



# STRATEGIES FOR TRAWL FISHERIES BYCATCH MANAGEMENT: REBYC-II CTI

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# UNCLOS 1982, RIO Declaration, 1993 compliance Agreement, UN Fish stock, Agreement

Mortality of fish  
escaping trawl gears

478

Options to mitigate  
bottom habitat impact  
of dragged gears

506

Impacts of trawling and  
scallop dredging on benthic  
habitats and communities

472

Abandoned, lost or otherwise  
discarded fishing gear

185

523

Discards in the world's  
marine fisheries

An update

470

INTERNATIONAL GUIDELINES ON  
BYCATCH MANAGEMENT AND  
REDUCTION OF DISCARDS

DIRECTIVES INTERNATIONALES SUR  
LA GESTION DES PRISES ACCESSOIRES  
ET LA RÉDUCTION DES REJETS EN MER

DIRECTRICES INTERNACIONALES PARA LA  
ORDENACIÓN DE LAS CAPTURAS INCIDENTALES  
Y LA REDUCCIÓN DE LOS DESCARTES

2011





## **Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of Bycatch Reduction Technologies and Change of Management**

- To reduce capture of immature/ juvenile fishes of commercially important species;
- To reduce the harvest of other unwanted bycatch fish and non-fish species



- Reduction in number of juvenile species caught by shrimp trawlers using bycatch reduction devices (BRDs) compared to trawlers not using such devices
- Improvement national capacities for the management of the shrimp-trawler fisheries and
- increased cooperation among countries at the regional and global levels



Indonesia + Philippines → FAO

Malaysia, Vietnam, Cambodia → SEAFDEC-JTF

Myanmar, Thailand

## **Reduction of Environmental Impact from Tropical Shrimp Trawling through the Introduction of Bycatch Reduction Technologies and Change of Management**



**Thai Turtle Free Device (TTFD)**



**Juvenile and Trash Excluder Devices (JTED)**





## Lesson learn REBYC Phase-I

- **Multi-species fisheries resources of found in Southeast Asia and the Pacific region**
- **Types and scale of trawler**
- **Fisheries resource management**
- **Bycatch is largely utilised and considered part of the total catch**

**Gear modification solutions also need to be supported by appropriate legal and incentive frameworks**



# Initial Phase of REBCY-II CTI

FAO/GEF INCEPTION WORKSHOP ON “BYCATCH  
MANAGEMENT AND REDUCTION OF DISCARDS IN TRAWL  
FISHERIES”

SEAFDEC/TD Samut Prakarn, Thailand 3 – 6 November 2009

FAO/GEF REGIONAL WORKSHOP ON STRATEGIES FOR  
FISHERIES BYCATCH MANAGEMENT CTI REBYC-2 PROJECT

Log-frame/project planning workshop,  
SEAFDEC/TD Samut Prakarn, Thailand 4–7 May 2010

*FISHING INDUSTRY ROUND-TABLE MEETING*

Organized by FAO and SEAFDEC in Bangkok Thailand, from  
30 April 2012

+

FAO/GEF PROJECT INCEPTION WORKSHOP

Organized by FAO and SEAFDEC in Bangkok, Thailand, from 1 to 4  
May 2012

FAO/GEF REGIONAL WORKSHOP

Work Planning – Year1

Organized by FAO and SEAFDEC in Bangkok, Thailand, from  
6-9 November 2012





# Strategies for Trawl Fisheries Bycatch Management (REBYC-II CTI)

## (2012-2015)





# Main goals and objectives

- More sustainable use of fisheries resources and healthier marine ecosystems in the project region by:
  - minimizing the catch of juveniles
  - minimizing species at risk from trawling
  - minimizing discards where such take place
  - avoiding negative impacts on habitats
  - improving utilization (value adding)
  - increasing resilience of coastal livelihoods

**The project aims to facilitate the change by seeking balance between environmental well-being and human well-being!**





# โครงการ REBYC-II CTI

- Executed by five countries + SEAFDEC
  - Indonesia, Papua New Guinea, Philippines, Thailand, Vietnam
  - SEAFDEC is the Regional Project Facilitating Unit (RFU)
- Project partners:
  - Swedish International Development Cooperation Agency (SIDA)
  - Sustainable Fisheries Partnership (SFP)
  - International Fishmeal and Fish Oil Organisation (IFFO)
  - Regional Fisheries Livelihood Programme for South and Southeast Asia (RFLP)
  - World Wide Fund for Nature (WWF)
  - Centre for International Migration and Development (CIM- German)
  - SEAFDEC



# Project Countries – Project Area

-South China Sea-  
-Coral Triangle Area-

## Project Countries

**Indonesia:** Arafura Sea (Maluku-Papua)

**Papua New Guinea:** Gulf of Papua

**Philippines:**  
Samar Sea for small-scale trawlers;  
whole country large-scale trawlers

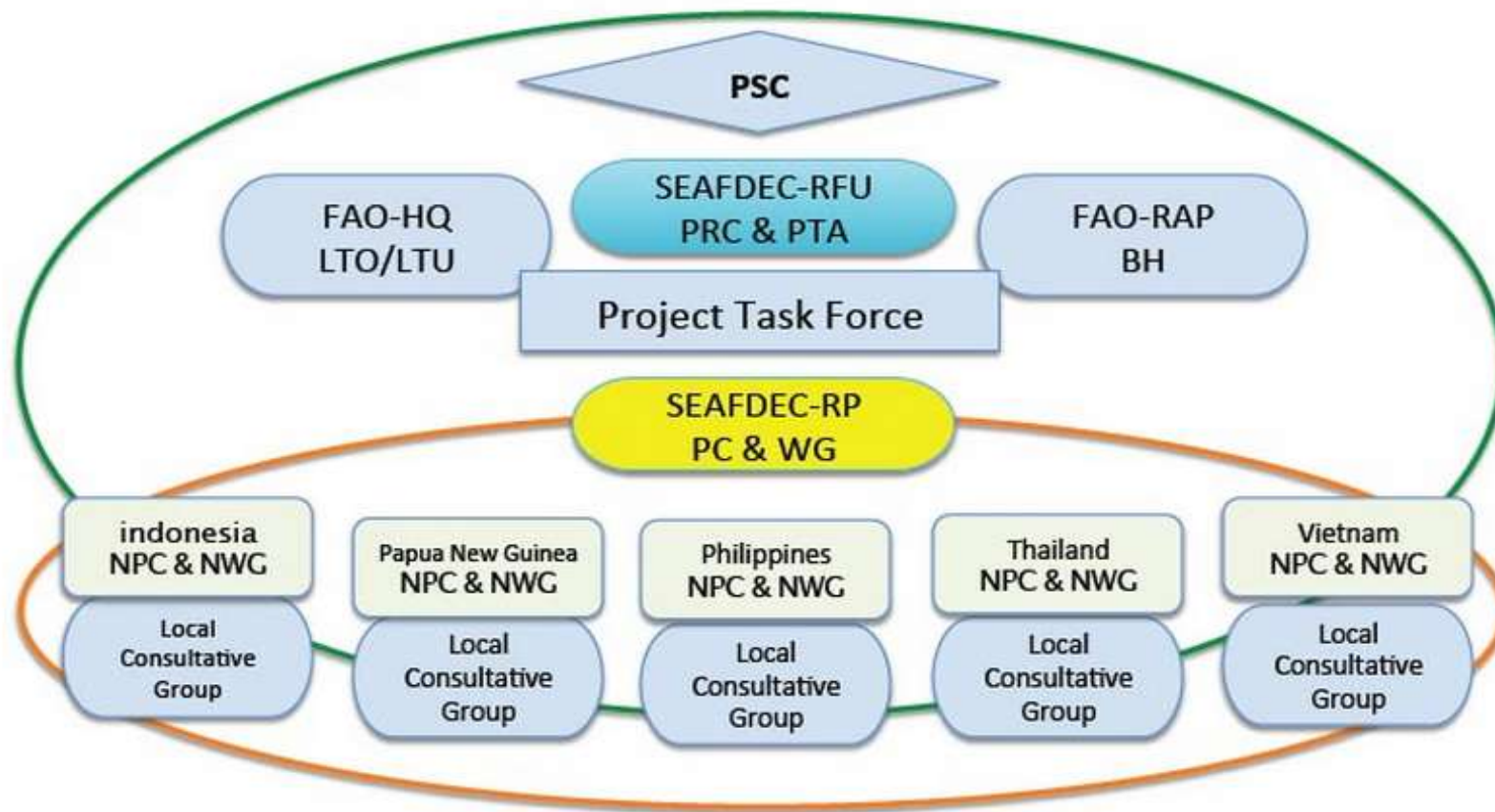
**Thailand:** Gulf of Thailand  
(Chumporn Province)

**Viet Nam:** Southern part of  
Vietnam (Kien Giang Province)





# Implementation and Management Arrangements (REBYC-II CTI)



PSC	: Project Steering Committee	NPC	: National Project Coordinator
PRC	: Project Regional Coordinator	NWG	: National Working Group
PTA	: Project Technical Advisor	RP	: SEAFDEC Regional Project
BH	: Budget Holder	PC	: Project Coordinator
LTO	: Local Technical Officer	WG	: Working Group
LTU	: Local Technical Unit		

## Potential solutions may include

- Effective zonation (exclusion from coastal zone)
- Fishing effort controls (self-directed)
- Improved fishing practices, alternative gears
- Effective incentives
- Exclusive access rights, recognition, etc
- Improved legislation/governance
- Improved co-management arrangements
- Awareness, empowering, training, support

**An effective mix of policy, technical and community support measures is needed**





# Project Components

Component 1: Policy, Legal and Institutional framework

Component 2: Resource management and Fishing operations

Component 3: Information management and Communication

Component 4: Awareness and knowledge

+ Project management

**Project Planning and Implementation**

**REBYC-II CTI Member Countries**

**Facilitate on Administrative and Technical Support**

**RFU+SEAFDEC**



# 1. Policy, Legal and Institutional framework

## Activities Frame (FAO-LTU)

- Establishment of national trawl fisheries bycatch management plans
- Adequate legislation and regulations to support the implementation of improved management measures
- Developing Regional bycatch policy/strategy

### All Countries

- Establish National Working Groups/ Technical Support Group/Advisory Group and organize Meeting/workshop
- Participation on the regional workshop to develop a regional guidelines on bycatch management and reduction of discards (REBYC-RFU)

### Indonesia

- Review of policy, legal and institutional framework of Arafura Sea fishery

### PNG

- Review of policy to determine if bycatch management in Gulf of Papua (GOP) requires specific management plan or should it form an integral part of GOP fishery management plan

### Philippines

- Review status of fisheries current policies / regulations

### Thailand

- Review the national law and regulation for trawl fisheries and other management measure in project areas

### Vietnam

- Review of legal, policy and institutional frameworks for trawl fisheries management in Vietnam
- National circular for trawl fishery management in Vietnam



## 2. Resource management and Fishing operations

### Activities Frame (FAO-LTU)

- Adoption of selective fishing gear and practices
- Basis for implementing zoning of fishing areas and Developing spatial-temporal closure management measures
- Generate better data on number of fishing vessels
- Recommendations for fishing effort and capacity management

### All Countries

- Identify, development, trial and assess the appropriate selective fishing gear /practices to reduce bycatch and juvenile of trawl fisheries
- Investigation of priorities for fishing closed area/season

### Indonesia

- Identify and mapping of Critical areas
- Review of existing vessel registry systems
- Identify potential incentives packages

### PNG

- Review current VMS registry and License condition of trawl fleets
- Research to assess fisheries resources status within 3 mile area

### Philippines

- Fish larval survey and critical habitat mapping
- Training of field officers on inventory procedures & registration/licensing, registry/database systems

### Thailand

- Validate existing data and inventory of trawl fishing fleets in the project areas

### Vietnam

- Review of status of trawl fisheries and vessel registration system in KienGiang

### 3. Information management and Communication

#### Activities Frame (FAO-LTU)

- Bycatch data collection (e.g. at landing sites and onboard vessels, and mapping of fishing ground characteristics),
- Standardized methods for bycatch data collection will be promoted across project countries
- Communicating bycatch data and information ( through website and information, education and communication (IEC) material)

**All Countries** Development of national project webpage

#### Indonesia

- Standardize data collection
- Training of enumerators/observers to collect data both onboard and landing sites

#### PNG

- Review/revise Observer programs to develop protocols/forms for trawl fishery data collection
- Develop trawl fisheries database
- Review and revise Logbooks, sampling forms/species guides

#### Philippines

- Coordination with collaborators to prepare data collections
- Training of enumerators for trawl catch/bycatch landing survey

#### Thailand

- Conduct data collection, analysis, size composition, proportion of catch, bycatch from mesh size expansion Zonation

#### Vietnam

- Develop protocols/forms for trawl fishery data collection
- Implement port sampling and trawl fishery logbook data collection program



## 4. Awareness Building

### Activities Frame (FAO-LTU)

- Fishers and other relevant stakeholders have improved their knowledge on bycatch, sustainability issues and collaborative managements
- Regional and national policy and decision-makers have been sensitized with regard to responsible trawl fisheries management
- Private sector, technical officers and extension workers (Government and NGOs) have improved their knowledge on BRDs and other management measures

#### All Countries

- Consultative meeting/workshop for stakeholders, fishing community and resource owners to introduce project, encourage participation, promote the for responsible trawl fishing and practices

#### Indonesia

- Carry out training needs assessment

#### PNG

#### Philippines

- Training / Seminar on BRDs & other management measures

#### Thailand

#### Vietnam

- Share project information through mass media and brochures distribution on bycatch management activities

## Benefits of reduced catches of trash fish and juveniles

- Improvement of productive potential of fish stocks
  - improved catches in the future ( + the small-scale sector)
  - larger size of fish
  - larger economic gains
  - improved food security
  - positive public attitude
  - new marketing opportunities
- Reduction of the operational costs
  - improved catch quality and value
  - less gear drag = reduced fuel cost
  - reduced sorting time of catch + crew
  - higher catch per unit of effort (CPUE)





# Expected long-term outcomes of REBYC-II CTI

- Critical barriers for executing responsible fishing by private sector understood and addressed.
- Incentives for trawl operators defined and implemented.
- Institutional arrangements and processes for public and private sector partnership in place.
- Appropriate harvest strategies available.
- Cost-effective measures and practices adopted to reduce catches of juvenile fish and other species at risk
- Improved data on catch composition and on condition of sensitive fishing grounds collected through standardized methods across all project countries.
- Agreed regional trawl management plans







<http://www.rebycti.org>

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