified elsewhere.

6 <http://www.oanda.com/currency/historical-rates/>.

# LEGAL CONTROL OF HUMPHHEAD WRASSE FISHERY AND TRADE

## Legal Control in Hong Kong

**Protection of Endangered Species of Animals and Plants Ordinance in Hong Kong (Cap 586)** enacted in 1989 (Cap189) and amended in 2006, under the authority of Agriculture, Fisheries and Conservation Department (AFCD)

- Legal import of HHW (CITES Appendix II species) into Hong Kong requires
  - Valid CITES export permit issued by export countries;
  - Inspection by officers upon landing;
  - Valid import licence issued by AFCD in advance for wild origin live Appendix II species, include HHW (which means that dead, i.e. frozen or chilled, or captive bred HHW does not need an import licence from AFCD)
- Legal re-export of HHW from Hong Kong requires
  - Valid re-export licence issued by AFCD in advance

Hong Kong applies personal/household effects for some species and their products, however:

- Giant Panda and rhinoceros (regardless whether live or dead), as well as all live animals are not eligible to such exemption,
- Import of dead (frozen/chilled) HHW to Hong Kong for personal use is exempted, and no export permit, import licence or possession licence is required.

In general CITES has a list of species/specimens for which there is an export permit or re-export certificate exemption for small quantities as personal/household effects. However, HHW is not on this list. Thus rules regarding any personal/household effects exemptions for HHW (not live fish as live animals cannot be exempted) are made by individual countries/territories. Some countries, including mainland China, the EU and Indonesia, do not have an exemption for tourist souvenirs. Thus, export permits are needed for tourists to bring (back) any quantity of HHW, live or dead, into mainland China. Indonesia only allows live HHW to be exported and only if shipped by air (CITES CoP15 Doc. 51, 2010).

- Legal possession of HHW in Hong Kong requires
  - A valid “possession licence” issued by AFCD for commercial purposes for any type of specimen (live or dead),
  - A valid “possession licence” issued by AFCD for wild origin live HHW in Hong Kong, regardless whether for commercial purposes or not,
  - Dead HHW for personal use are exempted from possession licence requirements.

### **Tariff and value added tax (VAT) for import of HHW to Hong Kong**

- There is no import tariff or VAT for import of HHW into Hong Kong.

## Legal Control in mainland China

**The Administration of the Import and Export of Endangered Wild Fauna and Flora** enacted since 1st September 2006 (Anon., 2006). This complies with CITES legislation on the import, export and re-export of CITES listed species.

- Legal import of HHW into mainland China requires:
  - A valid export permit issued by exporting countries/territories, include Hong Kong;

- A valid import permit issued by the China CITES Management Authority (MA) (The Endangered Species Import and Export Management Office) in advance.
  - There is no exemption for dead HHW or for personal use only.
- Legal re-export of HHW from mainland China requires
  - A valid import licence issued by China CITES MA in advance.

**Law of People's Republic of China on the Protection of Wildlife** enacted since 1st March 1989, under the authority of the State Council (Anon., 1989). This is an overarching law for wildlife protection in mainland China; it also regulates the harvest/fishing and trade of terrestrial and aquatic wildlife. HHW is under the second class of special State protection, which means its sale or procurement requires prior approval from the relevant authorities in provinces, autonomous regions or municipalities.

**The Administration on the Protection of Aquatic Wild Fauna** enacted since 5th October 1993, under the authority of Fisheries Administration of State Council (Anon., 1993). This regulation is based on the Wildlife Protection Law enacted in 1989 to govern the harvest, use and domestic trade of wild aquatic fauna in mainland China. Category I and II protected wild aquatic fauna can only be sold and purchased for the purpose of scientific research, ranching/captive breeding and exhibition etc. The commercial use (sale) of non-protected wild aquatic fauna should be administrated by the Department of Commerce and Fisheries Administration. Any illegal sale, purchase, transport or carrying of protected wild aquatic fauna, can result in confiscation of the products, seizure of any profits and punishment with a fine of not more than ten times the value of the products.

- Legal sale of HHW in mainland China, according to the Protection of Aquatic Wild Fauna, requires
  - A licence issued by relevant authorities at the provincial level.
  - A licence is also required for HHW online shops/sellers, although it is not specified in the Protection of Aquatic Wild Fauna.

According to Chinese authorities, it is more likely that HHW are sold in high end restaurants and hotels in mainland China, rather than in seafood markets. However, the relevant authorities lack sufficient resources to monitor and manage the market. Two high-end restaurants found in Beijing in June 2010 without the appropriate licences for HHW domestic sale were fined but not prosecuted (Anon., 2010). No national central database for enforcement of HHW regulations exists in mainland China.

**Fisheries Law** enacted since 1st July 1986, under the authority of State Council (Anon., 1986). This general law describes the scope of fisheries permitted and regulated by the Chinese government. Fisheries certificates must be obtained from the relevant government Fisheries Authority prior to engaging in fishing activities. Fishing practices, in terms of time, location and fishing gear must follow the conditions specified on the licence. Harvest of juvenile fish of important economic value is prohibited unless permission has been granted with a specified time, location and quota, for the purpose of aquaculture and other specific needs.

- Legal harvest of HHW in Chinese territorial waters requires:
  - A valid harvest licence issued by the Fisheries Authority at central or provincial level.

#### **Tariff and VAT for import of live HHW and other LRFF**

- 10.5 or 40% tariff for import of live HHW<sup>7</sup> into mainland China (Anon., 2015a and Anon., 2015e).

<sup>7</sup> Trade of Humphead Wrasse is recorded under Chinese Customs code 0301-9999-10 as "other endangered live fish". 10.5% import tariff for Most-Favoured-Nation (MFN) countries/territories; 40% import tariff for other exporting countries/territories.

- 0% tariff for import of young live HHW<sup>8</sup> into mainland China; as incentive to import young fish for mariculture purposes.
- 13% VAT for import of both live HHW and young HHW.
- The same import tariff and VAT as for HHW and their young are also applied to other LRFF<sup>9</sup>.
- According to the Closer Economic and Partnership Agreement (CEPA, the competent free trade agreement between Hong Kong and mainland China), any mainland China import tariff is eliminated for most commodities originating from Hong Kong, except those that are prohibited from import under the laws and administrations of mainland China, as well as relevant international Conventions to which mainland China is Party. Because HHW is a CITES-listed species, a 10.5% tariff is charged for legal import from Hong Kong to mainland China. LRFF other than HHW are exempted from the import tariff but not VAT.
- Indonesia, Malaysia, the Philippines, Papua New Guinea and Hong Kong are categorized as Most-Favoured-Nations (MFN)<sup>10</sup> and can benefit from the lower import tariff of 10.5% (Anon., 2015a). This means for the legal import of LRFF from the main exporters, such as Indonesia, Malaysia, the Philippines and Papua New Guinea, and from other possible transit countries, such as Singapore or Viet Nam to mainland China, that there is no tariff and VAT benefit to importing via Hong Kong compared to direct imports.

## HHW export quotas in source countries

HHW is a CITES Appendix II listed species, which can be legally exported with the valid export permit issued from export countries. Wild sourced specimens can be traded on a commercial scale. Import permit requirements are based on the regulations of importing countries/territories.

Before the CITES listing became effective on 12th January 2005, HHW were mainly exported from Indonesia, Malaysia and the Philippines to consumer markets, such as Hong Kong and mainland China (CITES CoP15 Doc. 51, 2010). Currently, only Indonesia and Malaysia have set export quotas for HHW to limit the scale of trade. Indonesia has set its HHW export quota since 2006 for live specimens only, but with no quota for other types of specimens. This export quota has been decreased from 8,000 fish in 2006 to 2,000 fish from 2012 onwards (Table 1). Malaysia has set its HHW export quota to “zero” since 2010 for live specimens, and further extended this zero export quota to all types of specimen in 2015. Based on the UNEP-WCMC CITES species trade database, the Indonesia export quota has never been fulfilled.

8 Trade of young Humphead Wrasse is recorded under Chinese Customs code 0301-9919-10 as “other young endangered live fish”.

9 LRFF (Live Reef Food Fish) other than endangered HHW are categorized under Customs code 0301-9919-90 as “other live fish”, and 0301-9919-90 as “other young live fish”.

10 China has provided MFN status to most of countries in the world, including all 10 countries from Southeast Asia, as well as Australia, Papua New Guinea, New Zealand and Fiji.

Year	Indonesia				Malaysia			
	export quota (no. of fish)	type of specimens	UNEP-WCMC recorded export*	type of specimens	export quota (no. of fish)	type of specimens	UNEP-WCMC recorded export*	type of specimens
2015	2,000	Live	0		0	All	0	
2014	2,000	Live	0		0	Live	0	
2013	2,000	Live	0		0	Live	0	
2012	2,000	Live	1,643	Live	0	Live	0	
2011	3,600	Live	2,710+100	Live+ derivatives	0	Live	0	
2010	5,400	Live	3,810	Live	0	Live	0	
2009	8,000	Live	4,220	Live	NA	NA	26,290+66	Meat+ derivatives
2008	7,200	Live	3,809	Live	NA	NA	21,500	Live
2007	8,000	Live	6,228	Live	NA	NA	17,300	Live
2006	8,000	Live	0	-	NA	NA	1	Live
2005	NA	NA	5,230	Live	NA	NA	0	

**Table 1. Export quotas and reported export quantity of HHW 2005–2015.**

Source: CITES Export Quotas (Anon., 2015d) and UNEP-WCMC data.

Note: \* export quantity reported by exporters.



Humphead (Napoleon) Wrasse *Cheilinus undulatus* in Hong Kong.

© Yvonne Sadovy de Mitcheson

## RESULTS

### Humphead Wrasse trade

#### UNEP-WCMC trade data in general

According to UNEP-WCMC CITES species trade data, exporting countries have reported the export of HHW as a variety of types of specimens. However importing countries/territories have only reported the import of bodies, live and meat specimens (Table 2). The trade quantities in general and for different types of HHW reported by exporting countries/territories were higher than those reported by importers. Eight countries—Malaysia, Indonesia, Papua New Guinea, Solomon Islands, Australia, Japan, Netherlands and Singapore—reported exports of HHW between 2005 and 2013. Twelve countries/territories—Hong Kong, Singapore, Australia, Japan, US, South Korea, UAE, Netherlands, Turkey, Thailand, UK and Germany—reported imports of HHW during the same period. Some countries/territories only imported or re-exported a few live HHW for aquarium display, but not for food consumption.

It is possible reporting differences are because exporting countries recorded and reported their CITES annual trade based on the number of permits issued, rather than on the actual trade. Another possibility is that some CITES export permits were not collected and incorporated into importers' annual data.

	Bodies*	Derivatives*	Live*	Meat*	Specimens*	Total
Exporter reported quantity	0	166	66,930	679.1 kg + 26,290	9,900 kg	10,579.1 kg + 93,386
Importer reported quantity	3	0	64,826	599.2 kg	0	599.2 kg + 64,829

**Table 2. Global HHW trade, based on UNEP-WCMC data, 2005-2013.**

*Note: \* where specified in kilogrammes, other products were recorded in unspecified units. However, it is likely that the unit for "Live" is "tail" (i.e. individual animal) and for "Body" is "pieces".*

Live HHW was the most traded type, and peaked in 2007-2009 based on importers' reports. There was probably very little actual trade in meat as the main market and entry port, Hong Kong, favours live HHW. Online trade monitoring revealed the other important market as mainland China, which also accepted chilled/frozen HHW at a lower price.

#### Box 1.

These findings suggest that importers have to increase their port inspection and market monitoring to catch any emerging and shifting trade, in terms of species or types of products. There appears to be market demand in mainland China and illegal imports of HHW from Hong Kong; patrolling and enforcement have to be increased at the border and in the market to ensure all the HHW are legally imported with source country indicated to comply with CITES regulation. Otherwise, further trade restrictions for HHW have to be considered.

Malaysia, Indonesia and Papua New Guinea were the three largest exporters between 2005 and 2013 (Annex 1). Hong Kong was the largest importer for global HHW trade. The second largest importer, Singapore, only accounted for less than 3% (1,710 live HHW) of Hong Kong's import volume (Annex 2).

### **The AFCD and UNEP-WCMC data records**

All CITES Parties have to report their trade in CITES-listed species to the CITES Secretariat annually. Hong Kong's trade is reported combined with data from mainland China, with import and (re-)export from Hong Kong recorded as such. Thus, trade in CITES-listed species between Hong Kong and mainland China and others can be identified and extracted from the UNEP-WCMC CITES trade database. Although UNEP-WCMC data are based on the annual reports provided by importing and exporting countries/territories, the import and export quantities for live HHW recorded in the UNEP-WCMC and AFCD databases are not always the same (Annex 3). The annual import of live HHW recorded by AFCD and UNEP-WCMC (importer reported data) differed in 2006, 2007 and 2009. The AFCD import quantity was significantly lower (707 tails of live HHW) compared to that recorded by UNEP-WCMC in 2006 (864), and a little higher in 2007 (AFCD is 20,447, UNEP-WCMC is 20,428) and 2009 (AFCD is 16,884, UNEP-WCMC is 16,850) (Annex 3).

AFCD recorded some live HHW re-export data in five non-consecutive years (2006-2007, 2010-2011 and 2013), however UNEP-WCMC exporters recorded no live HHW re-exported from Hong Kong between 2006 and 2013.

#### **Box 2.**

The UNEP-WCMC data were based on the annual reports provided by importing and exporting countries/territories. Although the annual data inconsistencies between the AFCD and UNEP-WCMC records are not large, it is recommended the two work together to try and understand if this is a data management issue or if there is a trade regulation gap. It is especially important to understand the lack of Hong Kong re-export records in the UNEP-WCMC data or the absence of mainland China import data.

For CITES to assist conservation and ensure sustainable use of natural resources, high quality reporting and good management of trade data are essential to iron out the inconsistencies that raise many questions and can lead to inadequate decision making.

Comparison of UNEP-WCMC data between major importers and exporters since the annual trade volumes recorded by AFCD and UNEP-WCMC are reasonably consistent (except for 2006, 2007 and 2009) and since there were no country specific breakdown available from AFCD data, UNEP-WCMC data were used for comparing reported quantities between individual importers and exporters.

According to UNEP-WCMC data, from 2006 to 2013 inclusive, only Malaysia, Indonesia and Papua New Guinea reported exports of live HHW to Hong Kong (Table 3). According to these exporters' reported quantities, Malaysia (38,100 live HHW) was the largest source country but only provided supplies in 2007 and 2008 (Table 3). On the other hand, Indonesia (26,404 live HHW) was the longest-term supplier, providing live HHW between 2005 and 2012 (except for in 2006). Indonesia also did not report HHW exports in 2013 although it is currently unclear whether there is a reporting time lag or no exports took place that year. (Indonesia has submitted some 2013 trade data, but it is not uncommon for Parties to submit such data piecemeal). Indonesia has set an annual export quota for live HHW in 2015, although the export volumes have gradually decreased since 2007. Papua New Guinea only exported a small volume (350 unspecified units) of live HHW to Hong Kong in 2007.

There were some significant inconsistencies between reported import and export quantities in the UNEP-WCMC data. Hong Kong's import data only showed imports of live HHW from Indonesia, Malaysia, Papua New Guinea and Tonga between 2006 and 2013, and no other type of HHW

specimen (Table 3). According to Hong Kong's reported imports, Malaysia was the largest source country but only provided supplies from 2007 to 2009. Hong Kong's reported quantities also showed that Indonesia was the longest-term supplier, providing live HHW between 2006 and 2013, with the import volume gradually decreasing since 2007. Hong Kong imported small quantities of live HHW from Papua New Guinea in 2007 and 2008.

In general, Hong Kong's reported quantities were lower than the exporter reported quantities, except in 2012 for trade from Indonesia and in 2007 for trade from Papua New Guinea. In 2013, 2009 and 2008, Hong Kong reported importing live HHW from Indonesia, Malaysia and Papua New Guinea, respectively, but no trade was reported from the corresponding exporting countries (Table 3). Although Malaysia did not report live HHW trade to Hong Kong in 2009, Malaysia reported 19,309 unspecified units of HHW meat exported to Hong Kong in the same year. But Hong Kong did not report any non-live HHW trade in 2009 (or in any other year). This suggests the type of HHW product exported from Malaysia to Hong Kong in 2009 may have been misreported or based on the issued permit not actual trade.

Mainland China did not report the import of any type of HHW following the CITES listing in 2005, however, Malaysia reported exporting 700 live HHW to mainland China in 2007. This data discrepancy might also stem from Malaysia reporting its export volume based on the issued permits and not on the actual legal trade. However, mainland China did not authorize the import of HHW until at least 2010 (CITES CoP15 Doc.51, 2010).

In 2005, before the implementation of the HHW CITES listing in Hong Kong, Papua New Guinea reported the export of 9,900 kg specimen of unspecified CITES Appendix II *Cheilinus* species<sup>11</sup> to Hong Kong.

**Box 3.**

Based on the information from CITES CoP15 Doc. 51 and UNEP-WCMC data, it is likely that mainland China did not approve any legal import of HHW since its listing. This leads to questions about the appearance of HHW in the market in mainland China.

It is possible that importer- and exporter-reported quantity inconsistencies are indicative of a data management issue, such as export countries only reporting the quantity approved on export permits but not the actual export quantity. This commonly occurs since it is more convenient to sum up the quantities from the issued permits than seek out copies of export permits from different ports to determine the actual levels of trade. For importing countries/territories, it is possible that recorded import volumes were lower than the actual trade volume because some CITES documents were not collected for data entry. Thus, in general, the importer reported volume is either equal to or lower than the exporter reported volume.

There is more concern if the importer-reported quantity is higher than the exporter-reported quantity, which could indicate trade in excess of approved quotas or that fraudulent permits have been used.

It is important for Hong Kong's AFCD to confirm the live HHW trade quantities with Indonesia, Malaysia and Papua New Guinea in 2013, 2009 and 2008, respectively, to understand the legality of the trade taking place. It is also important for AFCD to confirm with CITES the discrepancy of their re-export data.

11 There are seven recognized species under genus *Cheilinus*, only one species, *Cheilinus undulatus* is listed as CITES Appendix II species and could only be traded legally with valid export permit.

Trade direction	Indonesia to Hong Kong				Malaysia to Hong Kong				Papua New Guinea to Hong Kong				Total -WCMC	
Data source	ID reported*	HK reported†	HK Customst	MY reported*	HK reported†	HK Customst	PG reported*	HK eported†	HK Customst	Exporters	HK report			
Derivatives	100	0	0	66	0	0	0	0	0	100	0			
2009	0	0	0	66	0	0	0	0	0	66	0			
2011	100	0	0	0	0	0	0	0	0	100	0			
Live	26,404	15,114	7,248 kg	38,100	46,127	11,310 kg	350	994	8,846 kg	94,129	62,235			
2005	5,230	0	4,919 kg	0	0	0	0	0	4,516 kg	5,230	0			
2006	0	864	1,270 kg	0	0	0	0	0	4,330 kg	0	864			
2007	6,228	3,115	838 kg	16,600	16,529	1,131 kg	350	784	0	23,178	20,428			
2008	3,799	2,802	221 kg	21,500	15,799	7,554 kg	0	210	0	25,299	18,811			
2009	3,857	3,051	0	0	13,799	2,626 kg	0	0	0	3,857	16,850			
2010	3,410	2,201	0	0	0	0	0	0	0	3,410	2,958			
2011	2,400	1,120	0	0	0	0	0	0	0	2,400	1,120			
2012	1,380	1,403	0	0	0	0	0	0	0	1,380	1,403			
2013	0	558	0	0	0	0	0	0	0	0	558			
Meat	0	0	0	19,309	0	0	0	0	0	19,309	0			
2009	0	0	0	19,309	0	0	0	0	0	19,309	0			
Specimens	0	0	0	0	0	0	9,900 kg	0	0	9,900 kg	0			
2005	0	0	0	0	0	0	9,900 kg	0	0	9,900 kg	0			

**Table 3. Hong Kong imported HHW volume from different data sources, 2005-2013.**

Source: UNEP-WCMC and Hong Kong CSD, 2005-2013.

Note: ID: Indonesia; MY: Malaysia; HK: Hong Kong.

\* export quantities, in kilogrammes or unspecified units, obtained from UNEP-WCMC CITES data, reported by exporting countries Indonesia, Malaysia and Papua New Guinea.

† Import quantities, in kilogrammes or unspecified units, obtain from UNEP-WCMC CITES data, reported by Hong Kong's AFCD.

‡ Import quantities in kilogrammes obtained from Hong Kong's CSD.

Due to legislative amendments, Hong Kong only started to implement the CITES Appendix II listing for HHW from 1st December 2006. Thus, there are no CITES records of HHW imports into Hong Kong in 2005 or prior to then, and only 864 live HHW were reported as imported in 2006. However, given other CITES Parties did implement HHW CITES regulations from 2005, any trade that year to Hong Kong should have been recorded in exporters' records and should have been accompanied by appropriate export permits.

Hong Kong Customs data<sup>12</sup> only recorded import of live HHW (Customs code 03019931) between 2006 and 2009, and re-export of live HHW in 2011. Although Hong Kong was not implementing the HHW CITES listing in 2005 and consequently did not report HHW trade to UNEP-WCMC, Hong Kong Customs data showed that Hong Kong imported 22,097 kg of live HHW: from Singapore (12,450 kg), Indonesia (4,919 kg), Papua New Guinea (4,516 kg) and the Philippines (212 kg) that year (Table 3). Hong Kong Customs data also recorded live HHW imports (24,240 kg) from 2006 to 2009, and zero imports from 2010 to 2014 (Annex 3). Given that in UNEP-WCMC data neither the Philippines nor Singapore reported any live or other types of HHW exports to Hong Kong following the CITES listing in 2005, the conclusion is that any live HHW exported from Singapore and the Philippines to Hong Kong that year must have taken place in violation of CITES regulations in force at the time.

**Box 4.**

This suggests that Hong Kong did not take appropriate steps to avoid the import of illegally traded CITES species while amending its implementation of CITES regulations in 2005 and that Singapore and the Philippines were not vigilant in their enforcement of CITES trade regulations. Traders appear to have exploited this unsynchronized implementation of CITES regulations. The lack of co-ordination between different agencies (such as AFCD and Customs) provided loopholes for opportunistic and illegal traders.

UNEP-WCMC data recorded that Hong Kong reported imports of 3,051 and 13,799 live HHW from Indonesia and Malaysia, respectively in 2009. However, Hong Kong's Census and Statistics Department (CSD) only recorded the import of 2,626 kg of live HHW from Malaysia, and zero from Indonesia. Since Hong Kong Customs are supposed to verify all documents and commodities for any trade in CITES-listed species, the inconsistency between CITES trade data records and Customs import records reveal potential shipment monitoring and data management issues at the port of Hong Kong.

Comparison of the import volumes recorded by Hong Kong Customs and Hong Kong reported in the UNEP-WCMC CITES data revealed significant data recording discrepancies among different agencies, such as Customs and AFCD, for the same species and products. Hong Kong reported UNEP-WCMC data showed Hong Kong import live HHW from Indonesia between 2006 and 2013, but Hong Kong Customs data only recorded trade from 2006 to 2008 (Table 3). For those years in which both UNEP-WCMC and Hong Kong Customs recorded live HHW trade, the calculated average fish size (=Customs weight figure/number of live HHW) varied between 68 g and 1.47 kg. The 1.47 kg average fish size was calculated from the weight and number of live HHW recorded in 2006, the year Hong Kong began the implementation of the CITES HHW listing and recorded trade during one month. Thus, the number of actually traded live HHW could be much higher than the recorded/reported 864 and the calculated average fish size consequently much lower than 1.47 kg. According to traders and observations in the market, the favoured/available live HHW size is around 500-750 g.

<sup>12</sup> Hong Kong Customs data kept by CSD (Census and Statistics Department).

**Box 5.**

The calculated average size of imported live HHW was small compared to observations in the market. It is likely that importers under-reported their import weight to Hong Kong Customs. Hong Kong has good reason to encourage traders to be open about their import and export volumes and values since Hong Kong is a free trade port, with zero or very low import tariff. There was no legal re-export of HHW from Hong Kong to mainland China, thus there is no obvious/known benefit for under-reporting import volumes in Hong Kong. Earlier research into the dried seafood trade also concluded that Hong Kong Custom's records were generally higher than the records kept by the counterparts of their trade partners (Clarke, 2002). The live HHW trade data collected and reported by different agencies in Hong Kong reveal a potential problem of under-reporting in Hong Kong Customs data on some commodities, such as endangered species or live fish.

For the export data, AFCD recorded some exports in five years (2006-2007, 2010-2011 and 2013), however UNEP-WCMC reported exports showed no live HHW exported from Hong Kong between 2006 and 2013 (Annex 3). At the same time, Hong Kong Custom's data only recorded 25 kg of live HHW exports in 2011, and none in any other years.

In 2010, Malaysia applied a "zero" export quota for live HHW (Anon., 2015b). Since then, no HHW trade has been reported by Malaysia or any importing countries/territories.

## Humphead Wrasse trade in Hong Kong (market surveys)

Four markets, three retail and one wholesale<sup>13</sup>, in Hong Kong were visited to survey and understand the availability, origin and demand for live HHW (Fig. 1). Seventy-three<sup>14</sup> live HHW were observed in holding aquariums in 17 restaurants and stores in the three retail markets. At least one live HHW was also observed in the wholesale market. Hong Kong only records the import, re-export and landing of HHW, but has no statistics on the sale of HHW in the domestic market.

Two wholesalers and 17 retailers were interviewed (see Annex 5). Wholesalers and retailers of live HHW in Hong Kong require possession licences issued by the AFCD for selling HHW legally. Although these licence holders have to record their HHW sales within three days of their business transactions, there is no requirement to pass on those records to the AFCD. Licenced merchants are required to display their possession licences in a conspicuous position in the keeping premises or a place specified by the AFCD officers (AFCD, *in litt.* to Joyce Wu, December 2015). One trader claimed that HHW imported into Hong Kong is only about 10% of the volume imported 10 years ago. Interviewees in Hong Kong claimed that demand for HHW had significantly reduced by around 70-90% following the launch of the anti-corruption policy<sup>15</sup> in mainland China. However, it is not clear how much of the demand decline in Hong Kong actually resulted from the anti-corruption policy (which focuses on government officials in mainland China). One restaurant owner in Hong Kong claimed that 10-20% of LRFF imported into Hong Kong were HHW. One wholesaler claimed that fewer than ten importers in Hong Kong are involved in HHW import and that consumers in Hong Kong prefer HHW 600 g in size, whereas consumers in Taiwan prefer their HHW 500 g in size. This small size preference could be attributed to the price consumers' are willing to spend on HHW dishes.

13 One wholesale market in Aberdeen and three retail markets in Lei Yue Mun, Sai Kung and Tuen Mun.

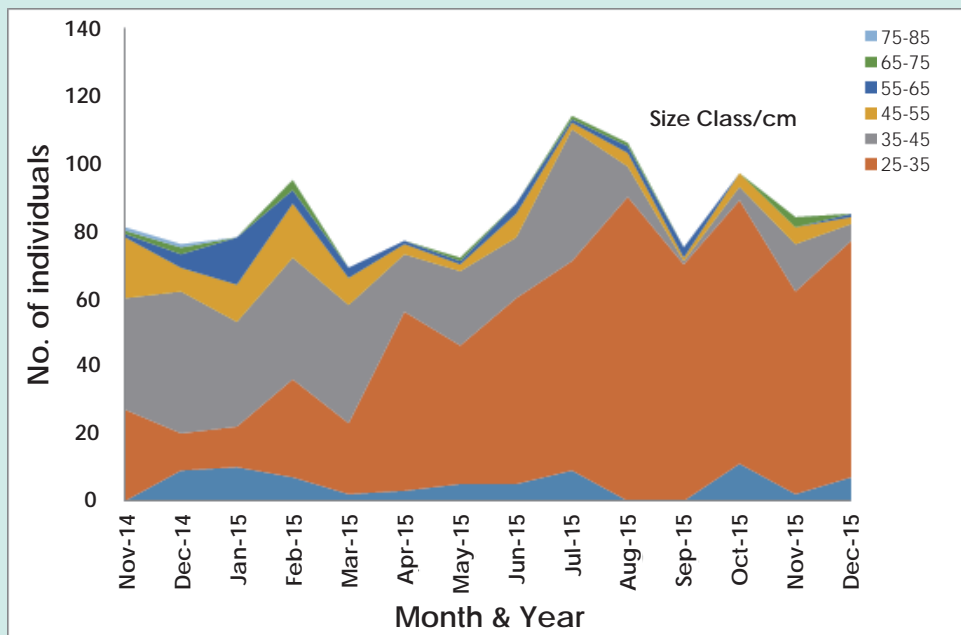
14 A monthly market counting conducted by Hong Kong University observed 69 to 96 live HHW available in three main retailing seafood markets in Hong Kong from November 2014 to March 2015, with a peak in February 2015.

15 Anti-corruption measures were launched in mainland China at the end of 2012.

The retail price of live HHW in three main seafood markets was HKD930–960 per Hong Kong catty (600 g) (USD200–206/kg)<sup>16</sup>. More would be charged, dependent on the weight of the seafood, for dish preparation in nearby restaurants.

#### Box 6.

A monthly retail market survey on the available number of live HHW was conducted by Hong Kong University from November 2014 until December 2015. The survey noted 1,197 live HHW available in the three main retailing seafood markets in Hong Kong from November 2014 to December 2015, inclusive. The 73 live HHW observed during the researchers' market surveys fall within the range observed by Hong Kong University. The great majority of fish on retail sale are in the 25–35 cm size range which are sexually immature fish.



The number of live HHW observed in November and December 2014 alone was 157 tails. This exceeded the import quantity (150) recorded and provided by AFCD to TRAFFIC (Annex 3). In 2014, Hong Kong also re-exported one live HHW meaning only 149 could have been legally available that year. Given the monthly market counting only began in November 2014, the number of live HHW available from earlier months is likely to be significantly higher than 157. This finding provides important evidence that illegal import of live HHW into the Hong Kong market has taken place. Moreover, from January to December 2015 no HHW were legally imported into Hong Kong according to AFCD. The AFCD is encouraged to inspect retail markets more frequently and holders of possession licences should be encouraged to report all their transaction records to AFCD. Market inspections and reporting by licence holders should be linked to the approved import quantity to understand the regulation compliance of traders in different points of the trade chain and increase the effectiveness of CITES species trade management. The survey is conducted monthly in order to avoid double counting, since individual fish on sale tend not to stay longer than around 2 weeks in tanks (Sadovy de Mitcheson, 2016, unpublished data).

16 Average exchange rate in April 2015 was 1 HKD = 0.1290 USD (1 USD = 7.7509 HKD).

## Humphead Wrasse trade in Shenzhen (market surveys)

A seafood street along the coast in Yantian, Shenzhen was visited twice in May and June 2015. The same seven seafood restaurants were visited during both visits; only one live HHW was observed during the second visit, which staff from the restaurant claimed originated from Malaysia and was on sale for CNY598 per Chinese catty (500 g) (USD195/kg<sup>17</sup>).

Offers of HHW and their unit prices were observed on the wall or fish holding aquariums in three restaurants. Staff from the restaurants claimed that HHW could be obtained even if they were not on display. One restaurant charged CNY888 per Chinese catty (USD286/kg) for HHW, the waiter claiming the fish was about 1.5 Chinese catty (750g) in weight. Another restaurant offered smaller HHW costing CNY388 per Chinese catty (USD125/kg). Staff in another restaurant did not provide clear information about the source of HHW. It is possible that restaurant staff were less knowledgeable than those in Hong Kong or were reluctant to talk about the HHW trade.

The seafood wholesale market in Yantian was dark inside and looked more like a warehouse than a business transaction place. Three uniformed security guards stationed outside. Live fish holding aquariums loaded with many red-coloured and some black-coloured Leopard Coral Groupers *Plectropomus leopardus* could be seen and appeared to be in much better condition than fish observed in the restaurants. According to the security guards they originated from Southeast Asia, but they did not know which country and they were unable or unwilling to answer questions raised by the researchers. No wholesaler, importer or exporter was interviewed.

Several speedboats containing live fish were observed arriving at a pier located within a security area close to the wholesale market and restaurants, to offload fish into plastic tanks (Fig. 2). No HHW were observed being offloaded but on one occasion an empty speedboat arrived to take live groupers from Yantian.

### Box 7.

Although there was only one live HHW observed in the Yantian seafood restaurants, the price lists on the walls of restaurants suggest that HHW is readily available there.

At least around 300 live HHW were found in Beijing, Shanghai, Fujian, Guangdong and Hainan according to a snapshot market survey conducted between January and February 2013 (Liu, 2013). Traders from many of the markets visited in 2013 claimed that live HHW arrive regularly. It seems that live HHW were available on the physical and/or e-commerce markets in mainland China, even though legal CITES import was never approved. Taking the low levels of HHW availability in the South China Sea into account, this raises questions about the legality of these HHW.

<sup>17</sup> Average exchange rate from April to June, 2015 was 1 CNY = 0.1633 USD (1 USD = 6.0901 CNY).

## Humphead Wrasse trade through e-commerce

Four major e-commerce websites were reviewed, including three Chinese language sites targeting the domestic market and one website in English targeting the international market (Table 4).

Fifteen advertisements were found with live, chilled or frozen HHW available for food or as ornamental fish (Annex 4).

Websites	Language used	Target markets	No. of adverts with HHW found (chilled and frozen, food and pet)
#1	English	global market	3
#2	Chinese	Domestic market and Chinese speakers around the world	3
#3	Chinese	Domestic market and Chinese speakers around the world	9
#4	Chinese	Domestic market and Chinese speakers around the world	0

**Table 4. HHW advertisements on e-commerce websites.**

Three companies located in Indonesia, Malaysia and the Philippines advertised in English live and frozen HHW from Indonesia and the Philippines (Fig. 3). It is not clear what quantities of HHW could be supplied by these three companies<sup>18</sup>. The Malaysian company also offered different species of frozen LRFF for sale. HHW and eels were the only two live fish supplied by the Indonesian company, the remainder of their products were frozen fish. The Philippine company only supplied three kinds of seafood, HHW, coral grouper and lobster.

The two domestic e-commerce websites identified 12 companies offering HHW (Fig. 4). These companies were located in Beijing (5), Guangzhou (3), Shanghai (2), Shenzhen (1) and Dairen (1) (Table 5). Eleven out of 12 companies provided HHW for food, and one sold it as an ornamental fish. These companies sourced HHW from Indonesia (5), the Philippines (2), Australia (1), Hainan (1) and unspecified origin (3). The companies sold live or chilled HHW based on the weight or the length of fish: the unit price ranged between RMB590 and RMB1,280 per Chinese catty (500 g) (around USD193–418 per kg). One company located in Guangzhou sold HHW from the Philippines for only RMB50 per Chinese catty (USD16/kg), which was presumably either a pricing error or the product was fake. Another company located in Guangzhou sold HHW as an ornamental fish for RMB500 (USD82) per tail. The size of HHW sold by these companies ranged from 500 g to 2.5 kg. One company located in Guangzhou claimed to source HHW from Australia and offered HHW at weights from 10 kg up to 50 kg in size<sup>19</sup>.

<sup>18</sup> Since late August, only the company from the Philippines was still searchable online, the other two companies from Indonesia and Malaysia were no longer found.

<sup>19</sup> Although the 10 kg to 50 kg figure for HHW as food is likely to be in error, in nature, HHW can grow up to 2 m and weigh up to 190 kg.

Company	Location	Origin of HHW	Price (RMB/500 g) (USD/kg)	Size of fish (g)
#1	Beijing	Unspecified	700 229	500-750
#2	Guangzhou	Australia	590-650 193-212	1,000 - >50,000
#3	Guangzhou	Philippines	50 16	650-900
#4	Beijing	Mainland China	1,280 418	600-2,500
#5	Beijing	Indonesia	780-820 255-268	NA
#6	Beijing	Philippines	680 222	750
#7	Beijing	Indonesia	979 320	1,500-2,500
#8	Shanghai	Indonesia	800 261	500-600
#9	Shanghai	Unspecified	1,000 327	NA
#10	Guangzhou	Indonesia	658 215	NA
#11	Dairen	Indonesia	800 261	1,500-2,500
#12	Guangzhou	Unspecified	500 per fish 82 per fish	30-35cm

**Table 5. Origin, price and size of HHW advertised by different companies on Chinese language e-commerce websites.**

Note: NA=not available.

#### Box 8.

The fact that five online seafood companies were located in Beijing, two in Shanghai and three in Guangzhou could indicate that markets for HHW in mainland China also exists in northern metropolitan cities and not near Hong Kong, the traditional HHW consumer market.

Although the adverts do not reveal information about the availability and sales volumes for HHW, the accompanying images, descriptions and price information, coupled with the offer for guaranteed live fish delivery in these major cities, indicates that these companies know the species well and can supply genuine products.

According to trade records held by UNEP-WCMC<sup>20</sup> as well as the regulation requirements for import and sale of HHW, all HHW available in mainland China, regardless of whether in physical or online markets, have been illegally imported. Hong Kong Customs data also suggested that no HHW have been re-exported<sup>21</sup> from Hong Kong to mainland China legally.

<sup>20</sup> China did not report the importation of any type of HHW products. Only Malaysia reported the export of 700 live HHW to China in 2007.

<sup>21</sup> Hong Kong Customs data only record 25 kg of HHW re-exported to Macau in 2011.

## The transportation of Humphead Wrasse to Hong Kong and mainland China

Hong Kong is a market with a long history of preference for LRFF (Live Reef Food Fish). A field survey in mainland China revealed that as a tariff-free port with frequent flights from source countries and a reputation for high quality products, Hong Kong remains a trade hub for LRFF trade (Shea, 2013). The same report demonstrated that a high percentage of HHW enters mainland China via Hong Kong. However, a percentage of trade is conducted on the high seas and is brought back by Chinese vessels without going through Hong Kong (Shea, 2013). Traders claimed that cost, i.e. tariff and VAT, was their main consideration for continuing to import LRFF via Hong Kong (Shea, 2013). The packing and shipping techniques and trading routes are similar for HHW to other LRFF, especially high value wild sourced groupers such as Humpback Grouper *Cromileptes altivelis* and Leopard Coral Grouper *Plectropomus leopardus*. In December 2007, the Quarantine Bureau in Guangzhou Baiyun airport seized ten boxes of unauthorized HHW smuggled in alongside 40 boxes of approved LRFF species from Malaysia (Huang, 2007). Ten boxes of HHW were confiscated and destroyed and the company was fined CNY1,000 (USD135 in December 2007<sup>22</sup>). This case revealed both, that HHW is laundered in shipments alongside other LRFF and not treated as they should be as CITES listed species, and also that at least some HHW and other LRFF are imported into mainland China without transiting Hong Kong.

### LRFF transportation from Southeast Asia to Hong Kong

According to traders in Hong Kong, LRFF are imported from Southeast Asia, such as Indonesia, Malaysia and the Philippines, or harvested by Hong Kong and Chinese flagged vessels in the South China Sea. HHW brought back by Hong Kong and mainland China flagged vessels were considered as harvest but not import. However, these areas are reported to have very few reef fish remaining as they have been heavily fished (Liu, 2013). A survey in early 2013 in Tanmen, Hainan found 25 HHW in a holding cage from a fishing village, which were accumulated from a few months harvest (Liu, 2013). At the same survey, another 50-60 HHW were also found in a holding cage from another fishing village Lingshui, Hainan. Owners of the fish claimed that these HHW were harvested several years ago.

AFCD also recorded<sup>23</sup> that the live HHW brought in by Hong Kong registered fishing vessels dated back to at least 1999. Since this is a voluntary reporting system, it is not clear how many vessels are actually reporting, and whether the CITES listing of HHW had discouraged the reporting.

Although it is unlikely that HHW brought back by Hong Kong fishing vessels were actually harvested by these vessels in Hong Kong or Chinese waters, but, instead, traded on the high sea, according to the import and (re)export data reported by AFCD (as CITES MA) to CITES Secretariat, it is obvious that AFCD did not consider such shipment as import, but rather harvest.

22 Average exchange rate in December, 2007 was CNY1=USD0.1354.

23 This data recording is a voluntary, fishing vessels do not obligated to report their carry.

Year	Weight (kg)	Year	Weight (kg)
1999	85,442	2007	7,251
2000	38,675	2008	1,191
2001	24,662	2009	0
2002	20,032	2010	0
2003	30,127	2011	0
2004	24,219	2012	0
2005	38,551	2013	0
2006	31,864	2014	0

**Table 6. HHW brought back to Hong Kong by Hong Kong registered vessels.**

Source: IUCN-GWSG.

Note: This data recording is a voluntary, fishing vessels are not obligated to report their cargo.

**Box 9.**

Hong Kong has to increase the monitoring and inspection of fishing vessels for legitimate fishing activity and harvest to differentiate genuine fishing vs purchasing fisheries products on the high sea. Hong Kong also has to implement mandatory harvest reporting to collect all fisheries data. All fish purchased on the high sea should be treated as import and recorded in Customs data, otherwise those fish should be considered as illegally acquired.

LRFF imported from elsewhere are either imported by air or by sea, depending on the exporting countries and the price of the fish. Interviews with traders revealed that most (80–90%) of LRFF exported from Malaysia and the Philippines were shipped by air, as were all those exported from Australia. However, only around 50% of LRFF from Indonesia is exported by air, the remainder is shipped by sea, according to traders.

According to traders interviewed in Hong Kong, ten years ago, only 30% of LRFF arriving in Hong Kong came by air, where it would be repackaged for re-export to mainland China. In the last seven to ten years, around 70% of imported LRFF has arrived in Hong Kong by air (although note above that sea imports are underestimated and hence the percentage by air will be lower). Currently, traders said that around 90–99% of all LRFF (legal and illegal) imported into Hong Kong, regardless of whether by air or by sea, are re-exported (legal and illegal) to mainland China for consumption. However, the import and (re)export of either HHW or other LRFF are recorded under two congregated (as opposed to species specific) Customs codes<sup>24</sup>. The estimation of HHW and other LRFF import volume is impossible based on the Custom recording code in mainland China alone.

Repackaging for re-export from Hong Kong has decreased in the past decade because of better sorting and packaging practices in source countries. LRFF are packaged in plastic bags with water and air and put in Styrofoam boxes for shipping and simple transit by land and sea to mainland China without the need for repackaging in Hong Kong.

According to the AFCD, in the past five years, only one case of illegal trade in live HHW has been detected and enforced in Hong Kong, in 2010. A shipment of 53 live HHW from Indonesia was found with only a valid export permit for 50 fish. Three fish were seized and the remainder was allowed to be imported.

<sup>24</sup> Trade via legal channels into China will be recorded in Customs data (0301999990, other live fish or 0301991090, other young live fish).

**Box 10.**

One trader claimed that in general import prices for LRFF have remained stable, but the volume has dropped a little following the launch of an anti-corruption policy in mainland China in December 2012.

**LRFF transportation from Hong Kong to mainland China**

An earlier survey concluded that LRFF re-export from Hong Kong to mainland China were all shipped by sea (Shea, 2013). According to traders in Hong Kong, LRFF are transported by truck from Hong Kong airport to standby locations close to the border with Shenzhen. After arriving there, during the warmer seasons, such as after May, depending on their condition, some fish are loaded into tanks on speedboats and carried to Shenzhen. Other LRFF are put into cages for a short time to recover from their long journeys or to allow a larger shipment to accumulate. During the winter, when the local sea temperature is colder than HHW and other LRFF can tolerate, the fish are repackaged into plastic bags and Styrofoam boxes for shipping. LRFF are shipped from Lau Fau Shan (流浮山) and Crooked Island (吉奥) in Hong Kong to Shekou (蛇口) and Yantian (盐田) in mainland China, respectively. It takes 5–15 minutes for speedboats to make the crossing from Crooked Island to Yantian.

Live fish shipped by speedboats, probably from Crooked Island, Hong Kong, were observed several times by the researchers in Yantian. However, no HHW were seen, although it is likely they are also transported along this route on occasion. The Golden Coast Pier of Yantian is located across the road from the seafood wholesale market and the seafood restaurants inside a small restricted area guarded by China Marine Surveillance. Workers used trolleys to collect the live fishes offloaded from the speedboats. No inspection of the products or any documentation apparently took place during this process and it is unclear if such activities were considered legal.

According to traders in Hong Kong the high import tariff and VAT in mainland China, especially for high value species such as LRFF, including HHW<sup>25</sup>, Coral Grouper and Humpback Grouper<sup>26</sup>, makes illegal importation an attractive option. The significant import requirements and the uncertainty of gaining official approval for importation were also reasons given for the high frequency of illegal trade in live LRFF.

**Box 11.**

Hong Kong Customs data and UNEP-WCMC CITES trade data reported by both Hong Kong and mainland China indicated no legal HHW trade of any kind between Hong Kong and mainland China. This information matches the traders' assertions about the disincentives for legal importation caused by the high tariff, VAT and document requirements and indicates that illegal shipping of HHW from Hong Kong to mainland China regularly takes place following legal importation into Hong Kong, where tariffs and VAT costs are lower.

<sup>25</sup> 23.5% of import tariff and VAT for live endangered fish, such as HHW.

<sup>26</sup> 13% of VAT for other live fish.

## DISCUSSION AND CONCLUSIONS

### **Legislation and enforcement assessment in Hong Kong and mainland China**

In terms of legal requirements for import and re-export of HHW, a CITES Appendix II species, Hong Kong and mainland China have complied with CITES regulations. Valid export permits issued by exporting countries are required for legally importing HHW, while Hong Kong and mainland China both additionally require traders to apply for import certifications for live CITES-listed species, which is a stricter regulation than CITES requirements. As a major consumer market, Hong Kong also requires all commercial traders/sellers of HHW to have a possession licence, regardless of whether the fish are alive or dead. The authorities do not have sufficient dedicated resources to monitor and enforce this in a sufficient frequency. Premises also have to record the sale of any HHW within three days of a business transaction. Unfortunately, there is no requirement for these records to be reported back to the AFCD or for their verification against import quantities. Presumably the AFCD considered that no premises would document illegal sales, nevertheless the insufficient patrolling and inspection of markets provide opportunities for illegal trading to occur.

Based on market monitoring in Shenzhen and on e-commerce sites, HHW are available in both physical and online seafood markets in mainland China. This finding is in contradiction to the UNEP-WCMC CITES species trade database which includes no records of permitted legal importation of HHW into mainland China since the CITES listing came into force in 2005.

Species identification of individual HHW does not appear to be a challenge for enforcement officials in Hong Kong and mainland China. However, it might be a challenge to identify HHW within a group of LRFF in large shipments. There appears to be insufficient inspection and detection capacity of HHW smuggling into mainland China from Hong Kong with focus on “high risk” shipments according to received intelligence. Furthermore, domestic market monitoring in Hong Kong found more HHW available for sale in 2014 than had been legally imported and recorded by AFCD.

Although a limited number of enforcement actions have taken place against illegal importation of HHW in mainland China, relevant authorities admitted that their resources to patrol and monitor HHW markets is low.

### **Market demand control**

HHW is a naturally rare species that cannot sustain high fishing pressure. Some market demand for HHW persists in Hong Kong and mainland China and authorities need to recognize that market supply must not exceed the legal supply. Some traders claimed that demand in Hong Kong has significantly reduced consumption (by 70–90%) following the implementation of an anti-corruption policy in mainland China (at the end of 2012), at least in part because many consumers in Hong Kong are tourists from mainland China (according to traders in Hong Kong). However, it is not clear how much of the demand decline in Hong Kong actually resulted from the anti-corruption policy (which focuses on government officials in mainland China). Even so, the demand is still higher than the level of legal supply. It is possible that consumers are not aware of or are not concerned about the conservation status or legislation regarding HHW.

### **Cross border shipments between Hong Kong and mainland China**

Although no direct evidence was witnessed for HHW being illegally shipped from Hong Kong to Shenzhen, it is highly likely to be happening given the availability of HHW in mainland China. According to traders, high import tariffs, VAT and challenges in obtaining legal documents were the reasons for the illegal trade of live fish from Hong Kong to mainland China. Mainland China has never issued any CITES import permits for HHW, so fish in the market might be illegally sourced, either via Hong Kong or direct from source countries.

To summarize, three different methods are known to have been utilized for smuggling HHW to mainland China: laundering of HHW within a legal shipment of other LRFF species—a high-risk strategy given shipments are regularly inspected; trans-shipment at sea—probably a low-risk option but one requiring considerable cost and effort; smuggling through a transit hub following legal importation elsewhere, such as Hong Kong—probably the most favoured option currently employed.

#### **Fisheries regulations and enforcement of HHW trade in Hong Kong and mainland China**

Although fisheries regulations exist, there is no information on the actual number of licences issued, harvest practices employed and verification of quantities harvested. It is unclear whether HHW are being harvested at sustainable levels or if mainland China and Hong Kong flagged vessels are harvesting HHW in territorial waters in the South China Sea as claimed by traders interviewed in Hong Kong. Hainan Fishery Agency claimed HHW might be harvested by Chinese flagged vessels but no further information was available and this seems unlikely to produce many HHW as the region is strongly overfished. A survey in February 2013 found up to 85 HHW in holding cages from fishing villages in Hainan (Liu, 2013). It is not clear if these HHW were actually harvested by Chinese flagged vessels or purchased on the high sea. It is very important that relevant authorities record this trade or harvest to correctly document the off take of HHW from wild populations for the matter of population and resource management.

##### **Box 12.**

Since there is a possibility that HHW are traded on the high sea and brought back to Hong Kong and mainland China, it is important for the relevant authorities in Hong Kong and mainland China to verify whether any HHW landed have been harvested by Hong Kong and Chinese vessels or purchased on the high sea. Verification should include checks on any fishing licences granted, whether the fishermen possess relevant fishing skills for HHW and whether fishing took place in the designated area. Every vessel should be checked before departure for valid licence and again when landing their fishes.

## RECOMMENDATIONS

In light of the fact that illegal sale of HHW, in both physical and online seafood markets, was observed in Hong Kong and mainland China despite the existence of adequate regulations, a monitoring scheme needs to be developed to ensure the appropriate legislation is being adhered to.

The following recommendations are made to HHW stakeholders in Hong Kong and mainland China:

For HHW from source countries:

- The responsible authorities in Hong Kong and mainland China should enhance awareness of all regulations and species identification issues for all relevant authorities (including Customs, quarantine, marine police, aquatic management officials as well as industry and commerce officials) and the industry about HHW trade in relation to the CITES compliance.
- The intensity and frequency of import monitoring of mixed LRFF boxes or shipments needs to be increased.
- Information on export regulations and annual export quotas of the main HHW exporters, such as Indonesia and Malaysia, should be made public and accessible to the industry, relevant authorities and others in the main markets, such as mainland China and Hong Kong.
- The relevant authorities in Hong Kong and mainland China should liaise with their counterparts in source countries (such as Indonesia and Malaysia) over every seizure case and ensure all relevant trade is reported to the CITES Secretariat.

For HHW available in domestic markets in Hong Kong and mainland China:

- Information on legal import quantities and the need for possession licences for legal sales should be communicated to the industry and general public to increase regulation compliance and reporting of any in-compliance.
- Domestic sales information on possession licence holders' recording sheets should be collected and analysed by AFCD to understand the scale of trade and whether illegal trade is occurring or not.
- Licences of HHW legal possession should be posted in a visible location. AFCD also has to consider whether to change the quota stated on the possession licence for those seafood shops since the current quota on the licence only records the number of fish that can be held at any one time, not the number of HHW retail outlets can have to the validity of the licence.
- Patrolling of domestic markets/high-end restaurants/hotels should be increased to verify if any illegally traded HHW are available. The patrolling is especially recommended during seasons of high demand, such as the Chinese New Year holiday, wedding and tourist seasons' The authorities should ensure that every HHW available in the market is clearly of legal origin.

For the HHW shipment between Hong Kong and mainland China:

- Hong Kong should monitor and report re-exports of HHW to mainland China as part of the official CITES database for trade. Hong Kong should also check with the CITES Secretariat on the data discrepancy of its HHW re-export data. Authorities should co-operate to ensure the legality of live fish transportation.

For the HHW arriving by fishing vessels in Hong Kong and mainland China:

- Authorities need to inspect the fishing vessels for the legality of harvest for HHW, and to record all HHW carried by the vessels in import or harvest statistics.

## REFERENCES

- Anon. (1986). *The Law of the People's Republic of China on the Fisheries* 《中华人民共和国渔业法》. <http://www.cites.gov.cn/ShowIndex/ShowNews.aspx?sort=t4&id=25>.
- Anon. (1989). *The Law of the People's Republic of China on the Protection of Wildlife* 《中华人民共和国野生动物保护法》. <http://www.cites.gov.cn/ShowIndex/ShowNews.aspx?sort=t4&id=23>.
- Anon. (1993). *The Law of the People's Republic of China on the Protection of Aquatic Wildlife* 《中华人民共和国水生野生动物保护实施条例》. <http://www.cites.gov.cn/ShowIndex/ShowNews.aspx?sort=t4&id=21>.
- Anon. (2006). *The Law of the People's Republic of China on the Import and Export of Endangered Wildlife* 《中华人民共和国濒危野生动植物进出口管理条例》. <http://www.cites.gov.cn/ShowIndex/ShowNews.aspx?sort=t4&id=13>.
- Anon. (2010). The first enforcement of illegal sale of Humphead Wrasse in Beijing. 28 June. China Fisheries Management. [http://www.moa.gov.cn/sjzz/yzjzw/sybhyzj/zfsybh/201006/t20100628\\_2681011.htm](http://www.moa.gov.cn/sjzz/yzjzw/sybhyzj/zfsybh/201006/t20100628_2681011.htm).
- Anon. (2015a). List of countries on MFN status. <http://www.qgtong.com/cxgj/bgdtzbgzdhdmb/bgzdsm/gbdqd/201112/32394.html>. Viewed 15th May.
- Anon. (2015b). CITES national export quotas for 2010. <https://cites.org/sites/default/files/common/quotas/2010/ExportQuotas2010.pdf>. Viewed 20th May.
- Anon. (2015c). *Cheilinus undulatus*. <http://www.iucnredlist.org/details/4592/0>. Viewed 30th May.
- Anon. (2015d). The CITES export quota. <http://www.cites.org/eng/resources/quotas/index.php>. Viewed 20th May.
- Anon. (2015e). The import tariff for other endangered live fish. <http://www.qgtong.com/hgsz/ShowArticle.asp?ArticleID=11867&Keyword=&page=2>. Viewed 10th May.
- Bentley, N. (1999). *Fishing for Solutions: Can the live trade in wild groupers and wrasses from Southeast Asia be managed?*. TRAFFIC Southeast Asia, Petaling Jaya, Malaysia. <https://www.cites.org/sites/default/files/common/com/ac/22/EFS-AC22-Inf05.pdf>.
- CITES AC22-Inf05. (2006). Development of fisheries management tools for trade in humphead wrasse, *Cheilinus undulatus*, in compliance with Article IV of CITES. <https://www.cites.org/sites/default/files/common/com/ac/22/EFS-AC22-Inf05.pdf>.
- CITES CoP15 Doc.51 (2010). *Humphead wrasse: additional management measures needed to combat IUU fishing*. <https://www.cites.org/sites/default/files/eng/cop/15/doc/E15-51.pdf>.
- Clarke, S. (2002). The trade in Asian Dried Seafood: Characterization, Estimation and Implications for Conservation. WCS Working Paper No. 22. <http://intranet-staging.wcs.org/Resources/Library/~media/Files/Departments/WCS%20Institute/wcswp22.pdf.ashx>.
- Gillett, R. (2010). Monitoring and management of the humphead wrasse, *Cheilinus undulatus*. *FAO Fisheries and Aquaculture Circular*. No. 1048. Rome, FAO. 2010. 62p. <http://www.fao.org/docrep/013/i1707e/i1707e00.pdf>.
- Huang, X.D. (2007). Intercepted the illegally imported Humphead Wrasse. *Sina News*. 19 December. <http://news.sina.com.cn/o/20071219/063013105131s.shtml>.
- Liu M. (2013). *Trade of the HHW in mainland China*. Field Report.
- Sadovy, Y., Kulbicki, M., Labrosse, P., Letourneur, Y., Lokani, P. and Donaldson, T.J. (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. Netherlands. <http://link.springer.com/article/10.1023%2FB%3ARFBF.0000033122.90679.97#/page-1>.
- Sadovy de Mitcheson, Y. (2016). *Results of monthly survey on numbers and sizes of live Napoleon (=Humphead) wrasse, Cheilinus undulatus, on retail sale in Hong Kong (November 2014-December 2015)*. IUCN Species Survival Commission Groupers & Wrasses Specialist Group. Unpublished report.
- Shea, S. (2013). *LRFF trade in mainland China*. Field Report.

# ANNEX

Year	derivatives		Live							meat		Specimens	Total
	ID	MY	AU	ID	JP	MY	NL	PG	SG	MY	SB	PG	
2005 <sup>27</sup>			17	5,230					2			9,900 kg	9,900 kg + 5,249
2006 <sup>28</sup>			41			1							42
2007			1	6,228		17,300		350					23,879
2008			15	3,809		21,500							25,324
2009		66	2	4,220	1					26,290			30,579
2010 <sup>29</sup>			4	3,810	5						679.1 kg		679.1 kg + 3,819
2011	100			2,710			3						2,813
2012			29	1,643	2		2						1,676
2013					5								5
Exporter total	100	66	109	27,650	13	38,801	5	350	2	26,290	679 kg	9,900 kg	10,579.1 kg + 93,386
Product total	166					66,930				679 kg + 26,290		9,900 kg	10,579.1 kg + 93,386

**Annex 1. Exporter reported HHW annual export quantities for different types of specimens (unspecified units, except those in kg).**

Source: UNEP-WCMC, 2005-2013.

Note: AU: Australia; ID: Indonesia; JP: Japan; MY: Malaysia; NL: Netherlands; PG: Papua New Guinea; SB: Solomon Island; SG: Singapore.

<sup>27</sup> Enactment of CITES Appendix II on 12th January 2005.

<sup>28</sup> Indonesia has implemented export quotas for live HHW since 2006.

<sup>29</sup> Malaysia has implemented “zero” export quotas for live HHW since 2010.

	bodies	live											meat	Total
Year	US	AE	DE	GB	HK	JP	KR	NL	SG	TH	TR	US	AU	
2005										2		10		12
2006 <sup>30</sup>					864	43						2		909
2007			1		20,428				200			6		20,635
2008		12			18,811				100			2		18,925
2009					16,850				320			6		17,176
2010					2,958		5	3	330			1	599.2 kg	599.2 kg + 3,297
2011	3		1	1	1,120		2	3	485		3			1,618
2012 <sup>31</sup>					1,403		9	4	253		1	4		1,674
2013		2		1	558				22					583
Exporter total	3	14	2	2	62,992	43	16	10	1,710	2	4	31	599.2 kg	599.2 kg + 64,829
Product total	3	64,826											599.2 kg	599.2 kg + 64,829

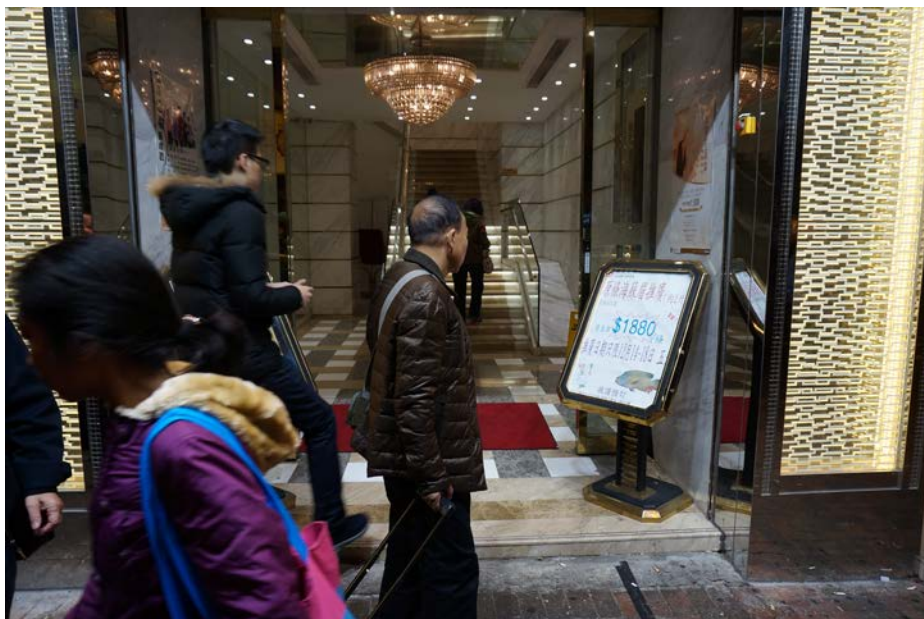
**Annex 2. Importer reported HHW annual import quantities for different types of specimens (unspecified units, except those in kg).**

Source: UNEP-WCMC, 2005-2013.

Note: AE: United Arab Emirates; AU: Australia; DE: Germany; GB: United Kingdom; HK: Hong Kong SAR; KR: Korea Republic; JP: Japan; NL: Netherlands; SG: Singapore; TH: Thailand; TR: Turkey; US: United States.

<sup>30</sup> Hong Kong has implemented CITES trade regulations since 1st December 2006.

<sup>31</sup> Anti-corruption policy launched in mainland China at the end of 2012.



© Yvonne Sadovy de Mitcheson

Man looking at signpost outside Hong Kong restaurant advertising special Napoleon fish offer for 2015 Christmas holiday season.

Year	Hong Kong import			Hong Kong re-export		
	UNEP-WCMC importer reported data (no specified unit)	AFCD data** (tail)	Customs data (kg)	UNEP-WCMC exporter reported data (no specified unit)	AFCD data** (tail)	Customs data (kg)
2006	864	832	11,870	0	435	0
2007	20,428	20,447	1,969	0	3,466	0
2008	18,811	18,811	7,775	0	0	0
2009	16,850	16,884	2,626	0	0	0
2010	2,958	2,958	0	0	36	0
2011	1,120	1,120	0	0	31	25
2012	1,403	1,403	0	0	0	0
2013	558	558	0	0	32	0
2014	NA*	150	0	NA*	1	0

**Annex 3. Number/weight of live HHW imports to and re-exports from Hong Kong, 2006 to 2014.**

Source: UNEP-WCMC, AFCD and CSD (Census and Statistics Department).

Note: \* data for 2014 not yet available from UNEP-WCMC.

\*\* Numbers of live HHW, recorded and provided by AFCD, imported to and re-exported from Hong Kong between 2006 and 2014.

Those numbers in italics indicated trade records of UNEP-WCMC and AFCD were inconsistent.

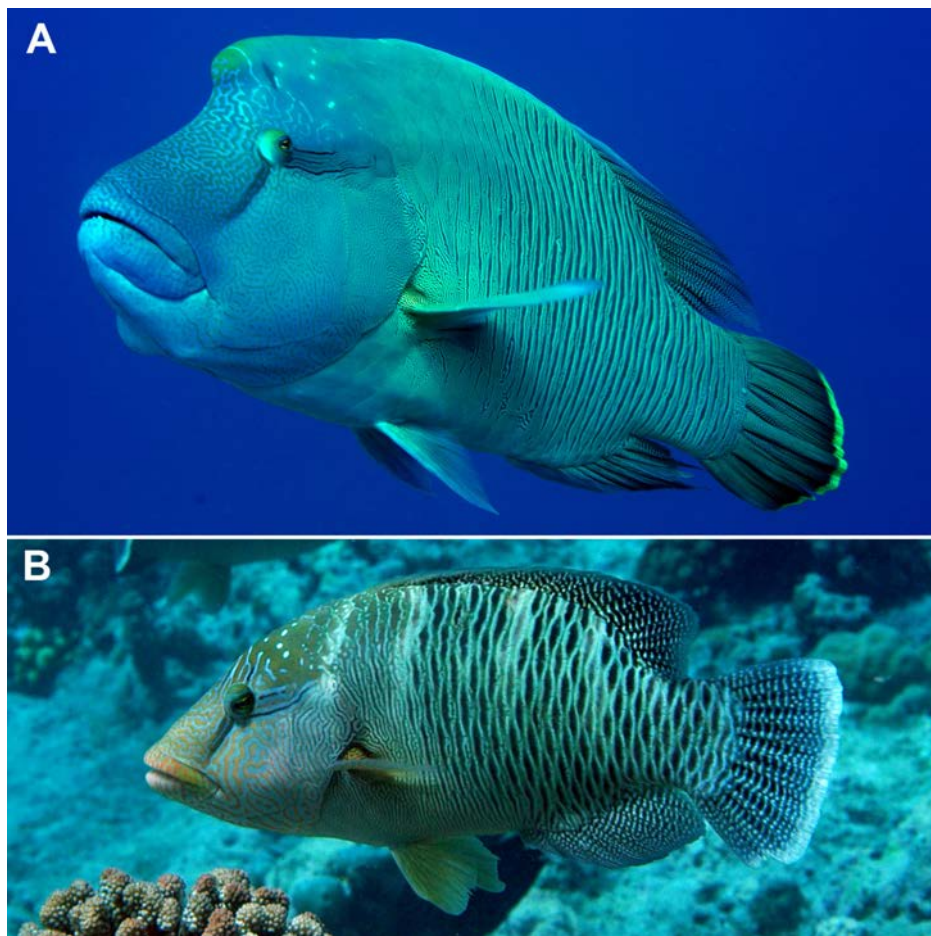
Company Name	HHW products	Minimum order	Company Profiles
A	frozen, vacuum packed HHW from Kalimantan, Timur, Indonesia	Min. Order: 28 t (same for all frozen seafood from this company) supply ability: 1 t per day	Business Type: Manufacturer, Trading Company Main Products: halal meat, seafood, perfume, general consumer items, kayu gaharu Location: Selangor, Malaysia Year Established: 2012
P	live HHW from Riau, Indonesia	FOB Price: US \$1-2/Kg Get Latest Price Min. Order Quantity: 1 twenty-ft. Container (standard for this company) Supply Ability: 50 t/month Port: Bitung (Makassar)	Business Type: Manufacturer Main Products: frozen fish, fishery Location: Jakarta Raya, Indonesia Year Established: 2011
F	Mindanao, Philippines	FOB Price: Get Latest Price Min. Order Quantity: 100kg per kind Supply Ability: 2 t per month Port: Manila	Business Type: Distributor/Wholesaler Main Products: We are selling wrasse humphead, coconut crab, seaweed, tiger lobster, green lobster, red lobster. Location: Mindanao, Philippines Year Established: 2004
# 1	RMB 700/500 g 500-750 g per tail	> 3 Chinese catties (=1.5 kg)	A 30 year experienced seafood wholesaler in Beijing. trading company, commodities include seafood, vegetables, fruits, textile, clothes etc.
# 2	RMB 650/kg for 1-9 kg RMB 600/kg for 10-49 kg RMB 590/kg for >=50 kg live, wild, from AU	NA	Business Type: Wholesaler (air shipment supply to hotels/restaurants throughout mainland China) Main Products: freshwater and seafood Established on 2014/May/22 located in Guangzhou
# 3	RMB 50/500 g 650-900 g per tail sourced from Philippines	NA	a seafood importer with 12 years' experience, located in Shenzhen

Company Name	HHW products	Minimum order	Company Profiles
# 4	RMB1280/500 g (600-2500 g per tail) wild sourced from Hainan	NA	seafood wholesale/retail
# 5	RMB780-820/500 g live/chilled wild HHW from Indonesia	NA	seafood wholesale/retail
# 6	RMB680/500 g (750 g per tail) live/chilled wild HHW from Philippines	NA	seafood wholesale/retail
# 7	RMB979/500 g (1.5-2 kg per tail) from Indonesia	NA	seafood wholesale/retail
# 8	RMB800/500 g (500-600 g per tail) from Indonesia HHW arrived SH from ID at the same day, deliver twice weekly	NA	seafood wholesale/retail
# 9	RMB1000/500 g	NA	seafood wholesale/retail
# 10	RMB658/500 g sourced from Indonesia, deliver once per week	NA	seafood wholesale/retail
# 11	RMB800/500 g for chilled RMB1200/500 g for live HHW sourced from Indonesia 1.5-2.5 kg per fish	NA	seafood wholesale/retail
# 12	RMB500 (30-35 cm?)	NA	ornamental fish retailer

**Annex 4. Fifteen advertisements for HHW found on three e-commerce sites in June 2015.**

**Annex 5. Questionnaire for HHW market survey in Hong Kong and Shenzhen.**

- Do you have HHW?
- How much does it cost?
- How large of the fish by weight?
- Where does the fish come from?
- When does the fish arrive?
- Who are the main consumers, local people or mainlanders?
- How's the price change, before and after anti-corruption policy launch?
- How's the demand change, before and after anti-corruption policy launch?
- Are there fish re-exported to China from HK?
- How does the fish been shipped to HK and China?
- How does the fish be packed?
- What are the requirement to import and re-export and sale HHW to and from Hong Kong?
- What are the regulation for import HHW to China?
- What are the requirement to sale HHW?



A: adult HHW

B: juvenile HHW—typical retail size of species for the live reef fish restaurant market.



Figure 1. Seafood markets, departure and arrival locations for speedboats transporting live fish between Hong Kong and Shenzhen.



Figure 2. Live fish offloaded onto trollies from a speedboat in Yantian, Shenzhen, China.

2015/6/17

Wrasse Humphead Lobster Seaweed - Buy Aquatic Product Product on

[Sign In](#) | [Join Free](#)

[For Buyers](#)
[For Suppliers](#)
[Help](#)
[Trade Assurance](#)

Products

What are you looking for...


Search

Get Quotations

About 1 results: Seaweed (1)

Home > Products > Food & Beverage > Seafood > Seaweed (16605)

Multi Language Sites



See larger image

Wrasse Humphead Lobster Seaweed

FOB Price:

Get Latest Price

Min. Order Quantity:

100 kgs per kind

Supply Ability:

2 tons per month

Port:

Manila

Payment Terms:

CASH

Quantity

1

Acre/Acres

Please write your requirement here.

☐ Recommend matching suppliers if this supplier doesn't contact me on Message Center within 24 hours.

☒ I agree to share my Business Card to the supplier

Contact supplier

Leave Messages

Add to Inquiry Cart

Add to My Favorites

Unverified Supplier -

RESOURCES COMPANY

Philippines | Contact Details

Experience:


Established 2004

Not exactly what you want?


1 request, multiple quotations

Get Quotations Now >>


You May Like:



Dried Fish, Live Crabs, Lobster and Live Fish  
 Other 100 - 550 / Kilogram  
 1 Metric



Mud Crabs Sea Cucumber Octopus And



lobster  
 10 Box/Boxes

Product Details

Company Profile

Report Suspicious Activity

Quick Details

Product Type:

Seaweed

Place of Origin:

Mindanao Philippines

Brand Name:

Live Aquatic Product

Model Number:

live marine product

Specifications

Wrasse Humphead

good size (0.5 kg - 1.0 kgs)

over size (1.1 kgs - 3.0 kgs)

Coral Grouper L

Wrasse Humphead

good size (0.5 kg - 1.0 kgs)

over size (1.1 kgs - 3.0 kgs)

Coral Grouper Leopardo

good size (0.5 kg - 1.0 kgs)

over size (1.1 kgs - 3.0 kgs)

Lobster

good size (0.5 kg - 1.0 kgs)

Not exactly what you want? 1 request, multiple quotations

Get Quotations Now >>

Send your message to this supplier

To: X Y

\*Message:

[http://www.Wrasse-Humphead-Lobster-Seaweed\\_11002817.html](http://www.Wrasse-Humphead-Lobster-Seaweed_11002817.html)

1/3

Figure 3. HHW advertisement posted by a Philippine company.

32 TRAFFIC report: *Humphead (Napoleon) Wrasse* *Cheilinus undulatus* trade into and through Hong Kong



TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

For further information contact:

TRAFFIC

East Asia Regional Office

c/o WWF Hong Kong

15/F, Manhattan Centre 8 Kwai Cheong Road

Kwai Chung N.T. Hong Kong, SAR.

Telephone: (852) 2161-9686

E-mail: [traffic.eastasia@traffic.org](mailto:traffic.eastasia@traffic.org)

Website: [www.traffic.org](http://www.traffic.org)

*UK Registered Charity No. 1076722,  
Registered Limited Company No. 3785518.*

