

Marine Capture Fisheries

Priority statement

Artisanal marine capture fisheries are a **MEDIUM** priority for pro poor development. While this is an important sector both in terms of employment and food security, focus now is on sustainability and larger companies accessing international markets for higher returns. However small-scale marine fishery value-chain analysis is an outstanding issue.

Table 1. Fisheries production statistics for selected provinces in Indonesia

Basic Statistics	East Java	West Nusa Tenggara (NTB)	East Nusa Tenggara (NTT)	Indonesia
Area of Production ² (ha)	-	-	-	5.8 million km ²
Volume of Production ¹ (tonnes)	338,918	111,886	90,185	5,039,446
Yield ³	Maximum Sustainable Yield = 6.4 million tonnes/year Total Allowable Catch = 5.12 million tonnes/year (80% MSY)			
Value of Production ² (IDR million)	1,872	882	497	33,255
People Employed ²	198,521	63,507	93,924	2,057,986 ¹
Source: ¹ Badan Pusat Statistik (2010) ² Ministry of Marine Affairs and Fisheries (2007) ³ MAFF and JICA (2011). Indonesian Fisheries Book 2011				

Poverty and sustainability

Is there potential to reach large numbers of poor households in production and post-production?

The potential is high.

- Despite the marginal decline in the number of marine fishers, there are over 3.38 million people directly involved in the fishery value chain including, fishers, processors, traders, and providers of support services.

What is the potential to increase income for producers?

The potential is limited.

¹This number represents only marine fishers and does not reflect processors, traders and associated services (ex: boat building, mechanics, net mending)

- An increase in the sale price could be obtained by improving access to export markets (linked to export quality infrastructure) or by improving value-adding through the improvement of local processing capacity. However these increases are unlikely to pass back to smallholder fishermen.
- For some tuna producers, improvement in eco-labeling and traceability of tuna might increase product value and thus increase producer income.

Does the chain/commodity fit with the focus of Government programs and priorities?

Yes, capture fisheries development is a focus of government interventions.

- The Strategic Plan of the Ministry of Marine Affairs and Fisheries (MMAF) (2010-2014) is based on making Indonesia the largest producer of marine and fishery products by 2015 and ensuring the welfare of the marine and fishery society.
- Capture fisheries is a higher priority for the MMAF compared to the aquaculture as indicated by their 2010-2014 budget. The MMAF Renstra 2010-2014 document stated the budget allocation for capture fisheries is IDR 8.1 billion compared to the aquaculture budget of only IDR 4.3 billion for 2010-2014.

How project-crowded is the sector? (to what extent are sector needs addressed by current donors?)

- There are 21 bilateral and 11 multilateral cooperation agreements currently in force (funded by Korea, Japan China, US, Australia, etc.). These cover: research, capacity building, infrastructure improvement, trade and natural resource management.
- There is also a lot of research being conducted at the Provincial level. For example, the FAO implemented Regional Fisheries Livelihood Programme for South and Southeast Asia (RFLP) program in Kupang, NTT, which focuses on providing training and capacity building for fishers.

What is the agro - ecological feasibility?

The ecological feasibility is low.

- Indonesia has 5.8 million km² of marine waters, a Maximum Sustainable Yield (MSY) of 6.4 million tonnes/year and a Total Allowable Catch of 5.12 million tonnes/year (80% MSY). Current marine production is 5,039,446 tonnes. Therefore, a dramatic increase in marine fisheries effort could be environmentally unsustainable; however different fisheries must be examined separately.

Sustainability (economic and environmental)

The economic and environmental sustainability is moderate.

- The sector growth is very low compared to the other sectors in fisheries. The marine capture fisheries growth for 2005 to 2009 was 2.1% per annum. The figure for 2010 and 2011 is even less at 0.4% per annum. The highest growth in the fisheries sector is achieved by aquaculture with growth at 21.9% per annum for 2005 to 2009 and 11.1% for 2010 and 2011.

- At fishers level, the economic sustainability of fishing is directly linked to the status of the targeted fishery resource, as well as the cost per unit effort (determined by input costs such as fuel and equipment prices). The shift to aquaculture fisheries however, suggests that cost per unit effort is rising.
- The country has an abundant marine fishery with 76% of its surface area being seawaters. As such, Indonesia has a considerable challenge in implementing effective monitoring, control and surveillance of its territorial waters and protecting the sustainable and legal use of its marine resources.
- The two main areas of environmental concern are the tuna fishery and coral reef fishing, both of which need to be closely regulated in order to avoid damage to valuable species and vulnerable habitats.
- Tuna exporters have recently identified that sustainability is an important issue for tuna. There is a reported decrease in tuna stocks. Exporters blame the central government policy on issuing licenses for the use of purse seine (nets) and fishing for baby tuna for this decline.

External risk

The risk is high.

- The main risks associated with the sector are the lack of sufficient management, control and surveillance capacity and the subsequent depletion of key resources.
- The impact of climate change that may impact habitats and negatively affect fish populations such as coral species.

Structure of the chain

What is the potential for improving market access?

The potential is high.

- Rural markets are accessible to small-scale fishers, however higher value urban market access requires investments in an efficient cold market chain, linking small-scale fishers to urban consumers who can offer higher prices for fresh fish.
- Access to market information is important for exporters. Most tuna exporters are experiencing difficulties in accessing the European Union market partly due to the limited information available for market players.

Is there potential for post-harvest productivity / value-added?

The potential is limited. Post-harvest value-adding is directly linked to access to processing facilities.

- The Fish Processing Units (FPU) figures indicate that while there is a large number of micro FPUs that target the national market, the vast majority are 'micro' in size. Due to their lack of capacity they offer limited value-added opportunities. There are 60,117 FPUs nationwide, of which 53,054 are classified as micro. In East Java there are 10,640 FPUs of which only 54 are classified as big. In NTB there are 3,550 FPUs and in NTT 272, none of which are considered big.

- There is potential to develop fresh/frozen tuna and canned tuna. There are 16 facilities that produce fresh/frozen tuna and 8 processors that supply canned tuna. Approximately half of them are EU market certified. However, the opportunity for smallholders to access these processors is very limited as they are international companies and the EU market is tightly controlled.

What is the scalability and transferability potential?

Scalability and transferability potential is moderate.

- While Indonesia has a large coastline and coastal population involved in small-scale fisheries the access for smallholders to large processors and markets is very limited. As a result transferability is limited for smallholders.

Is there sufficient infrastructure availability?

No

- There are 84 fishing ports and landing sites in East Java, 27 in NTB and 10 in NTT. Current fishing ports are not sufficient to ensure good handling practices and cold chain facilities needed to satisfy the quality demands of urban and international market standards.
- Improvement of export market access is directly linked to improvements in infrastructure.