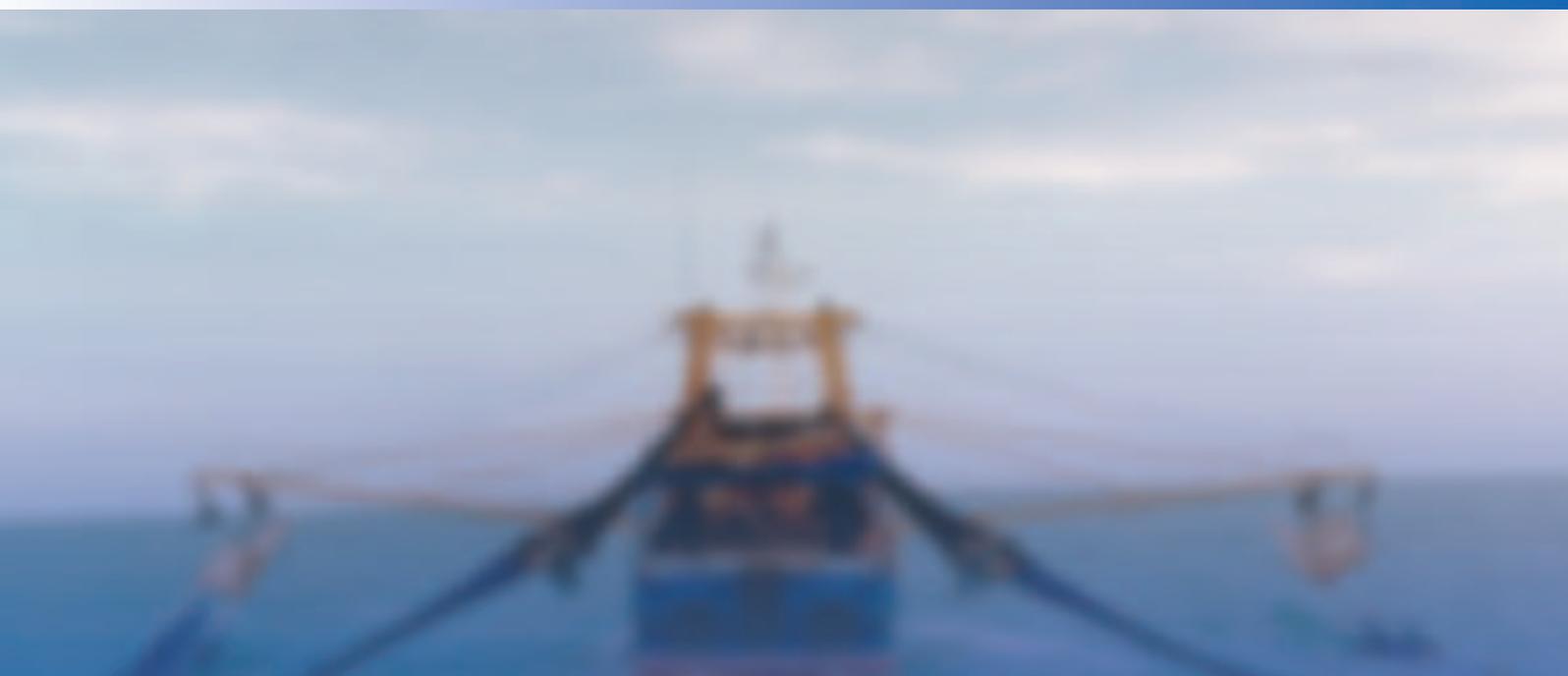


# MANAGING BYCATCH AND REDUCING DISCARDS



**TAKING IT TO THE NEXT LEVEL**





Every year tropical shrimp trawl fisheries generate millions of tonnes of bycatch. In some countries, bycatch is an important source of income and contributes to food supply; in others bycatch is discarded at sea.

**BYCATCH:** *anything that a fisher does not intend to catch, including juveniles of commercially-valuable species and biologically-important species*

**DISCARDS:** *the part of the bycatch that is returned to the sea, either dead or alive*

But excessive levels of bycatch create negative consequences for fishing communities, ecosystems and future fishing activities. The capture of juveniles threatens sustainable fisheries; unrestrained removal of unwanted fish threatens biodiversity; quality of catch is compromised; operational costs are needlessly increased.





## THE ISSUE – Current situation

- 15-20 million tonnes of bycatch caught by mixed-species shrimp trawlers
- 1.9 million tonnes of bycatch discarded annually from shrimp trawlers alone
- inadequate resource conservation and management practices
- habitat loss and degradation
- insufficient capacity to support existing fishing levels
- overexploitation threatening biodiversity and livelihoods



## GLOBAL SOLUTIONS – What can be done

- foster public and private sector partnerships to reduce bycatch
- promote awareness of the need for sustainable fisheries management
- conduct pilot projects to develop/test bycatch reduction technologies
- create incentives to adopt responsible fishing practices



## ONGOING ACTIONS – Current responses

### Under the 2002-2008 FAO/GEF/UNEP bycatch reduction project\*

- 12 countries implemented bycatch reduction technologies
- strong partnership established between industry and government
- bycatch reduction technology transferred between countries and regions
- bycatch mitigation measures incorporated into national legislation
- reduction of up to 65 percent of juvenile food fish in sea trials



## TAKING IT TO THE NEXT LEVEL

### What needs to be done

- raise international awareness to assess, monitor and mitigate bycatch problems
- expand activities and geographical coverage to manage bycatch and reduce discards
- develop and promote industry adoption of “Best Practice Guidelines” for fishing operations
- create legislation on responsible fishing practices

## Today,

**technologies exist to reduce the catch of juvenile fish and other bycatch. These technologies, based on using bycatch reduction devices (BRDs), can be adapted to specific fisheries taking into account environmental conditions and socio-economic interests.**

The success of the 2002-2008 FAO/GEF/UNEP bycatch reduction project shows a distinct advantage in adopting BRD technologies and responsible practices:

- reduction in number of juveniles caught when using BRDs
- increased conservation of biodiversity
- better product quality
- decreased fuel and labour costs
- increased cooperation among countries at regional and global scale
- greater public-private sector partnerships



### COSTA RICA

“Many thought that the bycatch reduction devices were unnecessary! But proper implementation of BRDs has completely changed how fishermen view this technology.”



### INDONESIA

“The consciousness of shrimp trawl industries has improved. The Indonesia Shrimp Trawl Fishing Industries Association requested to enlarge the mesh size of their own shrimp trawl nets through a new regulation.”



### MEXICO

“We have had wide regional cooperation and interaction among the Latin American countries, between researchers and stakeholders; through joint workshops, at sea demonstrations, training, technical assistance and transfer of new fishing gear technologies.”

## PROJECTS AND PARTNERS

### 2002-2008 – Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of Bycatch Reduction Technologies and Change of Management

Jointly funded by the Global Environmental Facility (GEF), the United Nations Environmental Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO) as well as the governments and private sector of the twelve participating countries and the Southeast Asian Fisheries Development Center (SEAFDEC). The project is implemented by UNEP and executed by FAO.

### 2009-2014 – Reducing and managing bycatch

The objective is to build on the success of the 2002-2008 project with additional partners from the public and private sector, to broaden the number of participating countries and integrate BRDs into a wider management framework aimed at sustainable fishing practices.



### THE PHILIPPINES

"We demonstrated that involvement of local government, boat operators, fishermen and stakeholders in planning and implementation of the project is effective. BRDs reduced juvenile fish catches by up to 60 percent."



### NIGERIA

"Thanks to the project, Nigeria is now re-certified to export shrimp caught in the wild to the U.S. market. Coordinated efforts in our administration, research and industry sectors allowed us to become proficient in the whole process of constructing, rigging and tuning BRDs."



### SEAFDEC

"SEAFDEC gave technical assistance to countries in Southeast Asia in developing and promoting the use of Juvenile and Trash Excluder Devices, other types of BRDs."

## WHAT NEEDS TO BE DONE

### Raise public awareness

To many, “bycatch” is synonymous with waste and the capture of high profile species such as seabirds and turtles. Less charismatic bycatch – including juvenile food fishes – have yet to grip the public’s interest. Awareness must be raised to understand that these species are also economically and ecologically important.



### Safeguard livelihoods

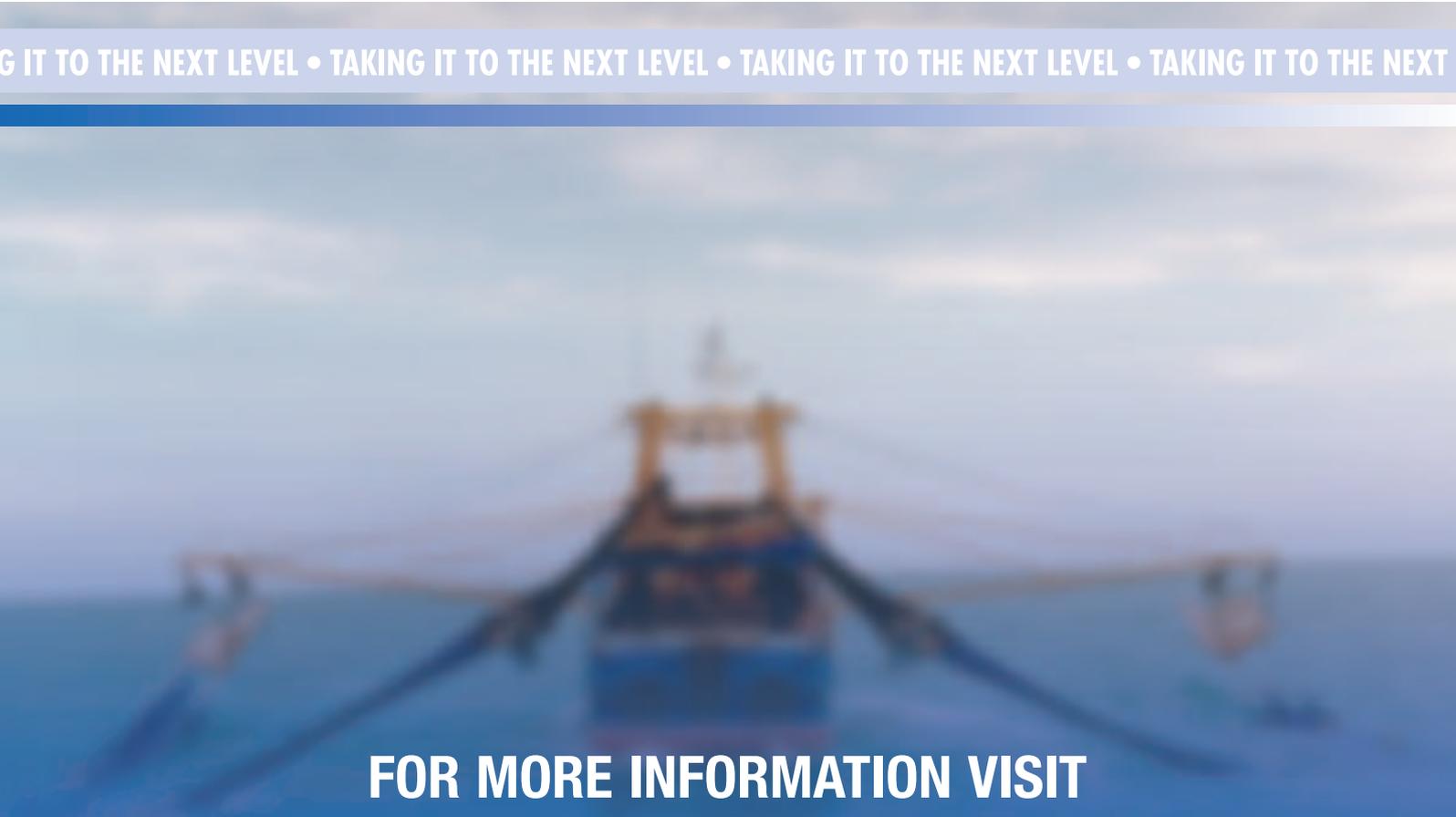
In many fisheries, bycatch remains a major source of domestic unregulated and unreported fishing and can be classified as IUU fishing. Although no detailed figure of bycatch is available, a crude estimate suggests that it could be 15-20 million tonnes globally – and growing. IUU fishing threatens the security of those who depend on fisheries as a source of food and income. To safeguard these often precarious livelihoods, responsible fishery management plans promoting good practices and control measures on bycatch and discards are needed.



### International action

Concerted national and international action can provide the global framework needed to assess, monitor and mitigate bycatch problems in shrimp fisheries. FAO has various instruments available for developing and promoting sustainable fisheries including the preparation of technical guidelines. International action on bycatch management and discard reduction needs to apply to all States, entities and fishers. It must address bycatch management objectives, bycatch reduction technologies, legislation, training, institutional capacity building and outreach to industry. Mechanisms must be put in place at the state level for baseline studies, regular monitoring and review of progress towards management of all retained catch species, elimination of discards and other sources of fishing mortality.





**FOR MORE INFORMATION VISIT**

[www.fao.org/fishery/rebyc](http://www.fao.org/fishery/rebyc)

**All the latest and most relevant information regarding bycatch management and discard reduction is available here.**

You will be able to access material such as:

- **Managing bycatch and reducing discards** – 20-minute training video (2008)

Every year tropical shrimp trawl fisheries generate millions of tonnes of bycatch. In some countries bycatch is an important source of income and contributes to food supply; in others, bycatch is discarded at sea. This FAO training video, filmed on location in Mexico, the Philippines and FAO headquarters in Rome, explores the issues and solutions to better manage bycatch and reduce discards in tropical shrimp fisheries. *English, Spanish*

- **Potted shrimps** – 20-minute documentary video produced by BBC/TVE (2006)

Exports of shrimp by developing countries earn them US\$8 billion a year and provide employment to hundreds of thousands of people. But shrimp trawling has negative impacts on the environment. An FAO project is introducing new technologies to deal with the problem. *English, French, Spanish, Arabic*

- **A guide to bycatch reduction in tropical shrimp trawl fisheries** – guidebook on bycatch reduction technology (2005)

This guidebook is designed for fishermen, net makers, fishing technologists and others interested in a practical guide to the design, use and operation of effective bycatch reduction devices. Fishery managers, policy-makers and legislators will find this guide useful to help develop specifications governing the design and application of these devices in a shrimp trawl fishery. *English, Spanish, Arabic*

- **Reduction of environmental impact from tropical shrimp trawling** – official project Web site

This Web site contains all the relevant information on the Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of By-catch Reduction Technologies and Change of Management. *English, Spanish*

- **Mid-Term Review** – assessment and evaluation of the project (2006)

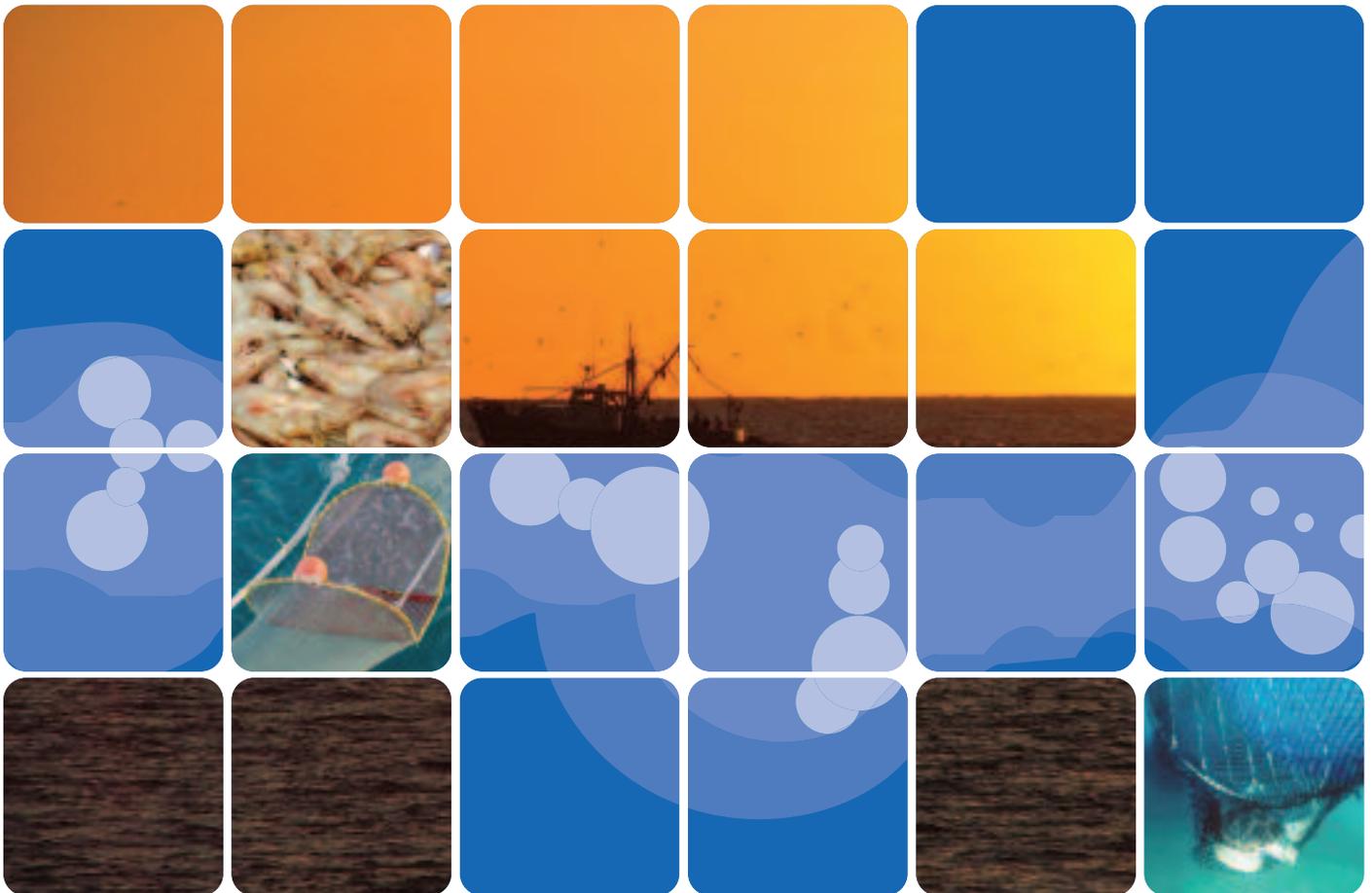
Mid-term review of the UNEP/GEF project Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of By-catch Reduction Technologies and Change of Management. *English*

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*Photos courtesy of Garry Day and Steve Eayrs, from "A guide to bycatch reduction in tropical shrimp-trawl fisheries"; and courtesy of partners of the FAO-GEF-UNEP 2002-2008 project "Reduction of environmental impact from tropical shrimp trawling through introduction of bycatch reduction technologies and change of management".*



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