Bali sardinella
Southern Java to Western of Timor Sea

**Fishery**
Indonesia Southern Java to Western of Timor Sea, Indonesia | purse nets

**IDENTIFICATION**

**SCIENTIFIC NAME**
Bali sardinella

**SPECIES NAMES**

- **Common Names**
  - Bali sardinella
  - Lemuru

**CATCH NAMES**
lemaru (Indonesian common name for adult size), lemuru kuring or bel kocking (name for the largest size fish), protolan (name for sub-adult size), sempent (name for juvenile size)

**STOCK IDENTIFICATION**
Bali sardinella or lemuru (Bali sardinella) is a coastal small pelagic, schooling, strongly migratory species that inhabits tropical and subtropical waters of the Indo-Pacific region. The fish feeds in a wide area from the eastern Indian Ocean, southern coast of Java, North East Java, to the eastern tip of East Java; the months of April and May represent an inter-monsoonal period (also non-sardine season).

The northwest monsoon (noted as non-sardine season) lasts from November to January; the southeast monsoon (as sardine season) lasts from April to May. The sardines as the upwelling brings nutrients enhancing the phytoplankton and consequently zooplanktons, and eventually fish.

The oceanographic conditions of the strait are influenced by bi-annual monsoons. These two monsoons govern the strength of currents where currents become weak in January (Merta et al. 2000), fixed lift-net attached to bamboo platform (jaring senar), jaring gilnet)

**FISHERY STATUS**

- Bali sardinella fishery is certified to a very small area (~1,220 sqkm) and is managed by only two provinces – less bureaucracy
- The fishery is ‘single species’ in nature and is mainly caught by a single type of gear (i.e., purse seine) – less of multispecies, mixed fisheries nature
- The fishery has been significantly supporting the local and national economy since mid-1970s;
- Strong challenges are faced by the Lemuru Management Committee, due to poor coordination and lack of funding.

**SCORING**

<table>
<thead>
<tr>
<th>Management Quality</th>
<th>Management Strategy</th>
<th>Managers Compliance</th>
<th>Fishers Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 6</td>
<td>&lt; 6</td>
<td>&lt; 6</td>
<td></td>
</tr>
</tbody>
</table>

**STOCK HEALTH**

- Current Health
  - < 6
- Future Health
  - < 6

**FIPs**
no related FIPs

**MSC**
no related MSC fisheries

**ASSESSMENT**

**Strengths**
- The lemuru fishery is certified to a very small area (~1220 sqkm) and is managed by only two provinces – less bureaucracy
- The fishery is ‘single species’ in nature and is mainly caught by a single type of gear (i.e., purse seine) – less of multispecies, mixed fisheries nature
- The fishery has been significantly supporting the local and national economy since mid-1970s;
- Strong challenges are faced by the Lemuru Management Committee, due to poor coordination and lack of funding.

**Weaknesses**
- Catch data has been seriously under-reported, discards and high-grading are not accounted for in official statistics;
- Stock assessment use basket/approaching group where species are aggregated at their ecologically-related group per fisheries management area or FMA (Buchary et al. 2002).
- There is only one MSY value and one TAC value for all species combined within each group in the FMA per assessment.
- FMA has huge size and has lack of internal stratification (i.e., for near-shore small-scale fisheries, or for offshore deep-water fisheries);
- Small pelagic group (where lemuru is lumped into) in FMA 573 had reached over-exploited state (E = 1.5), and other studies on lemuru also showed similar results.
- Managers have been issuing licenses for pair purse seine vessels, beyond the type agreed by the joint Management Committee;
- Fishers’ compliance to management regime is low, not only due to lack of facilities and governance efficiency, but also due to prevalent financial insecurity (Buchary et al. 2010);
- Deep challenges are faced by the Lemuru Management Committee, due to prior coordination and lack of funding.

**Options**
- Improve the implementation of the joint agreement between East Java and Bali Province to control the efforts; through limiting the number of license, fishing power, and boat size.
- Improve the statistics data collection system to obtain accurate catch data, including implementation of logbook system;
- Improve research on stock assessment and the cycle to estimate the potential of the fishery and the stock status as a basis for management and licensing.

**Future**

- < 6

**Compliance**

- < 6

**Fishers**

- < 6