



Food and Agriculture
Organization of the
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Workshop introduction and future activities

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Workshop on fuel savings in fisheries, Colombo, Sri Lanka

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Outline

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Climate change and fisheries

Negative effects of climate change are evident

- Floods, sea level rise
- Less predictable sea conditions
- Higher waves, storm surges, cyclones intensity
- Warmer ocean water



Negative effects on fisheries include:

- reduced fish abundance – distribution of stocks change & damage to critical habitats
- reduced fish productivity & reduced catches
- safety of fishers compromised
- damage to fishing gear and fisheries infrastructure
- increase in operational costs
- threats to fisherfolk livelihoods



Climate change adaptation and mitigation in fisheries

Adaptation measures:

1. use of climate smart fishing technologies
2. early warning systems
3. improve fish value chains & market diversification
4. improve fishing vessel safety (through design and practice)
5. climate proof fisheries infrastructure
6. awareness and capacity building of fishers on adaptation approaches
7. mainstream climate change into fisheries policy and management



Mitigation measures:

1. reduce greenhouse gas emissions - alternative fuels/energy sources
2. **reduce fossil fuel use - energy efficiency** = Subject of today
3. access to affordable life and vessel insurance



Project introduction

FAO project “Responsible use of fisheries and aquaculture resources for sustainable development” (GCP/GLO/352/NOR)

Project component 2: Assist partner countries and key stakeholders to adapt to climate change effectively and secure sustainable socio-economic development.

Title of component 2 activity in Sri Lanka:
Fishing vessel design adaptation to climate change



Impact expected:

Reduced numbers of fatalities and fishers lost at sea in small-scale fisheries.

Objective:

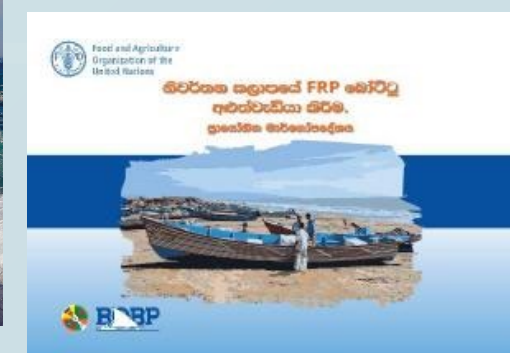
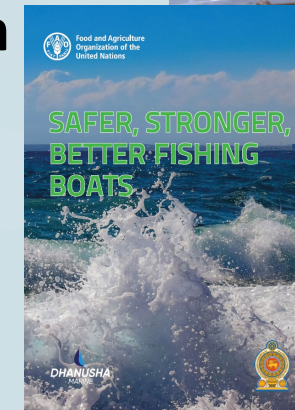
Increase the safety of vessels used in small-scale fisheries to adapt to climate change.

Project component achievements 2022 - 2024

Result 1: Safer, stronger and better small scale fishing boats designed, 2 boats constructed at Dhanusha Marine and tested at sea. Many boat builders trained. Boats widely demonstrated and promoted. Boats handed-over to the Ministry for further promotion. Mould available for boat building in series.

Impact:

- Unsinkable fishing boats save lives – once widely used.
- Boat builders of 8 shipyards are capable to build higher quality and stronger FRP boats, using international minimum constructions standards.
- One shipyard (Dhanusha Marine) indicated its interest to build 50 FAO design boats, responding to customer demand.
- Boat builders worldwide have access to new designs -> increased safety at sea!



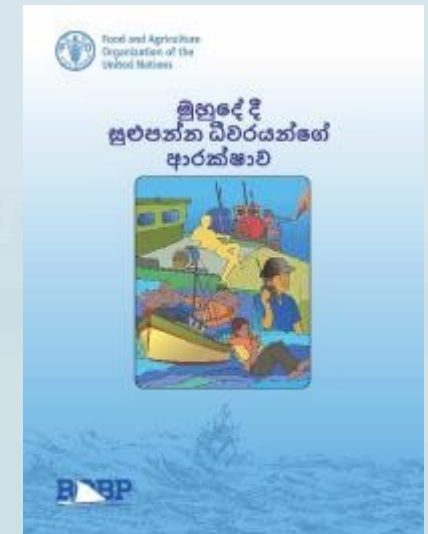
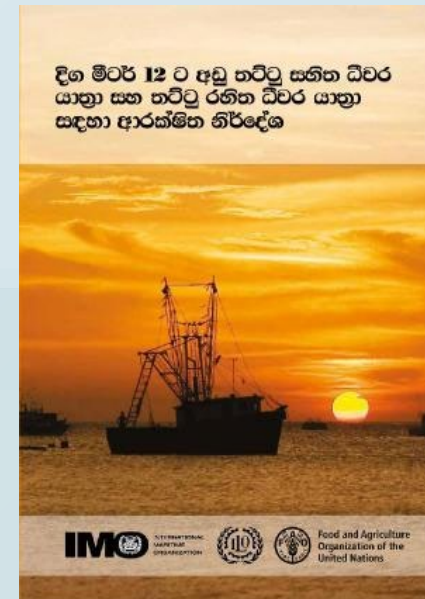
Project component achievements 2022 - 2024

Result 2: Trainers in fishing safety are trained in safety of small-scale fishers and have access to suitable training materials (in local languages).

- Personal safety & vessel safety
- Emergency preparedness
- Radio communication
- Safety risk management
- Boat basics,
- First aid at sea

Impact:

- Safety trainers in Sri Lanka apply FAO fishing safety training methodology in training of small-scale fishers.
- Future reduction of accidents and fatalities at sea – data are being collected.

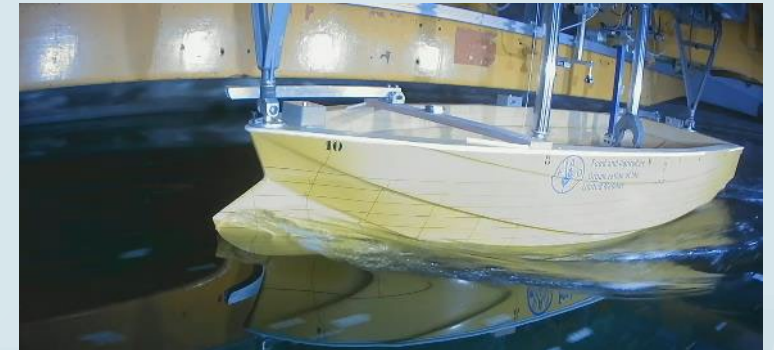


Project component achievements 2022 - 2024

Result 3: Bulbous bow for fuel savings in longline fisheries introduced; evidence of expected fuel savings demonstrated with the bulbous bow from testing in water tank, demonstration vessel equipped with the bulbous bow at Cey Nor shipyard. At sea testing is ongoing. Moulds of bulbous bow available for replication.

Impact:

- Multi-day fishing boat owners have shown interest. Potentially > 2000 longliner vessels of 15m can be equipped with a bulbous bow.
- Fuel savings for vessel owners -> Increased economic feasibility of fishing fleets.
- Reduction in GHG emissions by the fishing fleet.



Workshop objective

Objective: to inform multi-day fishing vessel owners and boat builders about available fuel savings techniques for long-line vessels in Sri Lanka.

The workshop will discuss:

- a) Fuel saving technologies and methods for multi-day fishing vessels in Sri Lanka.
- b) The design, test model development, water tank testing, construction and the at sea testing process of the bulbous bow suitable for fishing vessels in Sri Lanka.
- c) An analysis of fuel consumption monitoring data of the demonstration vessel “Layon 7”, with and without a bulbous bow.
- d) An economic feasibility analysis of the costs and benefits of installation of a bulbous bow, and estimation of the costs for other vessels that want to install a bulbous bow.
- e) The trends in multiday fishing vessels in Sri Lanka in terms of number of vessels, average vessel age and lifespan, and improvements recommended to increase profitability in long-line fisheries

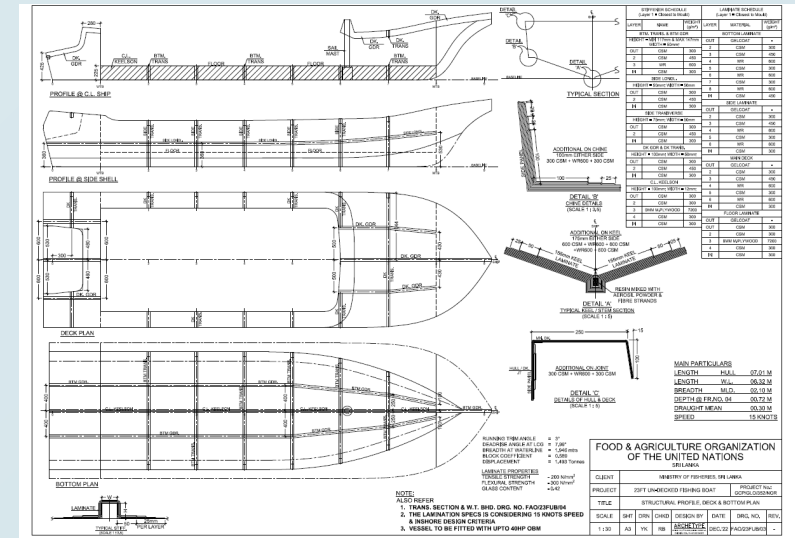
Future activities

- Designs are available on FAO website – free download
- **Until 30 June – bulbous bow design assistance available**
- Step-by-step construction videos finalization
- Publication of techno-economic performance report of long line fishing vessels in Sri Lanka

Next project on “Climate-resilient fisheries in Sri Lanka” supported by the Green Climate Fund

Includes output (1.2): Development and uptake of climate-resilient and low-carbon high-seas fishing increased

Demonstrate and promote new high sea vessel designs to navigate higher waves, to change to more resilient fishing operations and increase fuel efficiency, supported by loans provided by DFCC credit lines



Thank You

Any questions or observations?

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