



White Paper

Fishery : Snapper and Grouper (Makassar Strait, Flores Sea and Banda Sea)
Country : Indonesia

Purpose: The purpose of this whitepaper is to engage buyers, their suppliers, and other potential participants or supporters in improving the snapper and grouper fishery. It has been developed as preparation for a possible Fishery Improvement Project (FIP). The paper states problems in the fishery as related to sustainability and proposes solutions to address the problems identified.

1. Overview

1.1. Identification of the fishery

Snapper (or kakap merah or “*bambangan*”) is part of the family Lutjanidae. Three species of snapper (*Lutjanus malabaricus*, *L. erythropterus*, and *Pristipomoides multidens* (locally known as “*kurisi*” or “*anggoli*”) are the most economically important fish for export from Indonesia. In term of grouper, there are at least five species listed in the capture fisheries statistics, i.e. bluelined sea bass (*Cephalopholis boenak*), humpback grouper (*Cromileptes altivelis*), honeycomb grouper (*Epinephelus merra*), greasy rockcod (*Epinephelus tauvina*), and leopard coral grouper (*Plectropomus leopardus*) [MMAF 2012].

The species are found throughout Southeast Asia and Western Central Pacific. The species inhabits both coastal and offshore reefs with depth range from about 12 to 100 m. Large aggregations are often observed around coral reefs, rocky areas, estuaries, and mangrove habitats but also in the steep slope waters. The Indonesian snapper fishery covers vast areas of the archipelago from North Sumatra to West Papua (the Indonesian portion of New Guinea).

Total landing of snapper in Indonesia was 118,648 tonnes in 2011, with Maluku-Papua region being the major fishing grounds for this species, contributing 39 percent of the total catch, followed by South Sulawesi region (11%), East Sumatra and North Java regions (10% each). Meanwhile, total landing of grouper in Indonesia reached 75,252 tonnes in 2011, with South Sulawesi region contribute the biggest portion with 14.4%, followed by Maluku and Papua region (14.2%), Bali and Nusa Tenggara (13.6%) and West Sumatra (12%) [MMAF, 2011].

Snapper and grouper from South Sulawesi mainly consist of small-scale fisheries, using fishing boats from 3 GT to 5 GT and fishing on the shallow and deeper reefs to 100 m depth. Fishing gears are handline, hooks and lines, bottom long line and set and drift gillnet. Small-scale fishers are operating on a daily basis to more than 10 days per fishing trip. Fishing ground of snapper fishery in South Sulawesi covers the areas in Fishery Management Area 713 (Makassar Strait and Flores Sea) and Fishery Management Area 714 (Banda Sea).

1.2 Current and historical catch/landings numbers over time

Total landing of snapper and grouper in Indonesia shows the steady growth until 2011 – Table 1 and 2.



Table 1. Total landings of snapper in Indonesia over years

Year	2005	2006	2007	2008	2009	2010	2011
Production (tonnes)	97,044	109,312	116,994	109,299	115,523	123,827	118,608

Source: MMAF 2012

Table 2. Total landings of grouper in Indonesia (2005 – 2011)

Year	2005	2006	2007	2008	2009	2010	2011
Volume (tonnes)	45,856	50,189	61,763	57,913	74,040	73,135	74,059

Source: MMAF (2012)

South Sulawesi region has been the important region for both snapper and grouper production in Indonesia. Total landing for snapper from South Sulawesi region reached 12,955 tonnes in 2011, where South Sulawesi Province contributed the biggest portion with 65%, followed by Southeast Sulawesi (26%). South Sulawesi Province also contributed the biggest portion of total grouper landing from South Sulawesi region, with 65%, followed by Southeast Sulawesi with 32% (MMAF 2012).

In South Sulawesi Province, statistical production data from 2007 to 2011 showed the steady increase of snapper production every year, with a sharp increase from 5818 tonnes in 2010 to 8237 tonnes in 2011.

Table 3. Snapper Production in South Sulawesi Province (in tonnes)

Year	2007	2008	2009	2010	2011
Snapper (tonnes)	4,200	4,495	5,613	5,818	8,237

Source: Fishery Office of South Sulawesi Province (2012)

1.3 Current and historical stock status

A comprehensive nation-wide biological stock assessment for snapper (*Lutjanus sp.*) and grouper are not available. Therefore, the status of snapper and grouper population in Indonesia cannot be determined against the biological reference points. However, the newly released Fishery Minister Decree on Estimation of Fishery Resource Potential in Indonesia put red snapper and grouper in Makassar Strait and Flores Sea (WPP 713) as *moderately exploited* (MMAF, 2011).

1.4 Description of management system and regulations

The National policy exempt boat < 5 GT to acquire fishing license. They only need to register with the fisheries District office. However, the South Sulawesi Province/Districts requires the fishing boat < 5GT to obtain fishing licenses. These are: PAS Kecil (boat Identification /ID), SIUP (License to conduct trade - *Surat Ijin Usaha Perikanan*), SIPI (License to operate fishing activity -*Surat Ijin Penangkapan Ikan*). The fishers often get help from their buyer (local trader) or processor to apply for all these licenses. Which then create burden and extra costs for local traders, and processor to get these licenses.

1.5 Uses of harvested product

In general, the chain of custody in Indonesian snapper involves six components. They are: 1) fishermen; 2) traders/collectors/suppliers/middlemen; 3) processor/exporter; 4) importer/wholesaler; 5) retailer/restaurant and 6) end user/consumer.



Makassar processing companies mainly produce fresh and frozen demersal fish such as reef fish (snapper, grouper, emperor, parrotfish) and octopus. The city is also one of the main hub for live grouper export facilities. According to the Paotere (Makassar) Fishing Port data (2013), there are at least 10 companies processing grouper and snapper in Makassar (Yayasan LINI, 2014). According to the data from some major processors/exporters, snappers from Indonesia are mostly exported in the forms of frozen whole round and frozen fillet.

According to the information from snapper processors, small-scale fisheries contribute to up to 30% of snapper processed by those companies.

1.6 Market information

1.6.1 Export market, volumes and value

In general export volume of snapper from Indonesia fluctuated and ranged from 1.5 to 2.7 thousands tonnes per year, with main markets in the United States, EU countries, Japan, Hong Kong, Taiwan, Singapore, Malaysia, South Korea, Australia, Thailand, and the Middle East (MMAF, 2010). Data from Potere Fishing Port in South Sulawesi shows that fresh grouper are mainly exported to Singapore, Hong Kong, Malaysia, Taiwan and Vietnam. The precise volume and value of exported snapper to each destination country is not known.

United States has been important market for frozen fillet snapper from Indonesia. Indonesia has been the second biggest frozen snapper supplier to US market, contributing to 18% of total frozen snapper import to US market, following Brazil (42%). Data from NOAA 2012 showed that that US snapper imports from Indonesia has decreased from 952.2 thousand kilo in 2010 to 787.93 thousands kilo in 2012, but the value increased from USD 5 million in 2010 to 6 million in 2012.

Table 4. US snapper import from Indonesia (2009-2013)

Year	2009	2010	2011	2012	2013
Fresh snapper (kilo)	30,051	52,890	68,517	100,653	62,510
Frozen snapper (kilo)	926,702	899,627	691,308	687,282	450,026
Value (US\$)	4,725,495	5,022,761	4,780,908	6,003,573	3,767,229

Source: NOAA website

1.6.2 Domestic use and value

Local consumption of snapper in Indonesia is also high since the species is also the popular seafood in Indonesia.

1.6.3 Fishery's contribution and national economy

In South Sulawesi Province, snapper contributes to 4% of total fish landing in that province, putting snapper fishery on number 8 in the list of top fishery commodities from this province, following scad, skipjack, sardinella, mackerel, and anchovies.

2. Key issues/challenges in the fishery

Sustainability issues:

Data on the snapper fisheries are lacking. There is the need to improve data collection of catch and bycatch data from small scale as well as semi industrial snapper fisheries. Current catch data recording does not follow the Government fisheries data collection protocols.

Financial issues:



Fishermen are mostly dependent to their middlemen/supplier/collector to provide logistic to go fishing (e.g. fuel, bait, etc).

There are a lot of middlemen/collector that do not have proper place that collecting fishes from the fishermen – the fishes are exported as fresh snapper/grouper to Malaysia, Singapore, Taiwan and Hong Kong. They can offer higher price to the fishermen – they have very low operation cost (e.g. do not have the proper place – sometimes just rent a ‘ruko’ temporarily) - need to work with the government to standardize the supplier – minimum requirement for the supplier (need license/certification).

3. Recommended solutions

- Develop the FIP with five major snapper processors in Makassar, namely: CV Inti Makmur, Prima Bahari, Kemilau Bintang Timur, Multi Sari Makassar, and Kelola Mina Laut, with major activity:
 - o Conduct study to better understand about the fishery, including to get more accurate information on fishing ground, supply chain, how the fishery business contributes to local communities, etc.
 - o Develop catch data reporting to support the implementation of fishery management in the region
 - o Train enumerators and local trader to record catch data using logbook.
 - o Compile all the information related to fishing license and documentation needed for export
 - o Organise Stakeholder meeting, which invite provincial and district government to discuss issues face by snapper fishery including fishing license , standard/license for the suppliers, etc.

4. Stakeholder Summary and Roles

Stakeholder (company or organisation)	Stakeholder type	Potential role in FIP	Level of potential influence over fishing practices, policies, and/or research
Fishermen	Catcher	Comply to Collector’s requirements for good prices	Compliance to local regulation/requirement
Collector/Middlemen	Suppliers	Influence the fishers to make simple improvement (i.e. environmentally-friendly or better fishing practices) for earning better quality. Many of small; scale fisheries are very dependent to their middlemen (boat, supplies and logistic, loan, family relation, etc.), not only to the exporter or companies, approach to the middlemen is also very significant.	Contribute to more reliable catch production data
CV Inti Makmur, Prima Bahari, Kemilau Bintang Timur, Multi Sari Makassar, and Kelola Mina Laut	Processors/Exporters	Push the suppliers to make some improvement and setting up certain standards (i.e. only receiving a certain size).	Contribute to better management of tuna fishery in the region, through improved catch record, support observer program.
Importers/Buyers in the	Buyers	Push the processor/exporters	



US		to make some improvement	
Sustainable Fisheries Partnership	NGO	Providing training and technical assistance, i.e. technical support and advice, training and capacity building	
Yayasan LINI	NGO	Conduct capacity building on FIP development, Field survey and fishery data collection; investigating supply chain on the ground	
Fishery Office (Dinas Perikanan)	Government	Local regulation, providing more accurate fishery data within the area	

References

Fishery Office of South Sulawesi Province (2012) Statistic capture fisheries of South Sulawesi Province

Food and Agriculture Organization (FAO) FAO Statistical Collection - <http://www.fao.org/fishery/statistics/global-production/en>

Ministry of Marine Affairs and Fisheries (MMAF). 2011. Minister Decree of MMAF No 45/MEN/2011 on the Estimation of Fishery Resources Potential in Fishery Management Areas of Republic of Indonesia

Ministry of Marine Affairs and Fisheries (MMAF). 2011. Capture Fisheries Statistics of Indonesia, 2010

Ministry of Marine Affairs and Fisheries (MMAF). 2012. Capture Fisheries Statistics of Indonesia, 2011

NOAA webiste - <http://www.st.nmfs.noaa.gov/commercial-fisheries/foreign-trade/applications/annual-product-by-countryassociation>

Sustainable Fisheries Partnership. 2011. Sustainable Indonesian Tuna Initiative. *Whitepaper*

Yayasan LINI. 2014. Catalyzing new fisheries improvement projects in Sunda Banda Seascape (internal draft report)