

Urgency of threatened Shark and Ray assessment and research in Indonesia

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On behalf of Scientific authority



Threatened species

- Any species which are vulnerable to endangerment in the near future.
- Loss habitat and loss of genetic variation.
- Driven by market, expensive species are mostly become vulnerable due over exploitation.
- Habitat degradation destructive fishing technique..

Shark and Ray

- There are about 221 species of shark and Ray in Indonesia. (117 shark, 101 ray, 3 ghost shark)
- Widely distributed all over Indonesian water from coastal to oceanic area.
- Shark and ray are cartilaginous fish, ovoviviparous and without visica urinaria.
- Shark and have complex hearing system allow them to detect any target from long distance.

Appendix II CITES

- **Ikan pari**
- *Mabula japonica*. (***)
- *Mobula tarapacana*
- *Mobula kuhlii*
- *Mobula thurstoni*.
- **Thresher shark (oceanic)**
- *Alopias pelagicus*. (tikus, monyet, oceanic).
- *Alopias superciliosis*. (pahitan, oceanic).

- **Martil shark**
- *Sphyrna lewini*. (***)
- *Sphyrna zygaena*. (**)
- *Sphyrna mokarran*. (*)
- **Silky shark**
- *Carcharhinus falciformis*. (lanjaman)
- *Carcharhinus longimanus*. (koboï).
- **Other shark**
- *Rhincodon typus* (whale shark, geger lintang)
- *Pristis* spp (7 species. saw fish, hiu gergaji).

Existing Type of Fishing

- Small number of fisher targeted shark. (using long line or rawai).
- No exclusive targeted on certain species of shark.
- Shark are mostly by catch long line Tuna.
- Shark and Schooling baby shark catches by various fishing gear pursine and trawl. (in coastal area).

International trade for shark and ray.


- Meat : fresh or frozen and dried, salted
- Shark skin for handy craft.
- Shark oil. (**squalen, supplement**).
- Shark cartilage and gill (**drug, functional food**).
- Shark for ornamental Aquarium.
- Shark fin (as main product).



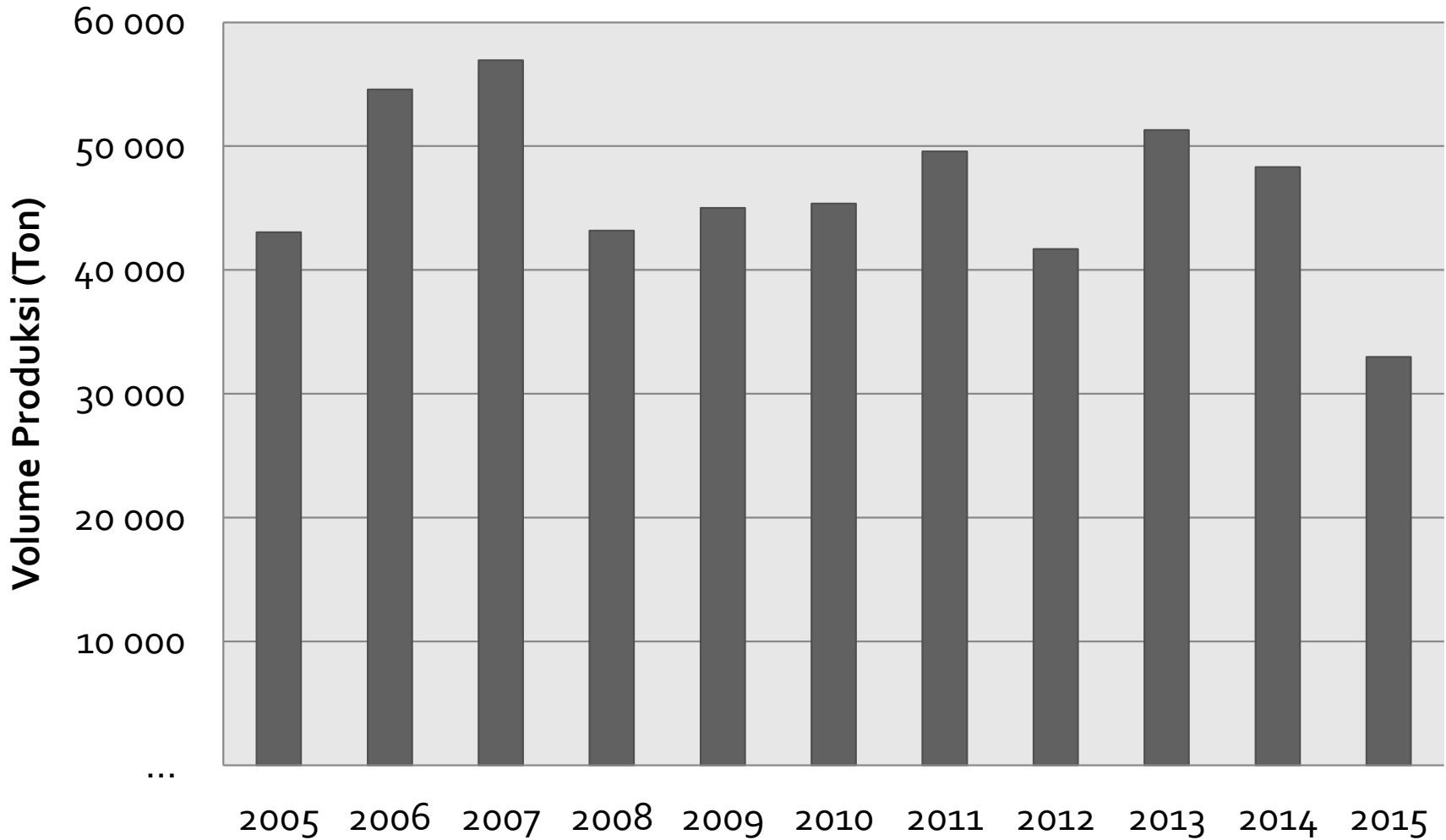
Nyam.....nyam dulu ...ah !!!



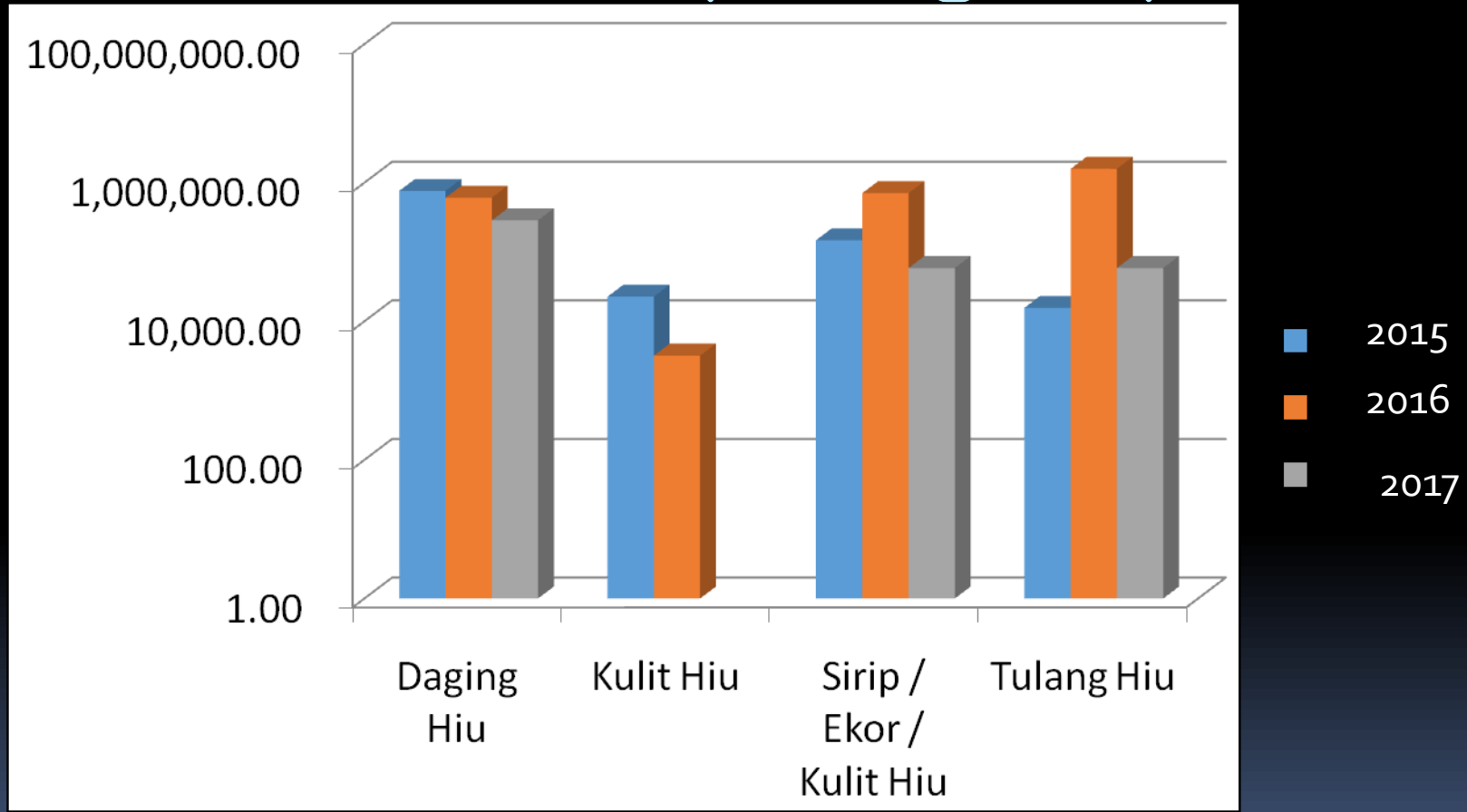
Problem for collecting data

- Distributed throughout Indonesia water.
 - Species of shark and CITES base on species.
 - Scarcity of data and information (mostly only from western Sumatera and southern part Jawa and NTB).
 - Small number of enumerator and observer.
 - Available data base on production all species of Sharks.
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PRODUKSI HIU 2005-2015




DATA EKSPOR HIU TAHUN 2015-2017 (Kilogram)





CITES Requirement

- Non detrimental Finding.
 - Traceability and legality.
 - Domestic measured for each state.
 - HS code for shark if possible.
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What we need for our shark resources

- Non detrimental Finding.
- Traceability and legality.
- Domestic measured for each state.
- HS code for shark .

Non Detrimental Finding

- Parties must ensure trade will not be detrimental to the survival of the species, through scientific assessment on species status under national jurisdiction.
- NDFs are essential a risk assessment.
- Information should be proportionate to the potential risk.
- The evaluation should be based on the best available information.




Common problems

- Deficiency on data and information of shark fisheries, population, abundance and distribution, nursery ground and stock assessment.
- Lack of data and information on trade, socio-economic and marketing of shark products.
- Shark is very important for small scale fisheries
- Lack of awareness of all stakeholder. Dealing with shark.
- Low involvement of fisher community in management of species listed species



Data and information needed

- Biology, distribution and abundance.
 - Population structure, status and trends
 - Harvest and population monitoring
 - Standard method for stock assessment and monitoring.
 - Genetic information of shark species
 - Correct identification of the Shark species.
 - Volume of trade vs vulnerability of species.
 - Management measure completed and implemented.
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Imidiate Researchs activities

- Taxonomic and identification (morphology and genetic)
- Life history : age and size maturity, age longevity and maximum size.
- Population dinamic : natural and fishing mortality, behaviour, current stock size relative to historic abundance.
- Population size and trend.
- Reproduction mode, fecundity.
- Catch production, season, location, fishing gear.

Immediate action needed

- Set up a clear roadmap for scientific assessment of the CITES listed shark species.
- Standard methodology for data collection and collation to be developed.
- Set up catches quota and implement shark fin size limit.
- Fishermen community must be included in all stage of shark management.
- Awareness activities program for the implementation agencies, the fishermen community and trader on CITES listed shark species

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- Provide training on identification and develop simple materials and applicable for all stakeholder.
- Securing adequate financial and human resources to support the implementation of sharks in the CITES appendix II.
- Increase and strengthening the capability, capacity and number enforcement staff.
- Road map research on shark agreed by all stakeholder.

Traceability of shark species

- Methodology reflecting origin, taxonomic characteristic of the specimen exported.
- Record from the beginning specimen caught and trace trade from the country of origin to the country of destination.
- Issuance of appropriate state permit or certificate (SATDn and SATLn).
- Issuance of appropriate CITES permit or certification.




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- Identification/verification of specimens.
 - An appropriate permit or certificate accompanies shark specimens will makes their trade traceable.
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Monitoring and Evaluation

- Status population and trend.
 - Sharks products and quality.
 - Traceability and legality from fishers, trader, custom and exporters.
 - Implementation of surveillance and law enforcement.
 - Welfare and prosperity of fishers.
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Obligation for Government

- Securing adequate financial and human resources to support the implementation of sharks in the CITES appendix II.
 - Increase and strengthening the capability, capacity and number enforcement staff (national and local staff).
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Training identification of shark

- Identification of shark species :
- Morphological identification.
- Numerical identification and,
- Genetic identification (DNA)
- Set up methodology for NDF.
- Stock assessment for shark status and trend.



Thank you




Modal yang telah dimiliki

- Material utk identifikasi ikan hiu.
- Leaflet / brosur utk edukasi dan penyadaran masyarakat.
- Leaflet yang dipasang di TPI-
- Data populasi yang sudah ada.
- Data rantai perdagangan ikan hiu.
- Adanya assosiasi eksportir ikan hiu ?
- Perlu usulan HS code utk produk Hiu ke depatemen perdagangan.



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- Kita telah memiliki National Plan of Action utk Hiu.
 - Kita telah mengimplemtasikan NPOA ?
 - Kita telah mengeluarkan ministerial decree utk melindungi Hiu dan Pari Manta.
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Training for identification

- Participants involve :
- Fishers communities.
- Fishery staff (central and Dinas).
- Pengawas perikanan,
- Trader, middleman and Exporter.
- Caratine staff
- Enumerator.
- Custom staff.