HUMAN DIMENSIONS

We're developing these tools with our developing country partners to understand social levers of change.

Recognize the need to integrate social science into conservation efforts because the solution to fisheries and resulting bycatch challenges typically isn't about changing marine mammal behavior but about changing human behavior.

Engage various stakeholders and understand how people affect, and are affected by, fisheries policy and marine mammal conservation.

Integrate human dimensions into marine megafaunal conservation.

GETTING TO THE BOTTOM OF BYCATCH

Bycatch is the greatest human threat to coastal marine mammals. Small cetaceans and sirenians get caught in many of the most common fishing gears, including gillnets, push nets, purse seines, pots, and traps.

Approximately 300,000 marine mammals are taken from the world's oceans each year due to global fisheries. However, few data exist that quantify the effects of bycatch on populations. We are co-developing a toolkit to map and measure the risk of marine mammal bycatch.

Through our interdisciplinary approach and open source toolkit, we intend to "get to the bottom of bycatch" in Southeast Asia and beyond. Key outcomes include:

- **Community-driven** approaches and tools
- **Flexible, data-driven** bycatch risk assessment
- **Develop and strengthen capacity** to design locally supported strategies that measure and mitigate bycatch of marine mammals.
- **Produce actionable information** for fundraising, decision–support, monitoring, and protected area design.

Ecotour guide and village leader - Bako Seberang, Malaysia

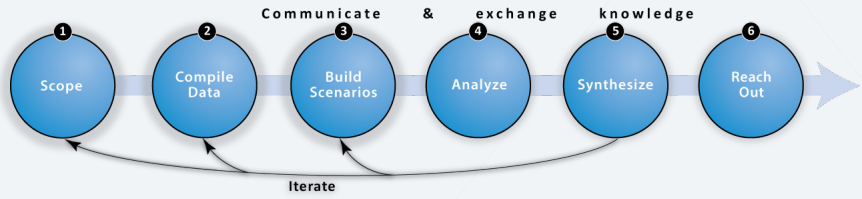
Artisanal fisher in Kuching Bay, Malaysia. Photo: G. Verutes

Fisheries bycatch of marine megafauna is poorly monitored and regulated. Photo: K. Adulyanukosol

Toolkit Summary:

- **Flexible, transferable, open-source tools** to support spatial planning and decision-making in Southeast Asia.
- **Turn information into action** by characterizing bycatch risk based on animal distribution, abundance and population structure, fisheries effort and interaction rates.
- Tips for **how to use existing data effectively and responsibly** and improve their quality over time.

How we will develop the toolkit:



Using a **science-policy approach** we are co-developing a toolkit with in-country partners that can serve as a roadmap for practitioners to create a localized bycatch risk assessment in developing countries. We have chosen four pilot sites in Southeast Asia to identify a range of data quality, analytical options and standardize our toolbox for application worldwide.

Our Partners:

State & Federal Governments, NGOs, and Academia

- The MareCet Research Organization, Malaysia
- Department of Marine and Coastal Resources (DMCR) of Thailand
- Sarawak Dolphin Project
- Kien Giang Biosphere Reserve, Vietnam
- SIE: Southern Institute of Ecology (Vietnam Academy of Science and Technology)
- Vietnam Marine Mammal Network
- Institute of Biodiversity and Environmental Conservation, Universiti Malaysia Sarawak

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Visit our website:
http://mmbycatchtoolbox.org