



REPORT OF THE 2ND REGIONAL TECHNICAL WORKSHOP ON
SAFETY AT SEA
FOR SMALL FISHING BOATS

20-23 APRIL 2010
Samut Prakan, Thailand



Training Department
Southeast Asian Fisheries Development Center





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PREPARATION AND DISTRIBUTION OF THIS DOCUMENT

Report of the 2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats, SEAFDEC Training Department, Thailand, 20 - 23 April 2010 was prepared by the Training Department to participants of the meeting, SEAFDEC member countries, SEAFDEC Departments and concerned institutions.

BIBLIOGRAPHIC CITATION

SEAFDEC. 2010 Report of the 2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats, SEAFDEC Training Department, Thailand, 20 - 23 April 2010, Southeast Asian Fisheries Development Center. 132 pp.

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Table of Contents

I.	Introduction.....	1
II.	Review of International, Regional and National Initiatives Related to Safety at Sea for Small Fishing Boats.....	2
III.	Current Situation of Safety at Sea: Progress of the National Works on Improvement of Safety at Sea for Small Fishing Boats.....	6
IV.	Recording Accidents of Small Fishing Boats at Sea.....	9
V.	Ways to Improve Safety at Sea for Small Fishing Boats.....	10
VI.	Conclusion and Recommendations.....	11
VII.	Closing of the Workshop.....	11
VIII.	Study Trip to Samuk Sakorn and Samut Songkham.....	12
Annex 1	.....	13
Annex 2	.....	22
Annex 3	.....	25
Annex 4	.....	26
Annex 5	.....	31
Annex 6	.....	36
Annex 7	.....	39
Annex 8	.....	64
Annex 9	.....	66
Annex 10	.....	70
Annex 11	.....	71
Annex 12	.....	72
Annex 13	.....	75
Annex 14	.....	82
Annex 15	.....	86
Annex 16	.....	90
Annex 17	.....	97
Annex 18	.....	101
Annex 19	.....	103
Annex 20	.....	107
Annex 21	.....	112
Annex 22	.....	114
Annex 23	.....	116
Annex 24	.....	119
Annex 25	.....	124
Annex 26	.....	125
Annex 27	.....	126
Annex 28	.....	128
Annex 29	.....	129
Annex 30	.....	131
Annex 31	.....	132

**Report of the Second Regional Technical Workshop on Safety at Sea
for Small Fishing Boats
Samutprakarn, Thailand
20-23 April 2010**

I. INTRODUCTION

1. The Second Regional Technical Workshop on Safety at Sea for Small Fishing Boats was held at the Training Department (TD) of the Southeast Asian Fisheries Development Center (SEAFDEC) in Samut Prakarn, Thailand from 20 to 23 April 2010, as a sequel to the First Regional Workshop on Safety at Sea for Small Fishing Boats which was organized by SEAFDEC in December 2003. Considering that safety at sea is a serious problem in developing countries, the First Regional Workshop recommended that the progress of the initiatives of the respective Southeast Asian countries in improving safety at sea for small fishing boats should be reviewed taking into account the international and regional initiatives on safety at sea. Thus, the Second Regional Technical Workshop was organized to review such initiatives with special focus on the establishment of a mechanism for recording the accidents at sea of fishing vessels, and on the need to improve the conditions of fishing boats and fishers in the Southeast Asian region.

2. The Second Regional Technical Workshop was attended by representatives from the SEAFDEC Member Countries, namely: Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Vietnam; as well as from Timor-Leste. The Workshop was also attended by representatives from the Bay of Bengal Program-Intergovernmental Organization (BOBP-IGO), Fisheries Research Agency (FRA) of Japan, Food and Agriculture Organization (FAO) of the United Nations, Kasetsart University (KU) of Thailand, Marine Department of Thailand, National Disaster Warning Center of Thailand, National Fisheries University (NFU) of Japan, the Secretariat of the Pacific Community (SPC), Thailand Maritime Enforcement Coordination Center (Thai-MECC or SORNCHON), and from the Tokyo University of Marine Science and Technology (TUMSAT) of Japan. The SEAFDEC Secretary-General, Deputy Secretary-General and senior officials from the SEAFDEC Secretariat, Marine Fishery Resources Development and Management Department (MFRDMD), and TD also attended the Workshop. The List of Participants appears as **Annex 1**.

1.1 Opening of the Workshop

3. During the presentation of the background and rationale of the Second Regional Technical Workshop, the Head of the Information and Training Division of SEAFDEC/TD and SEAFDEC Safety at Sea Project Coordinator, *Mr. Bundit Chokesanguan* specified that the Workshop also aimed to establish a collaborative mechanism among relevant agencies, organizations and authorities for the improvement of safety at sea for fishing boats and fishers as well as to initiate the preparation of regional guidelines for safety at sea of small fishing boats for Southeast Asia.

4. He added that the Workshop was also envisaged to establish a network for the exchange and sharing of information to improve the conditions of fishing boats and lives of fishers at sea in the Southeast Asian region. The Prospectus of the Workshop is shown as **Annex 2**.

5. The Secretary-General of SEAFDEC, *Dr. Chumnarn Pongsri* welcomed the participants to the Workshop and emphasized that SEAFDEC would continue its efforts in improving safety at sea in order to contribute to the overall promotion of safety and welfare in the fisheries sector for the sustainable development of fisheries in the Southeast Asian region. After advocating the need to improve the conditions of fishing boats as well as the living conditions of the fishers and crew taking into consideration the regional and international guidelines on safety and health in the fishing industry, he declared the Workshop open. His Opening Address appears as **Annex 3**.

1.2 Adoption of the Agenda

6. The Agenda of the Workshop, which is shown as **Annex 4**, was adopted.

II. REVIEW OF INTERNATIONAL, REGIONAL AND NATIONAL INITIATIVES RELATED TO SAFETY AT SEA FOR SMALL FISHING BOATS

2.1 Review of Global Initiatives Related to Safety at Sea for Small Fishing Boats

7. The Review on International Initiatives Related to Safety at Sea for Small Fishing Boats (**Annex 5**) was presented by *Mr. Ari Gudmundsson*, Fishery Industry Officer (Vessels) of the Fishery Technology Service of FAO. His report focused on the collaboration of FAO on safety at sea aspects with the International Labor Organization (ILO) and the International Maritime Organization (IMO) on the safety of fishing vessels and fishermen. Under such collaboration, FAO takes care of fisheries in general, ILO for labor in the fishing industry, while IMO looks after safety of life, vessels and equipment at sea. Based on such cooperation, the Code of Safety for Fishermen and Fishing Vessels had been formulated comprising Part A which deals with the skippers and crew, and contains provisions for operational and occupational requirements; and Part B targeting the shipbuilders and owners, and specifies the requirements for the construction and equipment of fishing vessels 24 meters in length and above.

8. With regards to the current status of the international safety standards for fishing vessels and fishermen, he presented the recent activities of FAO that support the implementation of the Code of Conduct for Responsible Fisheries specifically on safety at sea in the fisheries sector. He also presented the recent development regarding international safety standards which include the 1993 Torremolinos Protocol for fishing vessels 24 m in length and above which must be equipped to carry out fishing operations in distant waters in an environment-friendly manner but such Protocol is not yet in force pending ratification.

9. Furthermore, the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F Convention) includes requirements for training in basic safety for all fishing vessel personnel. The STCW-F is expected to enter into force soon after ratification by two more States. In this regard, he suggested that the STCW-F could be used as reference and guide for the formulation of training programs for the crew and personnel of fishing boats in the Southeast Asian region.

10. While noting that the report of FAO focuses on fishing vessels over 24 m in length and to certain extent on vessels below 12 m in length, the representative from the Philippines suggested that SEAFDEC should establish guidelines that could address the safety aspects of fishing boats less than 24 m but more than 12 m in length, considering that majority of the fishing boats in the region could be classified under this group. In response, SEAFDEC agreed to consider the proposal to develop such guidelines. However, since such group of fishing boats had not been considered in the safety at sea provisions in the Code of Conduct for Responsible Fisheries, a collaborative effort could be forged among the concerned international and regional organizations including SEAFDEC, to formulate the guidelines that would fill up such gap.

11. Moreover, the representative from Indonesia suggested that national inventory should also be conducted to assess the extent of compliance of the abovementioned international instruments on safety at sea by the countries in the Southeast Asian region. He also added that the existing relevant national regulations in safety at sea should be harmonized with the international regulations and instruments in order to maximize compliance by the countries in the region.

12. With regards to the proposed organization of the 5th International Fishing Industry Safety and Health Conference (IFISH 5) in 2012, SEAFDEC offered the possibility of co-hosting the Conference if the venue would be in Bangkok, Thailand. By actively participating in IFISH 5, SEAFDEC could enhance its efforts in promoting the link between fisheries management and safety at sea aspects for small fishing boats.

2.2 Review of the South Pacific Regional Initiatives Related to Safety at Sea for Small Fishing Boats

13. The Issues and Initiatives Related to Small Fishing Vessels Safety in the Pacific Island Region (**Annex 6**) were reported *Mr. Michel Blanc*, the Nearshore Fisheries Development Adviser for the Secretariat of the Pacific Community (SPC). He emphasized on the efforts of the Pacific Island countries in improving safety at sea in collaboration with UN agencies and regional organizations considering that the respective government agencies have limited involvement with such issue in spite of the fact that the region has the highest rates of sea accidents in the world. He cited that the SPC had also conducted sea safety awareness campaign for the Pacific Island countries based on the results of the surveys on sea safety issues conducted in the Pacific Island countries by FAO, where the results indicated that most of accidents at sea had been associated with small fishing boats.

14. During the discussion, the representative from SPC also suggested that the countries in the Southeast Asian region could refer to the websites of SPC for the various materials on safety at sea which could be used as guide especially during the conduct of national HRD programs on safety at sea. He specifically cited that the information in the SPC website on safety for fishermen could be adopted by the Southeast Asian countries taking into consideration the respective countries' local contexts and specificities. He also offered to collaborate and exchange information with the Southeast Asian countries for the promotion of safety at sea aspects for small fishing boats as well as for the safety of fishers.

2.3 Review of the South Asian Regional Initiatives Related to Safety at Sea for Small Fishing Boats

15. A Review of the South Asian Regional Initiatives Related to Safety at Sea (**Annex 7**) was presented by *Dr. Yugraj S Yadava*, Director of the Bay of Bengal Program-Intergovernmental Organization (BOBP-IGO). He summarized the efforts of BOBP in promoting safety at sea especially its initiatives in the surveillance and reporting of fishing-related accidents at sea as well as on its awareness campaign activities which had been carried out through training and dissemination of information materials. He also explained the need to link fisheries management with safety at sea aspects for the sustainable development of fisheries, considering that sustainable fisheries implies sustainable livelihood which in turn implies reduction of vulnerability leading to safe fishing operations.

2.4 Experience and Lessons Learned by the SEAFDEC-Sida Project on Safety at Sea for Fishing Boats in the Gulf of Thailand and Andaman Sea

16. The Experience and Lessons Learned by the SEAFDEC-Sida Project on Safety at Sea for Fishing Boats in the Gulf of Thailand and Andaman Sea (**Annex 8**) were reported by *Ms. Pattarajit Kaewnuratchadasorn* of the SEAFDEC Secretariat. The major activities undertaken by the SEAFDEC-Sida Project included the Regional Workshop on Fishing Vessel Record and Inventory in July 2009 which recommended the need to develop regional standards or specifications that are applicable to the Southeast Asian region taking into consideration the international standards and requirements.

17. In addition, the Project also carried out sub-regional activities that include the Second Gulf of Thailand Meeting in February 2009 and the First Meeting on the Andaman Sea in October 2009. Based on the recommendations of the aforementioned activities, the various aspects that should be considered while promoting safety standards and safety at sea could include among others the need to come up with fishing vessel record and inventory in Southeast Asia, to be promoted with safety aspects in connection with registration and licensing of fishing vessels, gear and crew.

2.5 Safety at Sea for Trawlers and Purse Seiners: A Case Study in Thailand

18. The result of the Case Study on Safety at Sea for Trawlers and Purse Seiners in Thailand (**Annex 9**) was reported by *Mr. Bundit Chokesanguan*. The report showed that the safety conditions of trawlers and purse seiners in Thailand vary according to the areas and sizes of the fishing boats. In addition, the results also indicated that more than 40% of the fishing boats have experienced accidents at sea due to the insufficient competence of the crew and who are working in poor working conditions for long hours. Based on the results of the study, the need for awareness building about safety at sea for the vessel crew, fishing boat owners and responsible officers was recommended while information on fatal accidents onboard and at sea should also be compiled and disseminated to all stakeholders.

2.6 Review of Initiatives Related to Safety at Sea for Small Fishing Boats of Other Organizations/Institutions

19. The representative from the National Fisheries University of Japan, *Mr. Junji Kawasaki* reported on the Safety of Fishermen in the Fishing Boat Operations in Japan (**Annex 10**). In addition, Modeling Experiments of Craft Capsizing in Japan (**Annex 11**) was presented by *Mr. Jun Miyoshi* of the National Research Institute of Fisheries Engineering of the Fisheries Research Agency of Japan.

20. Some ways of improving safety for small fishing boats in ship congestion area (**Annex 12**) were suggested by *Dr. Seiichi Takeda* of the Laboratory of Fishing Boat Engineering of Tokyo University of Marine Science and Technology (TUMSAT) of Japan. The causes of marine accidents of fishing boats and the factors affecting the safety for small fishing boats in Japan include stability, strength, fishing methods and operation, machinery maintenance, life saving equipment on board, and seaworthiness of the vessels. In the questionnaire survey conducted by TUMSAT with the navigation officers and fishers as respondents, the result indicated that in maintaining safety not only for small fishing vessels but also other ships and vessels, various aspects should be taken into consideration, such as cooperative operation, communication, giving way, mutual understanding, and early warning system.

21. While presenting the Initiatives Related to Safety for Small Fishing Boats by SORNCHON of Thailand (**Annex 13**), the Director of the Marine Security Division of the Thai-MECC, *Capt. Apichai Sompolgrunk* emphasized that the Thai-MECC plays the role as coordinator of the various maritime authorities comprising various national agencies, for promoting the safety at sea of small fishing boats. The Thai-MECC has been coordinating with relevant agencies for the implementation of the MCS in Thailand.

III. CURRENT SITUATION OF SAFETY AT SEA: PROGRESS OF THE NATIONAL WORKS ON IMPROVEMENT OF SAFETY AT SEA FOR SMALL FISHING BOATS

3.1 Brunei Darussalam

22. The representative from Brunei Darussalam, *Mr. Awang Bidin Suru* presented the Initiatives of Brunei Darussalam on Safety at Sea for Small Fishing Boats (**Annex 14**). He explained that since most of the small fishing boat crew and personnel are not formally trained in seamanship and navigation, training and certification should therefore be conducted in order to promote safety at sea. He also suggested various measures that include the need for all small fishing boats to be properly registered with proper authorities for safety reasons, and that fishing vessel owners should also provide on-board occupational safety and health awareness training for the crew and personnel.

3.2 Cambodia

23. The Current Situation of Safety at Sea of Small Fishing Vessels of Cambodia (**Annex 15**) was presented by *Mr. Chhuon Kim Chhea* from the Fisheries Affairs Department of the Fisheries Administration of Cambodia. The report indicated very limited information on small fishing boat accidents in the country, as the country's National Committee for Disaster focused their efforts in the inland areas. Few incidents of sea safety accidents were however, reported where boats sank resulting in losses of lives of fishers at sea due to inadequate safety equipment carried onboard. He also summarized the 4-year project of the Fisheries Administration of Cambodia with support from FAO, in developing measures to improve safety at sea and reduce vulnerability for fishers in Cambodia, which started in 2010.

3.3 Indonesia

24. The Progress of the Improvement of Safety at Sea for Small Fishing Vessels in Indonesia (**Annex 16**) was presented by *Mr. Saharyanto* from the Jakarta Fisheries University of Indonesia. He cited the responsibilities of competent authorities in ensuring safety at sea which could include among others the conduct safety and health training, imposing minimum requirements for fishing vessel personnel, development of manning regulation based on size and type of fishing vessel, conduct of fishing vessel inspection, promotion of health and safety management, improvement of access to insurance, and establishment of reporting and investigation systems.

25. Considering that stability of the fishing vessel has been considered one of the major causes of frequent capsizing of fishing boats leading to fatal accidents at sea, the representative from FAO suggested that the FAO publication on Safety Practices Related to Small Fishing Vessel Stability which includes the basic principles of stability and provides simple guidance for vessel crew to maintain adequate stability of their vessels, could be used as awareness raising materials and could be adapted in the local context of the Southeast Asian region. He also added that since the publication has been translated into Bahasa Indonesia for dissemination in Indonesia, the other countries in Southeast Asia could also translate the publication in their respective national languages to maximize its usage in the region.

3.4 Japan

26. The Current Situation of Safety at Sea: Progress of the Improvement of Safety at Sea for Small Fishing Boats (**Annex 17**) was presented by *Mr. Akihiko Matsuda*, Head of the Safety and Stability Research Team of the National Research Institute of Fisheries Engineering of the FRA of Japan. The efforts of Japan include licensing of small boats and small boat skippers as well as the conduct of safety lecture classes and dissemination of safety at sea information materials by the agencies responsible for the promotion of safety at sea.

27. During the discussion, the possibility of getting the young generation of the countries in the Southeast Asian region, to be involved in fishing operations should be explored taking into consideration the case of Japan where most of the fishers are already aged posing a problem on the sustainability of fishing operations.

3.5 Lao PDR

28. The Current Situation of Safety at Sea for Small Fishing Vessels in Lao PDR Focusing on the Inland Waters (**Annex 18**) was presented by *Mr. Akhane Phomsouvanh* of the Fisheries Division of the Department of Livestock and Fisheries of Lao PDR. The country's fishing boats are not registered and with no safety equipment onboard, fishing is not licensed while fishers are not registered and no certification required. Moreover, there are no full time fishers in Lao PDR considering that during the rainy season, the people devote their time in cultivating rice and it is only during the hot season that the people would go fishing. With inland waters that comprise the Mekong River cutting across the country from north to south and its tributaries, and two reservoirs, the Workplan to improve the safety at sea aspects in the inland waters of Lao PDR include the conduct of HRD activities for fishers, creating awareness on safety in inland waters, establishment of a registration system for fishing boats, setting up of reporting network, and establishment of a system for recording fishers even if they are part-time fishers only.

29. In the discussion, the representative from FAO suggested that the Outline for Best Practices for Safety at Sea in the Fisheries Sector which was developed during the FAO Expert Consultation on in November 2008 could also be used as guide in developing programs on the promotion of safety aspects in the inland waters of the Southeast Asian region. The November 2008 FAO Consultation also agreed that the word "sea" in "safety at sea" includes oceans, seas, bays, sounds, estuaries, rivers and lakes as well as the aquaculture environment.

3.6 Malaysia

30. The progress made by Malaysia on the Improvement of Safety at Sea for Small Fishing Boats (**Annex 19**) was reported by *Ms. Noorliza binti Ramli*, Fisheries Officer of the Licensing and Resources Management Division of the Department of Fisheries Malaysia. The efforts of Malaysia include registration of fishing boats and fishermen as well as maintaining standards of boats and crew. Moreover, in the renewal of the license of fishing boats, one of the requirements is the availability of sufficient safety equipment onboard as well as the vessel condition in terms of sea worthiness.

31. Taking into consideration the efforts of the countries in the Southeast Asian region to make their respective MCS system function effectively, *e.g.* the MCS system in Malaysia which is considered the most effective in Southeast Asia, the MCS system of the countries in the region could be developed and evolved into a good safety regime since MCS system *per se*, focuses only on management with minimal component on safety at sea.

3.7 Myanmar

32. The report on Safety of Small Fishing Boats in Myanmar (**Annex 20**) was presented by *Mr. Nyunt Sann* of the Department of Fisheries of Myanmar. The country has put in place a data recording system mainly with the Department of Fisheries in coordination with other competent authorities in the country, which also collects information on accidents related to fishing operations. Under this system, the detailed causes of some accidents and casualties in the industry had been analyzed and countermeasures identified and promoted.

33. While taking note of the efforts of the countries in Southeast Asia to reduce the number of accidents at sea, the effective conduct of training programs and awareness building activities in Myanmar could be referred to and the countries in the region could learn from the experiences of Myanmar for the development of their respective awareness creation programs on safety at sea.

3.8 Philippines

34. The progress on the Improvement of Safety at Sea for Small Fishing Boats in the Philippines (**Annex 21**) was reported by *Mr. Fileonor O. Eleserio* of the Capture Fisheries Division of the Philippine Bureau of Fisheries and Aquatic Resources. The common accidents involving small boats in the Philippines include capsizing and sinking mainly due to poor stability, this is in spite of the installation of outriggers in small boats used in the country. In an effort to improve the safety of small boats, efforts had been initiated by the Philippines to register all small boats, and promote strict enforcement of relevant regulations (*e.g.* safety regulations, issue boatbuilding/boatyard certification, conduct of relevant training programs).

35. In order to improve the stability of small fishing boats, the types of boats used in the Southeast Asian region should be assessed as far as sea worthiness is concerned in order to develop the appropriate guidelines on the most suitable design for small fishing boats which should be as safe as possible. In addition, the most suitable materials to be used, convenience in getting about in ports and piers, safety during inclement weather, among others, should also be taken into consideration in designing the small fishing boats.

3.9 Thailand

36. The report on Safety of Small Fishing Vessels in Thailand (**Annex 22**) was presented by *Mr. Kanit Chuapan* of the Upper Gulf Marine Fisheries Research and Development Center of the Department of Fisheries of Thailand. The report included the replacement of about 5,000 boats lost during the 2004 Tsunami by fiberglass fishing boats, which have been designed with maximum safety in mind and easier to construct than the wooden boats. Moreover, based on the initiatives of His Majesty the King of Thailand, experiments on installation of sails in the fiberglass boats have been conducted to reduce the fuel consumption of the fishing boats.

37. During the discussion, the representative from BOBP-IGO commended Thailand for replacing the lost wooden boats with fiberglass boats considering that there have been recent campaigns to reduce the footprints from fisheries. In this connection, the need to find a replacement of wood for boat material was deemed necessary as wooden boats had been found to contribute to increased footprints in fisheries, thus, the need to look for alternative materials (*e.g.* fiberglass reinforced plastics or FRP).

3.10 Vietnam

38. The Current Situation of Safety at Sea for Small Fishing Boats in Vietnam (**Annex 23**) was reported by *Mr. Tran Van Luan* of the Department of Capture Fisheries and Resource Protection of Vietnam. He emphasized that most accidents happened at sea because of mistakes of the fishermen which could be due to insufficient professional experience, limited knowledge on marine safety, inadequate equipment onboard, and changing weather conditions such as typhoon, which could no longer be predicted.

39. In the discussion, he suggested that it would be necessary to provide the fishers with information about typhoons at least one week before typhoons hit land, and that all fishing boats should be required to carry onboard important communication systems including radio, hand phone, etc.

3.11 Timor-Leste

40. The representative from Timor-Leste, *Mr. Sabino Leto Adonia* made a brief report on the progress and development in his country. When Timor-Leste gained independence in May 2002, the country set out its vision in the first National Development Plan for development of important sectors including the sustainable management of the agriculture, forestry and fisheries. The legislation and policies on natural resources management and environment management are still at an infancy stage and most legislations are still currently being drafted and developed.

IV. RECORDING ACCIDENTS OF SMALL FISHING BOATS AT SEA

41. The definitions and causes of accidents as well as the underlying and latent factors that could lead to accidents at sea (**Annex 24**) were presented by *Mr. Anurak Loong-on* of the SEAFDEC Training Department.

42. The Workshop agreed that the scope of recording accidents should target the small vessels, *i.e.* less than 24 m in length, and that the gaps existing within this group of vessels and the vessels more than 12 m but less than 24 m in length should be identified and filled up. Moreover, the information collected should be relevant even to the smallest of the small fishers, by explaining to them the objectives of the recording exercises and the benefits that the small fishers can derive from reporting information on accidents at sea. Moreover, creating awareness on the outcomes of the reporting exercises should be enhanced with the ultimate objective of changing the mindset of the small fishers.

43. During the discussion, the Workshop agreed that the various concerns in the effective reporting and recording of accidents at sea should be addressed. Such concerns could include the incentives or disincentives that could be derived from reporting the accidents (*e.g.* indemnity program, subsidies for fishermen), the causative agents of the accidents for the government to provide the necessary interventions, the administrative costs incurred during the reporting process, the competent authorities to take charge of the compilation and analysis of the reports, etc.

44. The Workshop also agreed that the reporting format should be as simple as possible as shown in **Annex 25**, and that the relevant draft guidelines on the Best Practices for Safety at Sea in the Fisheries Sector being formulated by FAO could be taken into consideration in formulating the format for recording accidents at sea.

45. A Roadmap with short-term time span should also be developed for the countries in the Southeast Asian region to consider encompassing the adopted simple reporting format (subject for revision by respective governments) for presentation to the communities or local organizations. Once accepted by local communities, the format could be pilot tested in selected communities of the respective countries and the results of the pilot testing should be reported to SEAFDEC at the end of the time span.

V. WAYS TO IMPROVE SAFETY AT SEA FOR SMALL FISHING BOATS

46. In order to discuss the direction and way forward to improve the safety at sea for small fishing boats in the Southeast Asian region, the Workshop participants were divided into two groups based on their capabilities and expertise. The outputs of the two groups would be used as inputs for the regional guidelines. Moreover, the identified key points by the two groups would be incorporated in the Recommendations of the Workshop.

47. The two groups discussed separately the issues that concern safety at sea in the Southeast Asian region. The first group was tasked to discuss the issues that relate to: (1) Boats and Boat Design and Construction; (2) Equipments and Tools and Facilities; and (3) Awareness and Capacity Building Programs. On the other hand, the second group discussed the issues related to: (1) Safety Fishing Operations and Working Procedures; (2) Crews and Fishermen (knowledge, standards, certifications); and (3) Awareness and Capacity Building Programs.

48. The outcomes of the group discussions on (1) Boats and Boat Design and Construction; (2) Equipments and Tools and Facilities; (3) Safety Fishing Operations and Working Procedures; (4) Crews and Fishermen (knowledge, standards, certifications); and (5) Awareness and Capacity Building Programs, are shown as **Annex 26** and **Annex 27**, respectively.

VI. CONCLUSION AND RECOMMENDATIONS

49. While noting that the Workshop on Safety at Sea for Small Fishing Boats organized by SEAFDEC in December 2003 agreed on a set of recommendations to be used as basis for the formulating a comprehensive framework of a program that could promote safety at sea for small fishing boats (**Annex 28**), the Second Workshop after revisiting the aforementioned December 2003 recommendations, considered the following suggestions to enhance the said recommendations:

- (1) For the stakeholders to be involved in the training programs, family members should be included considering the role of the family in promoting safety at sea, and other stakeholders such as government officials should also be involved
- (2) Raise the political will of policy makers, politicians, ministers, etc. in the aspects of safety at sea
- (3) Heighten the consciousness of individual fishers on safety concerns to change their safety culture and mindset
- (4) Raise the over-all profile of safety at sea to the general public through the public media and relevant information materials
- (5) Assure that access to life insurance as well as boat insurance are is developed
- (6) In the regional guidelines, small fishing boats could be defined as those less than 24 m in length

50. The Workshop also agreed that the recommendations raised during the Second Workshop could be used to update and enhance the December 2003 recommendations. Therefore, by using the December 2003 recommendations as template, the over-all recommendations on Safety at Sea for Small Fishing Boats in the Southeast Asian Region which appear as **Annex 29** have been considered as the framework for the formulation of appropriate programs on safety at sea to be developed for the Southeast Asian region.

VII. CLOSING OF THE WORKSHOP

51. The Deputy Secretary-General of SEAFDEC and Deputy Chief of SEAFDEC/TD, *Mr. Kenji Matsumoto* thanked the participants for their active participation and for the information provided during the Workshop, which SEAFDEC could refer to in its continued efforts in promoting the improvement of safety at sea for small fishing boats and fishers in the region. After ensuring that SEAFDEC would continue to work on the aspect of safety at sea to alleviate the conditions of the fisheries industry, he declared the Workshop closed. His Closing Remarks is shown as **Annex 30**.

52. The SEAFDEC Coordinator for the Safety at Sea Project, *Mr. Bundit Chokesanguan* also thanked the participants for their active participation in the Workshop. He also thanked the Secretariat of the Workshop for their efforts contributions for the success of the Workshop. His Closing Message appears as **Annex 31**.

VIII. STUDY TRIP TO SAMUK SAKORN AND SAMUT SONGKHRAM

53. The participants of the Workshop were taken to a study trip to the Provinces of Samut Sakorn and Samut Songkhram in Thailand. The itinerary included visit to a dockyard, fishing ports, a fishing village in Samut Songkhram and other relevant facilities.

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2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats
SEAFDEC Training Department
 4 days, 20-23 April 2010



Provisional Prospectus (WP_01)

I. Background and Rationale:

There are over a million of small fishing boats operating in the Southeast Asian (SEA) Region and that represents a high risk occupation. Even fishers have in nature and experience with very skillful and accomplished sailors who possess a great amount of weather and sea-going knowledge. *Nevertheless, accidents of the fishing boats still happen and the natural disasters have been currently recognized as an increasing unexpected matter due to the climate change and global warming.*

At global level, the Fisheries Department of FAO has been working in the field of fishers' safety for over 50 years to address the safety aspects of the fishing industry adequately because the nature of fishing operations is different from the merchant shipping. In 2001, FAO published "Safety at sea as an integral part of fisheries management" with the focus given to urge that the *safety at sea should be integrated into general management of the fisheries at the national level*. It was mentioned that safety at sea is a very serious problem in the developing countries and it is likely that many developing countries have been seeking external advice in planning of fishery management in their EEZ.

In the year 2003, SEAFDEC Training Department with the support from Japanese Trust Fund Program organized the 1st Regional Workshop on Safety at Sea for Small Fishing Boats. Experiences from the national initiatives to improve safety at sea for small fishing boats has been presented and discussed. The major conclusion included recommendation on safety at sea for small fishing boats in SEA. Since then, *progress of the national work on the safety at sea for small fishing boats in Southeast Asia is needed to be reviewed at the regional level.*

Recently, SEAFDEC Training Department (TD) with the support from FAO has conducted a study on safety at sea for fishing boats. The survey method was used in the study focusing with trawlers and purse seiners operating in the Gulf of Thailand and Andaman Sea. The result shows that only the commercial size of fishing boats are at the safety standard whereas the small fishing boats do not meet safety standards¹. This preliminary study indicated that there is a *need to address for further improvement of the safety at sea for small fishing boats; and to establish an appropriate national system for recording accident at sea of the fishing vessels.*

In this connection, the 2nd Regional Workshop on Safety at Sea for Small Fishing Boats will be organized in following up with international and regional initiatives related to safety at sea for small fishing boats with the special focus on the further establishment of an appropriate

¹ Referred to Marine Department and Department of Fisheries Thailand.

mechanism to record the accident at sea of the fishing vessels and to improve live of small fishing boats operators in dealing with the climate change.

II. Objectives:

1. To review international, regional, and national initiatives related to safety for small fishing boats
2. To review the progress of national works on improvement of safety at sea
3. To discuss on how to establish the system or mechanism at the national level for recording accident at sea of small fishing boats
4. To establish a collaborative efforts among the relevant agencies/authorizes for improvement of safety at sea for fishing vessels; and
5. To prepare regional guidelines for safety at sea of small fishing boats

III. Expected Outputs:

1. Set of document/information on the current situation of safety at sea of small fishing vessels
2. Set of recommendations for further development and establishment of a mechanism/system for recording accident at sea of the small fishing boats
3. Establishment of a network for future information exchange and sharing to improve live at sea of the small fishing boats in the SEA region; and
4. A draft regional guidelines for safety at sea of small fishing boats

IV. Date and Venue: to be organized during 20 -23 April 2010, 4 days, at SEAFDEC/TD

V. Target Participants and Resource Persons: SEAFDEC Member Countries (one each), SEAFDEC Non-Member Country (South Asia and Others), FAO, IMO, FRA (Japan), SEAFDEC Secretariat, ASEAN, SEAFDEC-Sida Project, SEAFDEC's relevant Projects, Fishers Association, Maritime Department, Statistic Bureau, etc.

VI. Agenda

1. **Introduction and opening**
2. **Review on international, regional, and national initiatives related to safety for small fishing boats (covering numerous dimensions such as Marine Time Safety, Vessels Registration, etc.)**
 - 2.1 FAO
 - 2.2 IMO, FRA (Japan)
 - 2.3 A Case Study in Thailand – Safety at Sea for Trawlers and Purse Seiners
 - 2.4 Experiences and Lessons Learned by SEAFDEC-Sida Project on Safety at Sea for Fishing Boat in the Gulf of Thailand and Andaman Sea
 - 2.5 Others

3. **Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats (to be presented by SEAFDEC Member- and Non-Member Countries' Representative)**
4. **Special discussion on “How to record accident of small fishing boats” – panelist compose of FAO, IMO, FRA (Japan), SEAFDEC, Statistical Bureau, and Marine Time Dept, and Small-scale Fishers Association.**
5. **Brain storming session on “Ways to improve safety at sea for small fishing vessel”**
6. **Conclusion and Recommendations**
7. **One-day Study Trip to observe fishing boats, dock yards, etc.**
8. **Closing**

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VIII. Further Readings and References

1. Bundit C. and Sutee R., 2009. Technical Report on Safety at Sea for Trawlers and Purse Seiners Survey in Thailand. SEAFDEC Training Department.
2. Gudrun P. FAO Fisheries Circular No. 966 FIIT/C966. 2001. Safety at sea as an integrated part of fisheries management. 49pp.
3. SEAFDEC Training Department. 2004. Proceeding of the 1st Regional Workshop on Safety at Sea for Small Fishing Boats, 17-19 December 2003, SEAFDEC Training Department, Thailand. TD/RP/63. 81pp.
4. Others

OPENING ADDRESS

Dr. Chumnarn Pongsri

**SEAFDEC Secretary General & Chief of the Training Department
2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats
SEAFDEC Training Department, 20-23 April 2010**

Distinguished Guests, Participants, Ladies and Gentlemen, Good morning!

It is indeed with great pleasure that I welcome you all to this Second Regional Technical Workshop on Safety at Sea for Small Fishing Boats, which is part of the commitment of SEAFDEC to assist the Member Countries in promoting international safety measures and standards for their fishing vessels as well as for the fishers and the vessel crew. SEAFDEC had always recognized the importance of safety at sea for the fishing boats in our region which are generally considered small-scale. In fact, the Regional Guidelines for Responsible Fishing Operations which SEAFDEC in collaboration with the Member Countries put up in 2000, provided that “States should be encouraged to elaborate special safety standards and policies with emphasis on the smaller boats”, and that “SEAFDEC should support its Member Countries to urgently formulate such standards for smaller fishing vessels in the region.”

We are all aware that there are over a million small fishing boats operating in the Southeast Asian region. Such big number could easily pose high risks in fishing operations. Although some fishers and crew could be very skillful as accomplished sailors, and possessing great amount of knowledge on weather and sea conditions, accidents involving fishing boats still continue to happen. This is coupled with natural disasters that occurred unexpectedly due to the effects of climate change and global warming. The series of workshops on safety at sea, the first of which was conducted in 2003, is SEAFDEC’s contribution to the overall promotion of safety and welfare in the fisheries sector in order to attain sustainable development of fisheries in the Southeast Asian region.

As I have just mentioned, the SEAFDEC Training Department organized the First Regional Workshop on Safety at Sea for Small Fishing Boats in 2003 where the initiatives of the SEAFDEC Member Countries in improving safety at sea for small fishing boats were presented. Since then, efforts have been made by the countries to conduct national activities on safety at sea for small fishing boats. This Second Regional Workshop is therefore an opportune time to review and exchange information on the progress of the activities carried out by the Member Countries on safety at sea for small fishing boats. We also envisaged that this Workshop would come up with a regional mechanism to improve the conditions of fishing boats as well as the living conditions of the fishers and crew, taking into consideration the regional and international guidelines on improving the safety and health in the fishing industry.

With that note, Ladies and Gentlemen, I take great pleasure in declaring this important workshop open. I very much look forward to the success of this workshop, and await the recommendations that you would arrive at during the workshop which SEAFDEC and the Member Countries could use as framework for the formulation of appropriate programs and activities to promote the issue on safety at sea for small fishing boats in our region. Thank you once again and good day!

Provisional Agenda

- Agenda 1.** Introduction and opening of the Workshop
- 1.1 Welcome and introduction of the Workshop
 - 1.2 Opening Address by Secretary-General, Dr. Chumnarn Pongsri
 - 1.3 Adoption of the Agenda
- Agenda 2.** Review on international, regional and national initiatives related to safety at sea for small fishing boats
- 2.1 Review on Global initiatives related to safety at sea for small fishing boats (by Mr. Ari Gudmundsson, FAO)
 - 2.2 Review on South Pacific regional initiatives related to safety at sea for small fishing boats (by Mr. Michel Blanc, SPC/CPS)
 - 2.3 Review on North Pacific regional initiatives related to safety at sea for small fishing boats (by Dr. Philip Somervell, CDC/NIOSH/APRO)
 - 2.4 Review on South Asia regional initiatives related to safety at sea for small fishing boats (by Dr. Yugraj Singh Yadava, BOBP)
 - 2.5 Experience and lessons learned by SEAFDEC-Sida Project on safety at sea for fishing boats in Gulf of Thailand and Andaman Sea (by Ms. Pattaratjit Kaewnuratchadasorn, SEADFEC-Sida Project)
 - 2.6 Safety at Sea for Trawlers and Purse Seiners- A Case Study in Thailand (by Mr. Bundit Chokesanguan, SEAFDEC/TD)
 - 2.7 Review on initiatives related to safety at sea for small fishing boats of other organizations/institutions
 - TUMSAT (Dr. Seiichi Takeda)
 - SORNCHON
 - Others
- Agenda 3.** Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats
- 3.1 Brunei Darussalam
 - 3.2 Cambodia
 - 3.3 Indonesia
 - 3.4 Japan
 - 3.5 Lao PDR
 - 3.6 Malaysia
 - 3.7 Myanmar
 - 3.8 Philippines
 - 3.9 Singapore
 - 3.10 Thailand
 - 3.11 Vietnam
- Agenda 4.** Special discussion on “How to record accident of small fishing boats”

Agenda 5. Brain storming session on “Ways to improve safety at Sea for small fishing boats”

Agenda 6. Conclusion and Recommendations

AGENDA AND TIMETABLE

20 April 2010 (Tuesday)

0830-0900	Registration
0900-0940	<p>Agenda 1: Introduction and opening of the Workshop</p> <p>1.1 Welcome and introduction of the Workshop by Mr. Bundit Chokesanguan</p> <p>1.2 Opening Address by Secretary-General, Dr. Chumnarn Pongsri</p> <p>1.3 Adoption of the Agenda</p>
0945-1000	Group Photograph and Coffee Break
1000-1200	<p>Agenda 2: Review on international, regional and national initiatives related to safety at sea for small fishing boats (Chairperson: Mr. Bundit Chokesanguan)</p> <p>2.1 Review on Global initiatives related to safety at sea for small fishing boats (by Mr. Ari Gudmundsson, FAO)</p> <p>2.2 Review on South Pacific regional initiatives related to safety at sea for small fishing boats (by Mr. Michel Blanc, SPC/CPS)</p>
1200-1330	Lunch
1330-1530	<p>Agenda 2: Review on international, regional and national initiatives related to safety for small fishing boats (continued, Chairperson: Dr. Magnus Torell)</p> <p>2.3 Review on South Asia regional initiatives related to safety at sea for small fishing boats (by Dr. Yugraj Singh Yadava, BOBP)</p> <p>2.4 Experience and lessons learned by SEAFDEC-Sida Project on safety at sea for fishing boats in Gulf of Thailand and Andaman Sea (by Ms. Pattaratjit Kaewnuratchadasorn, SEADFEC-Sida Project)</p>
1530-1545	Coffee Break
1545-1700	<p>Agenda 2: Review on international, regional and national initiatives related to safety for small fishing boats (continued, Chairperson: Dr. Magnus Torell)</p> <p>2.5 Safety at Sea for Trawlers and Purse Seiners- A Case Study in Thailand</p>

(by Mr. Bundit Chokesanguan, SEAFDEC/TD)

2.6 Review on initiatives related to safety at sea for small fishing boats of other organizations/institutions

- TUMSAT, Dr. Seiichi Takeda)
- SORNCHON
- FRA
- NFU

1800-2000 Welcome Dinner host by SEAFDEC/TD

21 April 2010 (Wednesday)

0900-1030 Agenda 3: Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats
(Chairperson: Dr. Worawit Wanchana)

- 3.1 Brunei Darussalam
- 3.2 Cambodia
- 3.3 Indonesia

1030-1045 Coffee Break

1045-1200 Agenda 3: Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats (Continued, Chairperson: Dr. Worawit Wanchana)

- 3.4 Japan
- 3.5 Lao PDR
- 3.6 Malaysia

1200-1330 Lunch

1330-1500 Agenda 3: Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats
(Continued, Chairperson: Mr. Sutee Rajruchithong)

- 3.7 Myanmar
- 3.8 Philippines

1500-1515 Coffee Break

1515-1700 Agenda 3: Current Situation of Safety at Sea: Progress of the national works on improvement of safety at sea for small fishing boats (Continued, Chairperson: Mr. Sutee Rajruchithong)

- 3.9 Thailand
- 3.10 Vietnam
- 3.11 Timor-Leste

22 April 2010 (Thursday)

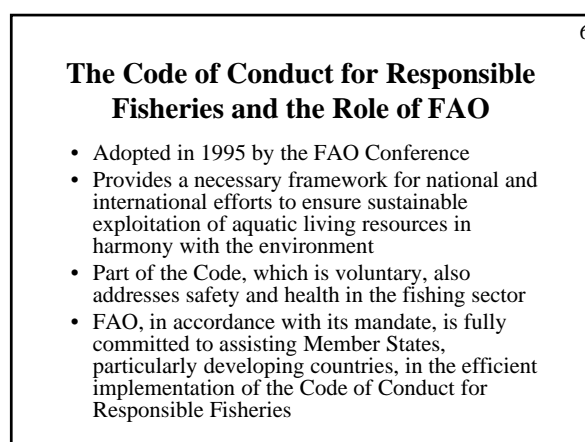
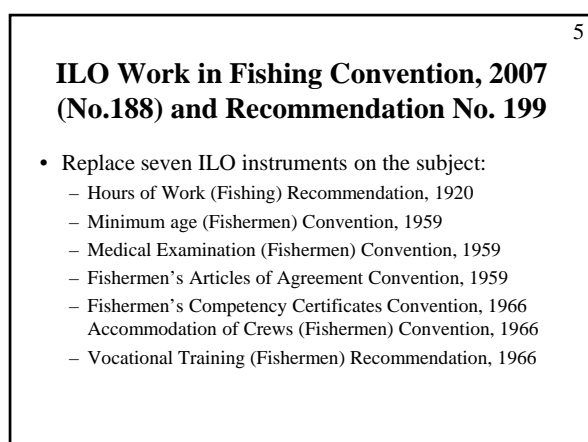
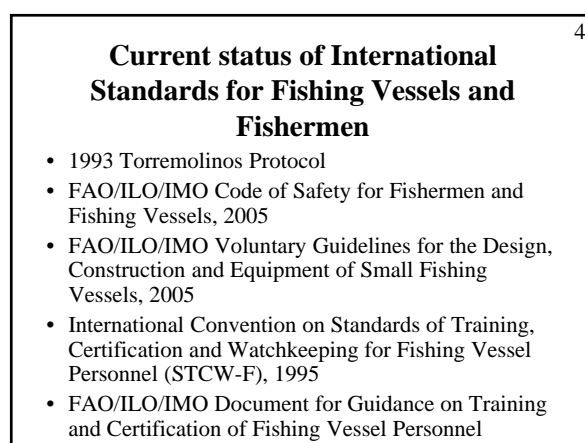
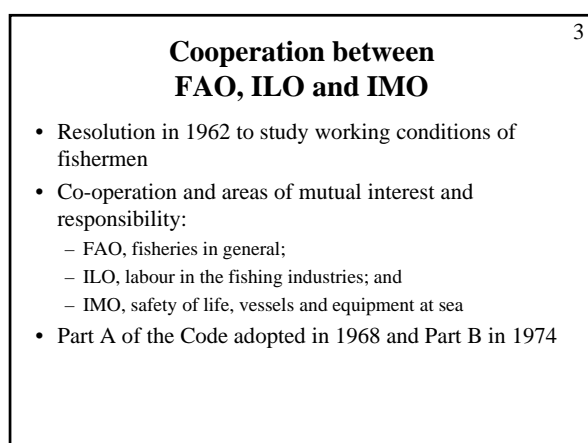
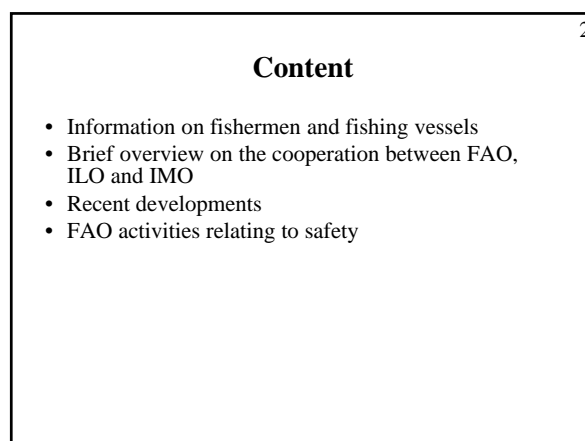
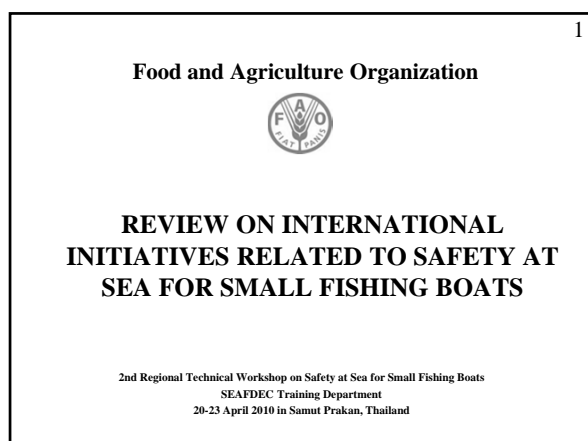
0900-1030	Agenda 4: Special discussion on “How to record accident of small fishing boats” (Facilitators: Mr. Ari Gudmundsson and Mr. Sutee Rajruchithong)
1030-1045	Coffee Break
1045-1200	Agenda 5: Brain storming session on “Ways to improve safety at Sea for small fishing boats” (Facilitators: Mr. Bundit Chokesanguan and Dr. Yugraj Singh Yadava)
1200-1330	Lunch
1330-1530	Agenda 5: Brain storming session on “Ways to improve safety at Sea for small fishing boats”(Continued, Facilitators: Mr. Bundit Chokesanguan and Dr. Yugraj Singh Yadava)
1530-1545	Coffee Break
1545-1700	Agenda 6: Conclusion and Recommendations (Facilitators: Mr. Bundit Chokesanguan and Dr. Magnus Torell)
	Closing of the Workshop
1800-2000	Farewell Dinner

23 April 2010 (Friday)

Study tour Facilitators: Mr. Bundit Chokesanguan and Dr. Yugraj Singh Yadava trip to Samut Sakorn and Samut Songkhram

- Dockyard
- Fishing Port
- Fishing Village in Samut Songkhram
- Others

0800	Leave SEAFDEC for Samut Sakorn Province
0900-0945	Visit Samut Sakorn Fish Marketing Organization
1030-1130	Visit P.S.P. Marine Co.,Ltd (Dockyard)
1215-1330	Lunch
1330-1500	Visit the local dockyard in Samut Songkram Province
1530-1730	Visit and Shopping at Amphava Floating Market or Central Rama II



7

**Recent developments regarding
International Safety Standards**

8

**Entry into force criteria of
the 1993 Torremolinos Protocol
and
the 1995 STCW-F Convention**

Protocol:

- Criteria: 15 States with 14,000 vessels (>=24m)
- Status: Ratified by 17 States with 3400 vessels

STCW-F:

- Criteria: 15 States
- Status: Ratified by 13 States

9

**Earlier initiatives to speed up the entry
into force process of the 1993 Protocol**

- A series of regional seminars in several regions of the world
- FAO has assisted IMO in holding seminars on the Protocol
- First seminar in Beijing, China, in September 2004
- Current world fishing vessel fleet (vessels of 24 m in length and above): almost 57 000 vessels
- 75% in Asia Region
- 53% of the world fleet in China

10

**A new initiative to implement
the 1993 Torremolinos Protocol
(IMO Consultant's study)**

- 2nd session of the FAO/IMO Ad Hoc Working Group on IUU Fishing and Related Matters, at FAO HQs, Rome in July 2007
- Certain provisions of the Protocol too stringent
- SLF Correspondence group to prepare a draft Agreement/Assembly resolution taking into account the 2004 Beijing Seminar, the 2009 Bali Seminar, the Questionnaire and the IMO study
- Intersessional meeting from 20 to 24 September 2010
- Adoption at the IMO Assembly in November 2011

11

**Safety Recommendations for decked
fishing vessels of less than 12 metres in
length and undecked fishing vessels (1)**

- FAO contribution mainly related to stability, construction and machinery and electrical installation
- Target completion date 2010
- The Safety Recommendations will apply to more than 90% of the world fishing fleet

12

**Safety recommendations for decked
fishing vessels of less than 12 metres in
length and undecked fishing vessels (2)**

- | | |
|---------------------------|---|
| - Preamble | 8. Emergency procedures and safety training |
| 1. General provisions | 9. Radio Communications |
| 2. Construction | 10. Navigational equipment |
| 3. Stability | 11. Crew accommodation |
| 4. Machinery | 12. Manning and training |
| 5. Fire protection | - Annexes (34) |
| 6. Protection of the crew | |
| 7. Life-saving appliances | |

Implementation of Part B, Voluntary Guidelines and Safety recommendations (Implementation Guidelines) ¹³

- Preface
- Introduction
- 1. The Instruments
- 2. Administrative Requirements
- 3. Legal Implications
- 4. Capacity Building
- 5. Enforcement
- 6. Operational Safety
- 7. Understanding Technical Provisions
- 8. Human Element
- Annexes

- Target completion date 2011

URL: <http://www.sigling.is/fvs-iscg>

Recent FAO activities relating to the safety at sea in the fisheries sector ¹⁴

• COFI 27 (2007): ¹⁵

- suggested the development of guidelines on best practices and that COFI should consider developing IPOA on the subject

• ICP-9 and UNGA 63 (2008):

- topic: maritime security and safety
- welcomed the ongoing cooperation among FAO, ILO and IMO and underline the urgent need for continued work in that area, and take note of discussions in FAO on the merit of an IPOA in this area

Expert Consultation on best practices for safety at sea in the fisheries sector (1) (Nov. 2008) ¹⁶

- Principle objective of the Guidelines:
- Holistic approach
- Awareness-raising - a high priority

Expert Consultation on best practices for safety at sea in the fisheries sector (2) (Nov. 2008) ¹⁷

- FAO/NIOSH Study on Fishing Management Regimes and their impacts on Fishing Safety
- Fisheries managers' decisions have indirect and direct effects on safety
- FAO and regional FMOs to promote safety at sea as part of the EAF
- Strong recommendation for the development of an IPOA
- Advance copy of the BP Guidelines ready in 2010

Global safety at sea programme for small-scale fisheries in developing countries (1) (funded by Sida with support from SMA) ¹⁸

- Improving livelihoods communities
- A part conducted in cooperation with IMO
- Main activities:
 - Harmonised accident reporting system
 - Development of safety recommendations/guidelines
 - Strengthen governments, national and regional organizations in safety at sea and introduction of safety at sea as an integral part of fisheries management
 - Conduct training, education and awareness raising campaigns

Global safety at sea programme for small-scale fisheries in developing countries (2) Regions ¹⁹



Global safety at sea programme for small-scale fisheries in developing countries (3) Website ²⁰



- URL: <http://www.safety-for-fishermen.org>

COFI 28 (Mar 2009) ²¹

- Members noted the importance of safety at sea and the outcome of the 2008 FAO Expert Consultation
- Recognition of the effective working relations with IMO and ILO
- COFI agreed on the fundamental importance of capacity building to assist developing countries in implementing the Code of Conduct on Responsible Fisheries
- Importance of having FAO working together with ILO on issues relating to child labour in the fisheries sector

Accident Reporting and Analysis System for Small Fishing Vessels (1) ²²

Guidelines (starting with a simple system that could later be expanded) to help countries finding out:

- The number of fatalities in the fishing industry
- The number of vessels lost
- The primary and secondary causes for the accidents
- Solutions to the problems causing the accidents

Accident Reporting and Analysis System for Small Fishing Vessels (2) ²³

The development of guidelines will follow a 4-step process:

1. Prepare the first draft of the guidelines and prepare steps 2-4
2. Conduct national or regional consultative workshops, in West Africa, Asia and Latin America and the Caribbean
3. Pilot testing in two to four countries in each region
4. Conduct regional workshops, in West Africa, Asia and Latin America and the Caribbean, to present the findings of the pilot testing projects

International Fishing Industry Safety and Health Conferences (IFISH)

- IFISH Conferences have been held since 2000
- Promote international coalition and promote action to prevent injury and improve health in the commercial fishing industry
- IFISH 4 in Reykjavik, Iceland in 2009
- 3-year intervals
- Place for IFISH 5 (2012) to be identified!

25

Concluding remarks

- Fishing is the world's most dangerous occupation with more than 24 000 fatalities every year
- Enhancing health and safety in the fishing industry is one of the main challenges
- Establish principles and provide guidance to be used in the formulation and implementation of international agreements and other legal instruments, both binding and voluntary
- Instruments need to be implemented and enforced and this is mainly the responsibility of Governments
- To be achieved with political will and commitment

26

Thank you!

2nd Regional Technical Workshop
on Sea Safety for Small Fishing Boats
SEAFDEC-TD - 20-23 April 2010

Review of issues and initiatives related to small fishing vessel safety in the Pacific Island region

Presentation by Michel Blanc
Nearshore Fisheries Development Adviser
Secretariat of the Pacific Community

The Pacific Islands

- 22 countries and territories in the WCPO / 9 million people
- 200 high islands, 2500 low islands and atolls
- limited land area (550,000 km²)
- large EEZs (50 times greater than land area – 30 million km²)
- major implications for sea safety

Fishing activity in the Pacific Islands

Two major types:

- **Coastal fishing:**
 - smaller volumes, crucial role in food security, catch taken by Pacific Islanders
 - vessels are small, undecked, OB-powered boats and canoes
- **Offshore fishing:**
 - large volumes (2 million MT = half of global tuna catch), important government revenue
 - large industrial vessels (mostly foreign and locally-based longliners) and small artisanal troll boats

Fishing activity in the Pacific Islands (ctd)

Scales of fisheries activities:

- **Subsistence** (or non-commercial fishing)
- **Artisanal** (or small-scale commercial fishing): vessels less than 12 meters in length
- **Industrial** (or large-scale commercial fishing): vessels greater than 12 meters in length

Numbers of fishing vessels:

- unknown
- FAO (1991): 17,000 small motorized and 25,000 non-motorized craft
- April 2008: 269 longliners, 56 purse-seiners and 2 pole-and-liners based in Pacific Island countries
- 1,000 foreign industrial vessels licensed to fish in PI EEZs

Sea Safety in the Pacific Islands

Some of the highest rates of sea safety accidents in the world
...but government agencies have limited involvement with sea safety issues.

Efforts to improve the sea safety record in the Pacific Islands have included activities by UN agencies and regional organizations

FAO survey of sea safety issues in Pacific Islands (1991)

- 16 countries surveyed
- offshore tuna trolling in small outboard powered skiffs is the most risky activity
- many accidents occur on small boats used for both fishing and inter-island transport
- main causes = mechanical breakdowns, limited availability of spare parts, cost of life-saving aids
- main conclusion: ongoing education and training is required for improving sea safety

FAO Technical Cooperation Programme
FAO/UNEP Regional Policy Support Programme

Secretariat of the Pacific Community sea safety work (1995 to present) www.spc.int/coastfish

- Based on the findings of the 1991 FAO survey
- Sea safety awareness campaign

- Statutory training

- Promotion of new technologies

The sea safety "grab bag"

- 1 EPIRB
- 1 handheld VHF radio
- 1 waterproof pyro container
- 2 rockets
- 3 hand flares
- 1 smoke signal
- 1 hand bearing compass
- 1 signal mirror
- 1 strobe and torch light
- 1 whistle
- 1 sea anchor
- 1 See Rescue Streamer
- 4 inflatable life jackets

Cost per bag = US\$ 1,600

The Argos beacon for small fishing boats tracks small fishing boats ("coastal" VMS) & EPIRB function in case of accident

compact, portable and rechargeable
waterproof and floatable
built-in GPS receiver

Cost per beacon = US\$ 1,000 + 500/year

- Collaboration with FAO - Safety for Fishermen website

A source of information and materials on sea safety in the fisheries sector

www.safety-for-fishermen.org

FAO survey of sea safety issues in Pacific Islands (2003)

- 5 countries surveyed (Tuvalu, Tonga, Samoa, Fiji, Kiribati)
- Main finding: the majority of accidents at sea are associated with small fishing vessels
- Survey identified several priorities for future sea safety work:
 - ✓ sea safety regulations for small fishing vessels
 - ✓ generation of political will
 - ✓ construction standards for fiberglass skiffs
 - ✓ systems for sea accident data collection / analysis
 - ✓ enforcement of sea safety regulations in both urban areas and in remote locations
- Survey also suggested that a meeting attended by motivated people from several relevant disciplines, focused on a few key issues in small boat safety could produce positive results

SPC/FAO expert consultation on sea safety in small fishing vessels (February 2004)



- The purpose of the meeting was two-fold:
 - ✓ Address and progress four key issues in small fishing vessel safety
 1. Sea safety regulations for small fishing vessels
 2. Sea safety awareness programmes
 3. Construction standards for fibreglass skiffs
 4. Sea accident data recording systems
 - ✓ Formulate plans for future sea safety programmes
- Participants included artisanal fishers, legal specialists, boat builders, personnel from government fisheries and maritime agencies and staff from FAO, IMO and SPC

SPC/FAO expert consultation on sea safety in small fishing vessels (February 2004)

- The main result was the production of guidelines for the development and implementation of coordinated national strategies
- Main features of these strategies:
 - ✓ National sea safety coordinating group made of motivated people (the "drivers")
 - ✓ The generation of political will to address small boat safety
 - ✓ The development of national sea accident databases
 - ✓ Appropriate legislation for small fishing vessels
 - ✓ Construction standards for fibreglass skiffs
 - ✓ Formal and informal training directed at fishing communities and government staff
- An FAO TCP with SPC's coordination inputs was identified as a possible way forward

FAO study on the relationship between tuna fisheries management and sea safety in the Pacific Islands (2009)

- Provides the most recent update on the sea safety situation in the Pacific region
- The link between fisheries management and sea safety is weak or absent in most countries (objectives of fisheries management are limited to biological and economic issues)
- One success story: the tuna fishery in Samoa
 - ✓ The "alia" catamaran fishing craft

- ✓ Mid-90s: Expansion of "alia" fleet with the development of an export market for albacore tuna (200 boats, 1000 fishers in 1998)
- ✓ High accident rate: 24 fatalities in 1996-97
- ✓ Measures taken to improve sea safety included:
 - Legislation for small fishing vessels
 - Mandatory safety requirements as part of licensing
 - Statutory safety training for vessel crew
 - "Big stick" enforcement
 - VHF network and 24h monitoring
 - Sea safety consultative committee
 - Compilation and analysis of sea accident records
- ➔ improvements in the safety record of the tuna fishery (fatalities down from 17 in 1997 to 0 in 2002)



**2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats
SEAFDEC Training Department**

20-23 April 2010 in Samut Prakan, Thailand

**REVIEW ON INTERNATIONAL INITIATIVES RELATED TO SAFETY AT SEA
FOR SMALL FISHING BOATS**

Ari Gudmundsson

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Fisheries and Aquaculture Resources Use and Conservation Division (FIR)
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00153 Rome, Italy

This paper provides information on the current cooperation between FAO, ILO and IMO on the safety of fishing vessels and fishermen. The paper provides information on the current status on international safety standards for fishing vessels and fishermen and recent developments related to these standards, with particular emphasis on small fishing boats. Finally, the paper gives a summary of recent FAO activities that support the implementation the Code of Conduct for Responsible Fisheries with regard to safety at sea in the fisheries sector.

INTRODUCTION

Fishing at sea is probably the most dangerous occupation in the world. In 1999, ILO estimated that 24 000¹ fatalities occur worldwide per year in capture fisheries. The consequences of loss of life have a profound impact on family dependents. In many developing countries, these consequences can be devastating: widows often have a low social standing, there is no welfare state to support the family and with a lack of alternative sources of income, the widow and children may face destitution.

FAO estimates² that more than 30 million fishers are working aboard 4 million fishing vessels operating in capture fisheries. The number of engine-powered fishing vessels is estimated to have been about 2.1 million in 2006, with almost 70 percent of them in Asia (Figure 1). In 2004, it was estimated³ that the number of fishing vessels of 24 metres in length and over was almost 57 000, which is less than 2% of the total number of fishing vessels in the world.

The safety of fishing vessels and fishermen has been a matter of concern for FAO since its inception in 1945 when the Organization provided assistance in the establishment of fishery training institutions in a number of countries. Hundreds of training institutions were established, many of which are still operating.

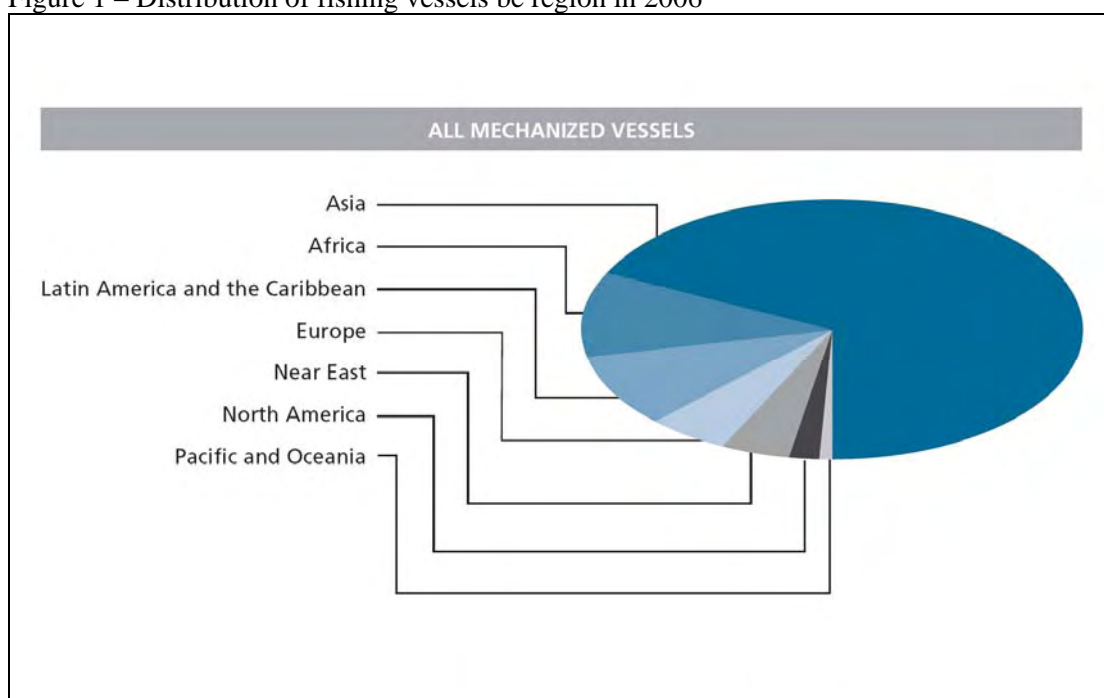
¹ ILO. 1999. Tripartite Meeting on Safety and Health in the Fishing Industry, Geneva, 13–17 December 1999.

² FAO.2006. The State of World Fisheries and Aquaculture. Rome: FAO.

³ IMO.2004 Council paper C 93/4/Add.2.

Fisheries, which is one of the world's oldest industries, provide a vital source of food, employment, trade and economic well-being for people throughout the world, both for present and future generations and should therefore be conducted in a responsible manner. A part of conducting fisheries in a responsible manner is to ensure that health and safety standards are adopted for everyone employed in fishing operations.

Figure 1 – Distribution of fishing vessels be region in 2006



COOPERATION BETWEEN FAO, ILO AND IMO

The cooperation between FAO, ILO and IMO started in 1962, when a resolution was adopted by the Committee on Conditions of Work in the Fishing Industry. This Committee was convened by ILO to study certain aspects of working conditions of fishermen. The Committee recommended the creation of a practical international code dealing with navigational, operational and occupational aspects of safety of fishing vessels and fishermen, and urged the ILO in collaboration with the FAO and IMO to examine the possibility of establishing a suitable body to prepare such a code.

Considering that it was desirable to co-operate within their respective fields of competency, in order to extend the scope of the proposed safety code for fishing vessels to make reference to all aspects of the safety of fishing vessels and fishermen, the three organizations subsequently entered into an agreement with respect to the principles of co-operation and the areas of mutual interest and responsibility in the field of fishing vessels and fishermen, namely FAO, fisheries in general; ILO, labour in the fishing industries; and IMO, safety of life, vessels and equipment at sea.

Code of Safety for Fishermen and Fishing Vessels

Following the above agreement, draft contributions to the Code of Safety for Fishermen and Fishing Vessels were prepared by FAO, ILO and IMO. It was agreed that the Code should be divided into two parts – Part A to be addressed to skippers and crews, containing operational

and occupational requirements; and Part B to be addressed to shipbuilders and owners, containing requirements for the construction and equipment of fishing vessels of 24 metres in length and above. Part A of the Code was adopted in 1968 and Part B in 1974.

FAO/ILO/IMO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels

The International Conference on Safety of Fishing Vessels, 1977, recognising that the 1977 Torremolinos Convention applied only to fishing vessels of 24 metres in length and over and being conscious that the vast majority of fishing vessels throughout the world are of less than 24 metres in length, adopted a resolution recommending that IMO continue to develop safety standards for design, construction and equipment of such fishing vessels with a view to promoting the safety of these vessels and their crews. As a result, the FAO/ILO/IMO Voluntary Guidelines were developed and finally approved in 1979

CURRENT STATUS OF INTERNATIONAL STANDARDS FOR FISHING VESSELS AND FISHERMEN IN PLACE

International safety standards for fishing vessels

International safety standards for fishing vessels already in place are the following:

- The 1993 Torremolinos Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977. The Protocol applies to decked fishing vessels of 24 m in length and over, but certain Chapters are not applicable to vessels of less than 45 metres in length. On the basis of Articles 3(4) and 3(5) of the Protocol and in order to apply uniform standards to vessels of 24 metres in length and over, not covered by the Protocol, the following regional standards have been developed and communicated to IMO:
 - Guidelines for the safety of fishing vessels of 24 m and over but less than 45 m in length operating in the East and South-East Asia region, adopted at a Conference in Tokyo in February 1997
 - European regional agreement applicable from 1 January 1999. The European legislation introducing a harmonised safety regime for fishing vessels of 24 metres in length and over was adopted in December 1997 and is entirely based upon the 1993 Torremolinos Protocol.
- The FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels. The Code, which was originally developed in the 1960s and 1970s, was recently revised and the current version is from 2005. The Code is divided into two parts. Part A on the safety and health practice applies to all fishing vessels while Part B on the safety and health requirements for the construction and equipment of fishing vessels applies for decked fishing vessels of 24 m in length and over.
- The FAO/ILO/IMO Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, which were originally developed in the 1970s, were recently revised and the current version is from 2005. The Guidelines apply to decked fishing vessels of 12 m in length and over but less than 24 m in length.

International standards relating to the safety of the fishermen

International standards relating to the safety of the fishermen are the following:

- International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995. The Convention applies to crews of seagoing fishing vessels generally of 24 metres in length and above. The STCW-F Convention is comparatively short and consists of 15 Articles and an annex containing technical regulations. Chapter I contains General Provisions and Chapter II deals with Certification of Skippers, Officers, Engineer Officers and Radio Operators.
- FAO/ILO/IMO Document for Guidance on Training and Certification of Fishing Vessel Personnel, which were originally developed in the 1980s, were recently revised. The current version was published by IMO on behalf of the three organizations in 2001.

Other international instruments on the safety of fishing vessels and fishermen

Other international instruments on the safety of fishing vessels and fishermen that are already in place are the following:

- SOLAS 74. Chapter V of the Convention applies to fishing vessels. It is, however, up to the flag State Administrations to determine to what extent the provisions of certain regulations of that chapter shall not apply. These regulations contain, *inter alia*, requirements on shipborne navigational equipment, such as carriage requirements for systems and equipment, nautical charts and nautical publications, as well as requirements on navigation bridge visibility, all of which are also covered in the 1993 Torremolinos Protocol.
- The Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs). The Convention applies to all vessels, including fishing vessels, upon the high seas and all waters connected to the high seas and navigable by seagoing vessels.

Both of the above instruments are in force but they cover only a restricted number of safety aspects that are related to fishing vessels and fishermen.

ILO Work in Fishing Convention, 2007 (No. 188) and Recommendation (No. 199)

In 2007, ILO adopted a new Convention, which applies to all fishers and all fishing vessels engaged in commercial fishing operations. The Convention, which title is **The Work in Fishing Convention, 2007** (No.188) and the accompanying Recommendation (No. 199) replace seven ILO instruments on the subject – five Conventions (concerning minimum age, medical examination, articles of agreement, accommodation and competency certificates) and two Recommendations (concerning vocational training and hours of work), all of which are over 40 years old.⁴

The Convention applies to all fishers and fishing vessels engaged in commercial fishing operations. Certain types of fishing vessels and limited categories of fishers or fishing vessels may be excluded from the requirements of the Convention, or from certain of its provisions.

⁴ Hours of Work (Fishing) Recommendation, 1920 (No. 7); Minimum age (Fishermen) Convention, 1959 (No. 112); Medical Examination (Fishermen) Convention, 1959 (No. 113); Fishermen's Articles of Agreement Convention, 1959 (No. 114); Fishermen's Competency Certificates Convention, 1966 (No. 125); Accommodation of Crews (Fishermen) Convention, 1966 (No. 126); and Vocational Training (Fishermen) Recommendation, 1966 (No. 126).

Certain, specified provisions of the Convention may be implemented progressively where it is not possible for a State to implement all the measures in the Convention owing to special problems of a substantial nature in the light of insufficiently developed infrastructure or institutions.

The Convention is implemented through: laws, regulations and other measures – the latter may include collective agreements, court decisions, arbitration awards, or other means consistent with national law and practice. It contains general requirements covering all fishers and vessels, and higher requirements for larger vessels or those remaining at sea for extended periods.

Examples of issues addressed in the ILO Convention

The following subject areas, among others, are addressed:

- the responsibilities of fishing vessel owners and skippers for the safety of the fishers on board and the safety of the vessels;
- minimum age for work on board fishing vessels and for assignment to certain types of activities;
- medical examination and certification required for work on fishing vessels, with the possibility of exceptions for smaller vessels or those at sea for short periods;
- manning and hours of rest;
- crew lists;
- fishers' work agreements;
- repatriation;
- recruitment and placement of fishers, and use of private employment agencies;
- payment of fishers;
- on board accommodation and food;
- medical care at sea;
- occupational safety and health;
- social security; and
- protection in the case of work-related sickness, injury or death (through a system for fishing vessel owners' liability or compulsory insurance, workers' compensation or other schemes).

The Convention includes provisions concerning compliance and enforcement by flag States and ports States. The Convention will enter into force 12 months after the date on which the ratifications of ten Members, eight of which are coastal States, have been registered with the Director-General of the ILO.

The Recommendation provides additional guidance on the areas covered by the Convention. It also makes references to some other Codes and Guidelines, including those prepared jointly by the FAO, ILO, IMO and/or WHO that are relevant to work in the fishing sector.

FAO took active part in the development of this Convention and Recommendation.

The Code of Conduct for Responsible Fisheries and the Role of FAO

FAO Code of Conduct for Responsible Fisheries, which was unanimously adopted on 31 October 1995 by the FAO Conference, provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony

with the environment. Part of the Code, which is voluntary, also addresses safety and health in the fishing sector.

FAO, in accordance with its mandate, is fully committed to assisting Member States, particularly developing countries, in the efficient implementation of the Code of Conduct for Responsible Fisheries and is reporting to the United Nations community on the progress achieved and further action required.

RECENT DEVELOPMENT REGARDING INTERNATIONAL SAFETY STANDARDS

Entry into force criteria of the 1993 Torremolinos Protocol and the 1995 STCW-F Convention

The Torremolinos Protocol shall enter into force one year after 15 States with at least an aggregate fleet of 14,000 vessels (which were in 1993 deemed to be approximately 50% of the world fishing fleet of vessels of 24 m in length and over) have ratified the Protocol. The current status is that the Protocol has been ratified by 17 States⁵, with approximately 3400 vessels, which is only about 24% of the required number. It is, therefore, not yet in force.

The STCW-F Convention shall enter into force one year after 15 States have ratified the Convention. The current status of the Convention is that 13 Member States and one Associate Member State⁶ have ratified it. Only two more ratifying States are needed for the Convention to enter into force.

Earlier initiatives to speed up the entry into force process of the 1993 Protocol

At the beginning of the new millennium there was concern among some States that since the adoption of the 1993 Torremolinos Protocol and the 1995 STCW-F Convention, only a few States have ratified these IMO instruments. At the 22nd IMO Assembly, which was held in November 2001, the opinion was expressed that IMO should become more proactive on the safety of fishing vessels and fishermen in view of the fact that over 24 000 fishermen's lives were lost at sea every year. The Assembly consequently adopted Resolution A.925(22), "Entry into force and implementation of the 1993 Torremolinos Protocol and the 1995 STCW-F Convention".

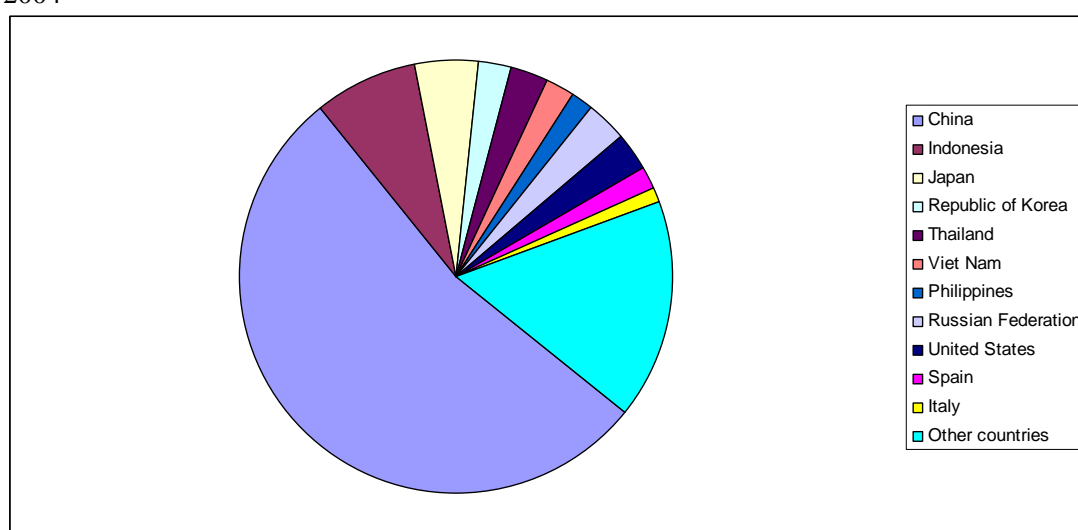
In a response to Assembly Resolution A.925(22), IMO planned a series of regional seminars on the implementation of the 1993 Torremolinos Protocol and the STCW-F Convention to be held in several regions of the world. The first seminar on the implementation the Torremolinos Protocol was held in Beijing, China, in September 2004 and the second one in Guayaquil, Ecuador in 2005. The third one, which was a Sub-Regional Seminar/Workshop, was held in October 2009 in Bali, Indonesia. FAO has assisted IMO in holding these seminars.

⁵ On 28 February 2010 the 1993 Torremolinos Protocol had been ratified by the following countries: Bulgaria, Croatia, Cuba, Denmark, France, Germany, Iceland, Ireland, Italy, Kiribati, Liberia, Lithuania, Netherlands, Norway, Saint Kitts and Nevis, Spain and Sweden.

⁶ On 28 February 2010 the 1995 STCW-F Convention had been ratified by the following countries: Denmark, Iceland, Kiribati, Latvia, Mauritania, Morocco, Namibia, Norway, Russian Federation, Sierra Leone, Spain, Syrian Arab Republic, Ukraine and Faeroe Islands.

In addition, the Secretary-General of IMO invited Member Governments to provide IMO with information on the number of fishing vessels of 24 metres in length and over flying their flags and to identify the reasons for not ratifying the Protocol. Based on the data collected and the analysis made by the IMO Secretariat, it was concluded that the size of the current world fishing vessel fleet of 24 metres in length and over is estimated to be 56,789 vessels.⁷ Out of 56,789 vessels, 42,626 vessels, or 75%, come from countries in Asia region. One country (China, incl. Hong Kong, China and Macao, China) possesses 53.3% of the total number of fishing vessels of that size.⁸ The estimated world fishing vessel fleet size shows a considerable increase since 1993, when the size of the world fishing vessel fleet of 24 metres in length and over had been estimated to be 28,000 vessels.

Figure 2 – Distribution of decked fishing vessels of 24 m in length and above by countries in 2004



A new initiative to implement the 1993 Torremolinos Protocol

The initiatives that were taken by IMO in the early 2000s did not result in ratifications of the 1993 Torremolinos Protocol by countries with large fishing fleets, in particular countries in the South East Asia Region. It also became more evident that the Protocol was unlikely to enter into force as some of the countries were not able to ratify it, in its current form, because of legal, administrative and technical difficulties, which had been identified at the 2004 Beijing Seminar.

A new initiative to implement the Protocol was presented at the 2nd session of the FAO/IMO Ad Hoc Working Group on Illegal, Unreported and Unregulated Fishing and Related Matters (hereinafter referred to as JWG), which was held at FAO Headquarters in Rome, Italy from

⁷ The total number of fishing vessels that was provided by FAO is 19,065. This figure is based on the LR-F database. It should, however, be noted that FAO reported that in that database, the number of vessels in China was “only” 652.

⁸ The number of fishing vessels provided by China and used in the IMO study is 28,679 (excl. Hong Kong, China and Macao, China). It should, however, be noted that at the Beijing Seminar, which was held after China had provided IMO with the aforementioned figure, China reported 24,003 vessels. At the same seminar, Hong Kong, China and Macao, China reported 1,500 and 100 vessels respectively.

16 to 18 July 2007 in form of an IMO consultant study. The study noted that many Governments had indicated that certain provisions of the Protocol were too stringent and wanted the relevant provisions of the Protocol to be amended before they could agree to be bound by the Protocol.

The study observed that one of the important means to enable States to ratify the Protocol was increased co-ordination and co-operation among the authorities responsible, respectively, for fisheries and maritime transport in the Member States of FAO and IMO. To achieve this it was necessary for FAO and IMO to ensure that future discussions on the Protocol would involve the relevant ministries and departments in each State.

Having noted that the technical difficulties for the entry into force of the Protocol had been described in detail in the report of the 2004 Beijing Seminar, such as the “narrow beam design” and the differences between vessels involved in fishing in domestic and international waters, the JWG agreed to recommend that IMO, with the collaboration of FAO, undertake appropriate consultations with interested Governments with a view to identifying the revisions the 1993 Protocol which are needed to make the Protocol acceptable to enough Governments to ensure the early entry into force.

Among other safety issues that were recommended by the JWG are the following:

- the FAO Secretariat, in consultation with IMO Secretariat, as appropriate, should consider the development of an instrument similar to the International Safety Management (ISM) Code for fishing vessels and companies, including fishery management-related provisions;
- the FAO Secretariat, in consultation with IMO Secretariat, as appropriate, should consider the merits of an audit scheme, based on the implementation of fishery management-requirements by Member States in their capacity as flag State, port State, coastal State and market State;

The outcome of the JWG has been considered by several IMO organs, such as the IMO Assembly, which in November 2007 adopted resolution A.1003(25) on the entry into force and implementation of the 1993 Torremolinos Protocol. IMO has agreed that the Organization, in consultation with FAO, should explore options suggested, including the possibility of preparation of the draft Agreement relating to the implementation of the Torremolinos Protocol with a view to adoption by an appropriate IMO organ.

As a result, the correspondence group on fishing vessel safety, which was established by the IMO Sub-Committee on Stability and Load Lines and on Fishing Vessel Safety (SLF) was requested to prepare a draft Agreement on the implementation of the 1993 Torremolinos Protocol, as called for under resolution A.1003(25), taking into account the conclusions of the 2004 Beijing Regional Seminar and the above-mentioned IMO study on the conditions for the entry into force of the Protocol.

The group, having discussed the technical issues that may be preventing States from ratifying the 1993 Torremolinos Protocol, recommended that the IMO Secretariat initiate a Consultation Process with States with large fishing fleets. In this regard, the group prepared a questionnaire to be sent to States that have more than 500 registered fishing vessels of 24 metres in length and over⁹,

⁹ On the basis of the information provided in C 93/4/Add.2, annex 7, table 2.

At its 52nd session in January 2010, the SLF Sub-Committee instructed the correspondence group to further develop amendments to the 1993 Torremolinos Protocol using the replies to the above-mentioned questionnaire, the outcome of the Bali Seminar and the outcome of the working group at the session. In addition, the Sub-Committee agreed that there was a necessity to hold an intersessional meeting of the working group and agreed to request MSC to approve such a meeting, which is tentatively scheduled to meet from 20 to 24 September 2010 at IMO Headquarters.

Regarding the timing for the development, implementation and conclusion for this task, an action plan, which has been prepared, foresees that a new Agreement or an Assembly Resolution could be adopted at the 27th IMO Assembly which is scheduled to be held towards the end of 2011.

Safety recommendations for decked fishing vessels of less than 12 metres in length and undecked fishing vessels

In 2004 when IMO approved the revised FAO/ILO/IMO Fishing Vessel Safety Code and Voluntary Guidelines, the Organization agreed with the proposal by FAO to include in the work programme of SLF, a new item on “Safety of small fishing vessels”, with the objective of developing safety standards for small fishing vessels that are not covered by the revised Code and Guidelines.

Since 2005, a correspondence group, established by SLF Sub-Committee, has been developing the new safety standards, which provisional title is “**Safety recommendations for decked fishing vessels of less than 12 metres in length and undecked fishing vessels**”. There is much interest for the development of the new Safety Recommendations and more than 30 members from all parts of the world take part in this work. FAO contribution to this work has been substantial, in particular in the development of requirements related to stability, construction and machinery and electrical installation. In this work, FAO has been drawing from the long experience from its field projects, where thousands of fishing boats have been designed and constructed all over the world. Furthermore, in the ongoing FAO projects relating to safety of fishermen and fishing vessels, the draft Safety recommendations have been tried out and the feed-back from these activities have resulted in changes to some of the chapters and annexes of the draft Safety recommendations. In this regard, it is worth mentioning that the draft Safety recommendations, together with the Voluntary Guidelines, have or are being used as a guide in a number of countries where FAO and others are providing assistance in the development of national regulations on the safety of fishing vessels. When developing the wooden vessel construction standards, FAO signed an agreement with the Norwegian University of Science and Technology in Trondheim, Norway to undertake a research project concerning scantlings for small wooden fishing vessels. As a part of this project, a workshop was held in Trondheim, Norway, in March 2008.

The development of the Safety recommendations, which was proposed by FAO in 2004, was completed at the 52nd session of SLF, which was held in January 2010. The list of contents of the draft Safety recommendations is attached as Annex 1. It is expected that the text will be approved by the Maritime Safety Committee (MSC) in May 2010, after which it will go to FAO and ILO for their approval. It is furthermore expected that ILO will approve the text in November 2010. The next opportunity for FAO to approve the text will be at the next COFI meeting, which takes place in February 2011, after which the Safety recommendations will be published. It was recommended by SLF that the final text be translated into all 6 official languages of IMO and made publicly available on the IMO website.

The completion of the Safety recommendations will be a very important step towards the improving of the safety of small fishing vessels as the standard is the first attempt to develop international requirements on the design, construction and equipment of decked fishing vessels of less than 12 metres in length and undecked fishing vessels of any size. It is estimated that more than 90% of the world fishing fleet is in this category.

New guidelines to assist Competent Authorities in the implementation of Part B of the Fishing Vessels Safety Code, the Voluntary Guidelines and the Safety recommendations

In 2007, IMO agreed to FAO's proposal regarding the development of new guidelines to assist Competent Authorities in the implementation of Part B of the Fishing Vessels Safety Code, the Voluntary Guidelines and the Safety recommendations. It has been suggested that the existing "MARPOL-how to do it" publication can provide a useful format for the development of these guidelines. The preliminary list of contents of the guidelines, which are being referred to as the "Implementation Guidelines", is attached as Annex 2.

It is envisaged that the SLF Sub-Committee will finalise the development of the Implementation Guidelines at its next session, which will be held in January 2011. The Guidelines will then be sent for approval by MSC in May 2011, after which they will go to FAO and ILO for their approval. It is envisaged that the Guidelines can be published in 2013. However, countries that are planning to develop or upgrade their safety legislation for fishing vessels before the publication of the Implementation Guidelines, will be able to use the draft version that will be made available on the web. As for the Safety Recommendation, it is likely that the final text of the Implementation Guidelines will be translated into all 6 official languages of IMO and made publicly available on the IMO website.

The outcome of the development of the Safety Recommendations and the Implementation Guidelines, as well as other work of the correspondence group can be found on the group's website, which is hosted by the Icelandic Maritime Administration at the following URL:

<http://www.sigling.is/fvs-iscg>

RECENT FAO ACTIVITIES RELATING TO THE SAFETY AT SEA IN THE FISHERIES SECTOR

Twenty-seventh session of FAO Committee on Fisheries (COFI 27)

The issue of safety in the fisheries sector was raised at COFI 27¹⁰ in March 2007, where a large number of Members expressed concern about the safety at sea for fishing vessels, especially small-scale fishing vessels. FAO was urged to continue collaboration with IMO and it was suggested that FAO should develop guidelines on best practices for safety at sea and that COFI should consider developing an International Plan of Action (IPOA) on the subject.

The ninth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (ICP-9) and the sixty-third session of the United Nations General Assembly (UNGA)

ICP-9 met from 23 to 27 June 2008 and, pursuant to UNGA resolutions 61/222 and 62/215, organized its discussions as decided in the resolutions on the topic of **maritime security and**

¹⁰ Paragraph 82 of the report of the twenty-seventh session of COFI.

safety. During the negotiations on the elements to be forwarded to the UNGA, the importance of addressing the safety of fishing vessels and fishermen was underlined and the ongoing cooperation between FAO, IMO and ILO was encouraged. Some delegations also encouraged further work by FAO on the safety of fishermen and fishing vessels, including through the development of an international plan of action, as had also been suggested by some delegations at the 27th session of COFI.

ICP-9 agreed by consensus to a number of elements relating to maritime security and safety to be suggested to the UNGA for consideration under its agenda item “Oceans and the law of the sea”. This includes the following paragraph, which was adopted by the UNGA, in December 2008, through resolution A/RES/63/111 and concerns safety of fishermen and fishing vessels:

The General Assembly,

58. Welcomes ongoing cooperation among the Food and Agriculture Organization of the United Nations, the International Maritime Organization and the International Labour Organization relating to the safety of fishers and fishing vessels, underlines the urgent need for continued work in that area, and takes note of discussions in the Food and Agriculture Organization of the United Nations on the merit of an international plan of action in this area.

Expert Consultation on best practices for safety at sea in the fisheries sector

As a result of the COFI 27, an Expert Consultation on Best Practices for Safety at Sea in the Fisheries Sector was held at FAO headquarters, Rome, from 10 to 13 November 2008 to develop a draft outline of Guidelines for Best Practices to improve safety at sea in the fisheries sector.¹¹ The Expert Consultation considered that the principle objective of the Guidelines should be the improved safety and health of those working in the fisheries sector through the development of national strategies and that this objective could be achieved through the use of a set of readily understood guidelines. It was agreed that the Guidelines should emphasise a holistic approach to ensure that all factors having an influence on safety should be comprehensively covered, and that awareness-raising of safety issues should be accorded a high priority. The Expert Consultation deliberated on a broad range of safety and health issues and provided a detailed outline of the Guidelines’ contents.

In its consideration of the strategy and its structure, the Consultation agreed on an outline for the development of these guidelines, based on a series of four interlinked “pillars”. Under each of these pillars, three layers of guidance are provided: a first layer directed at the policy level, supported by a second layer setting out more detailed procedures and checklists, and a third layer providing detailed working instructions, case studies and reference material.

Under the first pillar, it is proposed that a baseline assessment of safety issues be carried out through data collection and analysis of accidents within the fisheries sector in order to identify and provide the necessary information to permit an understanding of where problems exist. In addition, the results of the analysis would provide benchmarks in support of monitoring and evaluation units.

The second pillar is devoted to the creation of an inventory or baseline survey, providing a comprehensive overview of all aspects of a national fisheries sector and, in particular, the human resources engaged in the sector, as well as available aquatic resources, technology and

¹¹ The report of the Expert Consultation can be downloaded from the following link:
<ftp://ftp.fao.org/docrep/fao/011/i0609e/i0609e00.pdf>

supporting services. Such an inventory would be useful in drawing attention to the diversity of fisheries, which range from subsistence fisheries to industrial fleets.

Within the third pillar, the information provided under pillars 1 and 2 will be analysed in detail in order to identify safety problems and their causes. This analysis would then be used to develop corresponding solutions and measures for their mitigation, together with a prevention strategy.

The fourth pillar then concentrates on the implementation and promotion of the strategy. It includes recommendations on how to advocate, manage and influence change and evaluate progress.

It was agreed that success in achieving the objectives of national strategies aimed at improved safety and health could also result ultimately in a higher level of professionalism within the fisheries sector, noting that women and men should have decent and productive work in conditions of freedom, equity, security and human dignity. It was acknowledged that safe and health working practices contribute positively to productivity and economic growth.

The Expert Consultation, noting the recommendation contained in the report of COFI 27 that “FAO should develop guidelines on best practices for safety at sea”, recommended that the FAO Secretariat should now proceed with the development of the Guidelines on the basis of the outline and general guidance developed by the Expert Consultation.

The Expert Consultation, in which resource persons from ILO and IMO participated, noted with interest the quality of the findings of recent FAO regional workshops on safety at sea and suggested that their outcome be reflected in the Guidelines¹².

Following extensive discussion on the draft *International Study on Fishing Management Regimes and their impacts on Fishing Safety: Synthesis of Case Reports*, the Expert Consultation recommended that FAO should freely distribute the templates used in the development of the case studies to countries wishing to carry out a case study on their own fisheries. The Consultation also recommended that FAO should undertake further research into impacts of fisheries management on safety for the purpose of developing training materials which might lead to an improved and shared understanding between fisheries managers and safety professionals on issues of mutual concern. The Expert Consultation agreed with the main finding of the report that fisheries managers’ decisions have indirect and direct effects on safety.

Considering the socio-economic and the environmental elements of safety at sea, the Consultation recommended that FAO and regional fisheries management organizations should undertake to promote safety at sea as part of the Ecosystem Approach to Fisheries.

12 BOBP/FAO Regional Workshop on Sea Safety for Artisanal and Small-scale Fishermen in Chennai, India, October 2001;

FAO Project TCP/RLA/0069 in the Caribbean Region on the Development of Standards for the Construction and Inspection of Small Fishing Vessels, 2000-2001;

FAO/SPC Regional Expert Consultation FAO/SPC Regional Expert Consultation on Sea Safety in Small Fishing Vessels in Suva, Fiji, February 2004;

FAO/SWIOFC Regional Workshop on Safety at Sea for Small-Scale Fisheries in the South West Indian Ocean Moroni, Union of the Comoros, December 2006;

FAO Regional Workshop on Safety at Sea in Artisanal and Small-Scale Fisheries in Latin America and the Caribbean in Paita, Peru, July 2007.

The Experts, aware that Guidelines constitute only voluntary guidance, considered and sought ways and means of ensuring that the Guidelines would lead to the development of national fisheries safety strategies. As a means of providing the Guidelines with additional authority, the Expert Consultation strongly recommended the development of an IPOA on Safety in the Fisheries Sector of which the Guidelines would be an integral component.

FAO is currently working on the development of the guidelines on best practices for safety at sea in the fisheries sector and is hopeful that an advance copy can be ready by the end of 2010.

FAO/NIOSH International Study on Fishing Management Regimes and their impacts on Fishing Safety

The National Institute for Occupational Safety and Health of the United States of America (NIOSH) and FAO collaborated to conduct the *International Study on Fishing Management Regimes and their impacts on Fishing Safety* to provide a first empirical review of the effects of fisheries resource management measures on the safety of fishing operations and to provide guidance to fisheries managers on how to make commercial fishing safer. The study was based on 16 diverse case studies sponsored by FAO, and concluded, as outlined in a paragraph above, that fisheries managers should acknowledge that their decisions have indirect and direct effects on safety and therefore should consider safety as an explicit management objective. It was recommended that fisheries managers and safety professionals should work together to develop shared understanding on issues of mutual concern.

Global safety at sea programme for small-scale fisheries in developing countries (GCP/GLO/200/MUL)

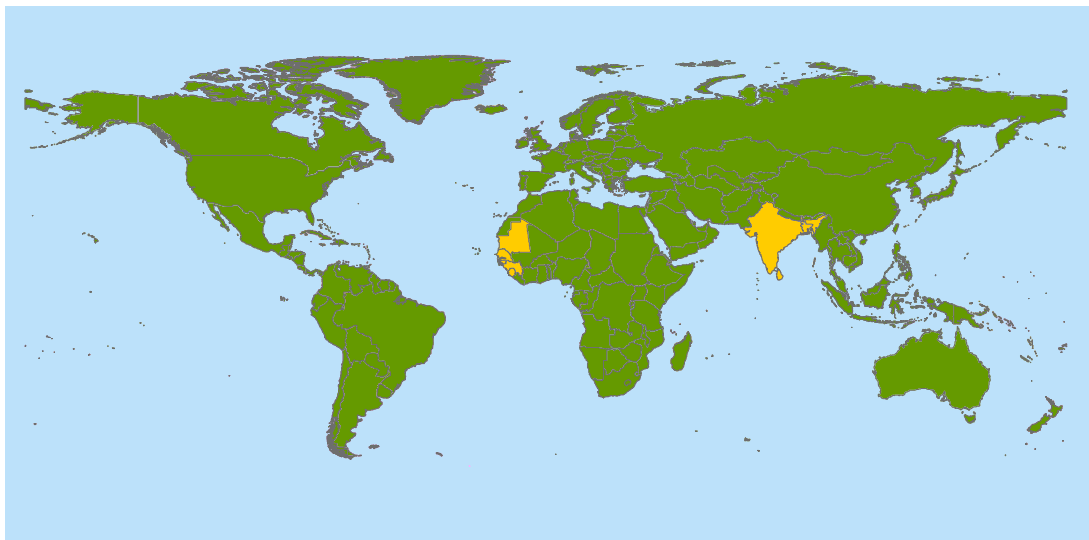
FAO is currently operating a global safety at sea programme for small-scale fisheries in developing countries. The programme, which is funded by the Swedish International Development Cooperation Agency (Sida) with support from the Swedish Maritime Administration (SMA) is aimed at improving the livelihood of small-scale fishing communities by decreasing the number of accidents at sea and the effects of such accidents. A part of the South Asia Region component of the programme is conducted in cooperation with IMO.

The main activities of the programme are the following:

- Introducing a harmonised accident reporting system, which should be easy to use and give valuable information back to decision makers. A broad range of data is needed to understand the causes of accident, and thus to prioritise effective interventions;
- Development of safety recommendations and guidelines for fishermen and fishing vessels, introducing the draft FAO/ILO/IMO Safety recommendations;
- Strengthen governments, national and regional organizations in safety at sea, introduce safety at sea as an integral part of fisheries management; and
- Conduct training, education and awareness raising campaigns on safety at sea.

Project activities in India and Sri Lanka are jointly implemented by FAO and IMO under the joint FAO-IMO project on tsunami reconstruction and rehabilitation in the Bay of Bengal Region with a focus on small scale fishing vessel safety.

The safety at sea project is implemented in close cooperation with regional fisheries bodies, such as the Sub-Regional Fisheries Commission (SRFC) in West Africa and the Bay of Bengal Programme – Intergovernmental Organization (BOBP-IGO) in South Asia.



The global activities have promoted expansion in other regions, such as Latin America, the Caribbean, South East Asia, South Pacific and East Africa. Regional workshops have recently been held by FAO in South Pacific, Latin America and East Africa to develop project proposals.

A new website on safety of fishermen has been developed under the Global safety at sea programme. The objective of this website is to disseminate information related to safety for fishermen. The website is hosted by FAO and managed by a selected group of experts contributing information on safety at sea in the fisheries sector. The URL for the site is as follows:

<http://www.safety-for-fishermen.org>

The Safety at Sea programme had to finish last year due to lack of funding.

Guidelines to Competent Authorities in Implementing an Accident Reporting and Analysis System for Small Fishing Vessels

Fatality rates among fishers at sea are higher than in any other normal occupation. As stated earlier, it has been estimated that 24 000 fatalities occur worldwide per year in capture fisheries and it seems plausible that the fatality rates in countries for which data are not available may be higher than in those countries that do keep records; thus the total number of fatalities may be even higher than those indicated above.

In order to formulate effective interventions to improve safety, a comprehensive understanding of both the nature of safety and the lack of it is a prerequisite. The need for reliable data and information related to both the causes and effects of accidents at sea cannot be overestimated. Such analysis must go beyond the direct cause of an accident (e.g. fire, collisions, capsizing), and must seek to explain why and how the problem arose. The process

should include the views of all partners, taking their perceptions and perspectives into account. Definition of the problem will suggest potential solutions, as well as eliminating those that are unsuitable or unworkable.

The Expert Consultation on best practices for safety at sea in the fisheries sector, held in November 2008 identified the importance of understanding the number of accidents at sea, and it is important to have an accidents at sea reporting and analysis system in place for fishing vessels and/or their crews. There is limited guidance available on an easy-to use approach, and many countries would benefit from guidelines for competent authorities in implementing an accident at sea reporting and analysis system for small fishing vessels and crews serving on board such vessels.

Accidents at sea reporting system has been developed and introduced under the Sida-funded FAO project on Safety at Sea for Small-scale Fisheries in developing countries (GCP/GLO/200/MUL). Baseline studies have been carried out in South Asia by BoBP-IGO/NIOSH/FAO cooperation and an easy-to-use accidents at sea reporting system has been introduced in West Africa under the project. There is a need for developing guidelines to make the system useful in other developing countries and, in this regard, the outcome from the studies and work carried out in South Asia and West Africa will be helpful.

FAO is currently working on the development of the first draft to such guidelines. The guidelines, when finalized, would give several options (as the needs differ from country to country), starting with a simple system that could later be expanded. The guidelines will help countries find out:

- The number of fatalities in the fishing industry;
- The number of vessels lost;
- The primary and secondary causes of the accidents;
- Solutions to the problems causing the accidents.

The guidelines will provide guidance on how the accidents at sea reporting system could later be expanded to cover also non-fatal accidents and accidents where the vessels have not been lost.

Such data will be of value to FAO and other organizations providing assistance to countries that would like to improve the safety of their fishermen.

The development of guidelines will follow a four-step process:

1. Prepare the first draft of the guidelines and prepare steps 2-4;
2. Conduct national or regional consultative workshops, in West Africa, Asia and Latin America and the Caribbean.
3. Pilot testing in two to four countries in each region.
4. Conduct regional workshops in West Africa, Asia and Latin America and the Caribbean, to present the findings of the pilot testing projects.

Twenty-eight session of FAO Committee on Fisheries (COFI 28)

The issue of the safety in the fisheries sector was again raised at COFI 28,¹³ which was held in March 2009, where many Members noted the importance of safety at sea and the outcome

¹³ Paragraphs 19, 20 and 21 of the report of the twenty-eight session of COFI.

of the 2008 FAO Expert Consultation. There was widespread support for the development of Guidelines on Best Practices for Safety at Sea as recommended by the Expert Consultation. Some Members also supported the development of an IPOA on safety in the fisheries sector.

COFI recognised the effective working relations that FAO enjoyed with IMO and ILO and encouraged such collaboration to continue especially in the areas of safety at sea, work on fishing vessels and health standards. In addition, the ILO representative drew attention to the importance of having FAO work together with ILO on issues relating to child labour in the fisheries sector.

COFI agreed on the fundamental importance of capacity building to assist developing countries in implementing the Code of Conduct on Responsible Fisheries, which addresses, *inter alia*, safety and health in the fisheries sector. It called on FAO and the international community to promote and sustain national and regional support in a range of activities including the development of data bases, the mounting of workshops and skills enhancement in other areas.

International Fishing Industry Safety and Health Conferences (IFISH)

The International Fishing Industry Safety and Health Conferences (IFISH) have been held since 2000 and are intended to promote international coalition and promote action to prevent injury and improve health in the commercial fishing industry; they address safety culture and promotion, occupational health and behaviour, injury prevention, search and rescue, and occupational safety in regard to the commercial fishing industry.

The fourth of these Conferences, IFISH4, was held in Reykjavik, Iceland in May 2009 under the sponsorship of the National Institute for Occupational Safety and Health (NIOSH), Alaska Pacific Regional Office, USA; the Institute for Sustainable Development, University of Iceland; the Icelandic Maritime Administration and FAO. The Conference was well organized and attended by about 70 representatives from 24 countries. Key themes were the relationship between fisheries management and safety and collaborations on sea safety between developed and developing nations.

The IFISH Conferences have been held in three-year intervals. As the last conference was held in 2009 it is expected that the next one, IFISH5, will be held in 2012. Its venue has to be decided soon in order to give the organizers sufficient time to make the necessary preparations.

Concluding remarks

As stated at the beginning of this paper, fishing is probably the most dangerous occupation in the world. Enhancing health and safety in the fishing industry is one of the main challenges for international organizations as well as their Member States which have to take this issue seriously. One way of addressing the matter is to establish principles and provide guidance which may be used in the formulation and implementation of international agreements and other legal instruments, both binding and voluntary. There are several international documents available, such as the Code of Safety, the Voluntary Guidelines, the Safety Recommendations, the Implementation Guidelines, just to mention a few. They could be used as a guide when developing or upgrading national legislation regarding the safety of fishing vessels and fishermen as well as training material. In order to improve the safety of fishing vessels and fishermen, instruments need to be implemented and enforced and this is mainly

the responsibility of governments. This can only be achieved with political will and commitment.

Keywords: Safety at sea, Guidelines for Best Practices, 1993 Torremolinos Protocol, STCW-F Convention, Code of Safety for Fishermen and Fishing Vessels, Voluntary Guidelines, Work in Fishing Convention, Safety recommendations, Implementation Guidelines, International Plan of Action (IPOA), Expert Consultation on best practices for safety at sea in the fisheries sector.

ANNEX 1

**LIST OF CONTENTS OF
THE FINAL DRAFT SAFETY RECOMMENDATIONS FOR DECKED FISHING
VESSELS OF LESS THAN 12 METRES IN LENGTH AND UNDECKED FISHING
VESSELS.**


Chapter/ Annex	Contents	Countries/Organisations which have submitted documents
Preamble		South Africa
Chapter 1	General provisions	Denmark
Chapter 2	Construction, watertight integrity and equipment	Japan
Chapter 3	Stability and associated seaworthiness	FAO, Spain, Russia Fed. Rep. of Korea, Japan
Chapter 4	Machinery and electrical installations	Norway, FAO
Chapter 5	Fire protection and fire fighting	Japan
Chapter 6	Protection of the crew	Denmark
Chapter 7	Life-saving appliances	Rep. of Korea
Chapter 8	Emergency procedures and safety training	Venezuela
Chapter 9	Radio Communications	Norway
Chapter 10	Navigational equipment	Iceland
Chapter 11	Crew accommodation	ICFTU, South Africa
Chapter 12	Manning and training	Rep. of Korea
Annex I	Illustration of terms used in the definitions	FAO
Annex II	Recommended construction standards for wooden vessels	FAO
Annex III	Recommended construction standards for GRP vessels	FAO
Annex IV	Recommended construction standards for steel vessels	FAO
Annex V	Recommended construction standards for aluminium vessels	FAO
Annex VI	Anchoring and mooring equipment	FAO
Annex VII	Structural strength of hatch covers	FAO
Annex VIII	Guidance on the dimensions of freeing ports	FAO
Annex IX	An approximate determination of small vessel stability by means of the rolling period	FAO, Spain,
Annex X	Recommended practice on portable fish-hold divisions	FAO, Spain
Annex XI	An example of a stability notice	FAO, Spain
Annex XII	Guidance on additional stability criteria for beam trawlers	FAO
Annex XIII	Practical buoyancy test	Norway
Annex XIV	Guidance on tools and spares to be carried onboard	FAO
Annex XV	Steering gear	FAO
Annex XVI	Recommended practice exhaust systems	FAO
Annex XVII	Guidance on the installation of electrical	Norway, FAO

	equipment	
Annex XVIII	Basic First Aid Kit	FAO
Annex XIX	Personnel Protective Equipment	United Kingdom
Annex XX	Requirements for buoyant apparatus	Rep. of Korea
Annex XXI	Guidance on the requirements for lifesaving equipment	Rep. of Korea
Annex XXII	Recommendation for testing lifejackets	Rep. of Korea
Annex XXIII	Correct securing of hydrostatic release units	United Kingdom
Annex XXIV	Safety Training	Venezuela
Annex XXV	Safe operation of winches, line haulers and lifting gear	ICFTU
Annex XXVI	GMDSS	Norway
Annex XXVII	Range of VHF for various transmitting/receiving units	Norway
Annex XXVIII	Use of Mobile Telephones in distress and safety communications	Norway
Annex XXIX	Radar reflector	Iceland
Annex XXX	Equipment required to comply with the Collision Regulations	Iceland
Annex XXXI	International Code of Signals	Iceland
Annex XXXII	Distress Signals	South Africa
Annex XXXIII	Basic Pre-sea safety training	South Africa, Rep. of Korea
Annex XXXIV	Annotated list of pertinent publications	South Africa, FAO

ANNEX 2

**PROVISIONAL LIST OF CONTENTS OF THE GUIDELINES TO ASSIST
COMPETENT AUTHORITIES IN THE IMPLEMENTATION OF PART B OF THE
CODE OF SAFETY FOR FISHERMEN AND FISHING VESSELS, VOLUNTARY
GUIDELINES FOR THE DESIGN CONSTRUCTION AND EQUIPMENT OF
SMALL FISHING VESSELS, AND SAFETY RECOMMENDATIONS FOR DECKED
FISHING VESSELS OF LESS THAN 12 METRES IN LENGTH AND UNDECKED
FISHING VESSELS (IMPLEMENTATION GUIDELINES)**


	Contents	County/Organization
	Preface	All
	Introduction	All
Chapter 1	The Instruments	Korea
Chapter 2	Administrative Requirements	Japan
Chapter 3	Legal Implications	Norway
Chapter 4	Capacity-building	FAO/ILO
Chapter 5	Enforcement	Norway
Chapter 6	Operational Safety	South Africa/FAO
Chapter 7	Understanding Technical Provisions	Korea
Chapter 8	Human Element On Board	ILO
Annex 1	Assessment of needs for fishing vessel survey and inspection services	FAO
Annex 2	An example of a safety certificate	South Africa
Annex 3	Examples of survey checklists	Iceland
Annex 4	Example of an Inspection checklist with explanatory notes for vessels of Design Categories C and D	FAO
Annex 5	Vessel and Boat building Sectors	FAO
Annex 6	Code for the Conduct of an Inspector of Small Fishing Vessels	FAO
Annex 7	Examples of relevant international agreements, both binding and voluntary	FAO
Annex 8	Annotated list of documents	All




South Asian Regional Initiatives Related to Safety at Sea – A Review

Yugraj Singh Yadava


www.bobpigo.org






The Bay of Bengal (BoB) covers some of the most productive waters in the world, and supports a large population of small-scale fishermen: some 6-8 million directly and an additional 35 - 40 million engaged in ancillary activities related to fisheries.


The contribution of coastal fisheries to nutrition and economic well being in the region is substantial.






Safety at Sea (S@S)


- Marine capture fishery is one of the riskiest occupations known to mankind;
- However, the issue has not got sufficient importance in fisheries management in the region;
- While in developed countries there are research and developmental efforts aimed at improving the safety regime, in developing countries such efforts are lacking. Scarcity of information is also a major problem to understand the magnitude of the issue.






Bay of Bengal Programme and the S@S

The BOBP has been a consistent campaigner for S@S for fisher folk. The years of development work carried out on fishing craft -- engines, engine installations, sails and beach-hauling devices – aimed at making craft safer, sturdier and more comfortable.







S@S

A regional workshop on S@S in October 2001 discussed many issues concerning legislation, fishing vessel construction, education, training and awareness, and integration of sea safety issues into the fisheries management framework.


The most significant outcome of the regional workshop was the 'Chennai Declaration on Sea Safety for Artisanal and Small-Scale Fishermen'.






S@S


In early 2007, the Food & Agriculture Organization (FAO) of the United Nations with funding support from the Swedish International Cooperation Development Agency – Sida partnered with the Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) to implement a Global project on 'Safety at Sea for Small-scale Fisheries'.






S@S

The National Institute of Occupational Safety and health of the United States is also partnering with the BOBP-IGO in improving surveillance and monitoring of fishing related injuries and fatalities in the member-countries.







S@S

The Project focused on the following:

- **Provision and analysis of data to identify the cause of accidents;**
- **Education and training of trainers, extension workers, fishers and inspectors in safety requirements and good working conditions in fisheries sector; and**
- **Awareness building and outreach programmes to build a culture of sea-safety within artisanal small-scale fishing communities.**







S@S

Initiative in Surveillance & Reporting of Fishing-related Accident at Sea

- >30 million individuals work in commercial fishing operations worldwide. Although < 1% of the worldwide workforce, fishermen account for > 7% of worker mortality.
- Fishing-related mortality data and prevention activities may be relatively complete for the developed nations, but often quite limited for developing nations, due to shortages of infrastructure, critical expertise, and resources.







S@S

Work carried out so far:

- On-site fishing community field work in each nation;
- Worker, vessel owner, and employer focus groups in multiple fishing communities in each nation, in developed and remote sites;
- Regional workshops involving germane ministry, fisher associations and NGO representatives from each of the nations,
- Detailed examination of death records, insurance data, and search and rescue (SAR) data, and
- Finalization of Accident Reporting Forms.







S@S

Awareness Campaign & Training Material under Safety at Sea Project

- Visit to the Project Countries
- Identification of Target Groups
- Baseline Surveys
- National Workshop
- Stakeholder Consultation
- Identification of Project Sites




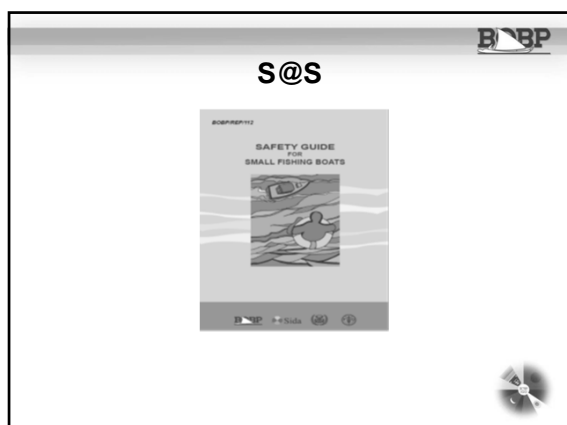
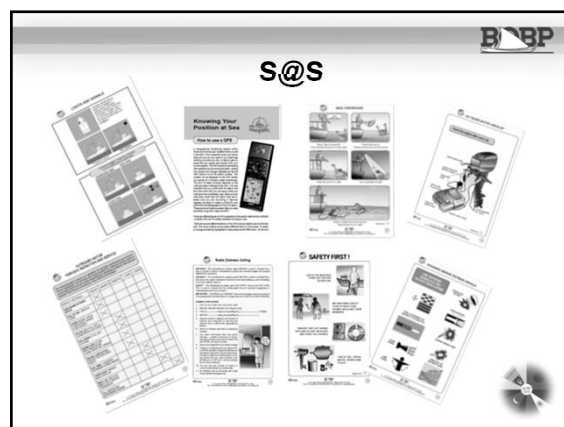
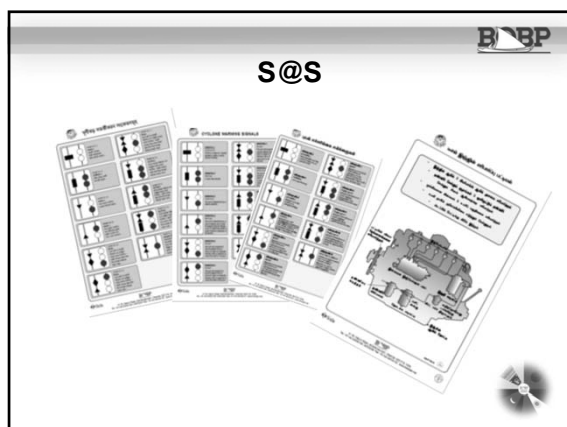


S@S

Outputs:

- Posters
- Leaflets
- Guidelines
- Video films on engine maintenance
- Video films on general S@S situation
- Accident Reporting Form





S@S

Road ahead:

- Setting up/ strengthening of Awareness Centre/ Safety Committee in each project site
- Expanding the reach of the programme through awareness, training and setting up of Safety Committees
- Ensuring sustainability of the Safety Committees and awareness Centers

S@S

Training Needs of Small-scale Fishers in Safety at Sea

- Artisanal and country boats (< 12 m LoA)
- Mechanized small fishing vessels <12m LoA
- Fishermen of medium size boats of more than 12m but less than 20m LoA

S@S

S@S and Fisheries Management

S@S can be considered as a set of policies and practices to improve the chance of survival of a fisher during fishing as well as minimizing damage to fishing assets during fishing operations.

S@S

The BoB region, fisheries is an important economic activity with a predominant population of small-scale fishers. However, there are disturbing signs from fish landing:

- ☞ Slowing growth rate;
- ☞ Full or over-exploitation of about 55 % of commercially important species (FAO data); and
- ☞ Increasing share of juvenile catch and reducing CPUE.

• Ensuring sustainability and safety are policy and management challenges now faced by many countries, including those in the BoB region

S@S

The Issues.....

- S@S issues are not prioritized and no time bound plan are mentioned;
- Policies to manage fishing effort often negatively impacts the safety issues;
- MCS system is not up to the mark making implementation of policies partial and adding to the risk of the fishers;
- Due to non-prioritization, enough fund is not available for S@S.

S@S

Understanding Risk:


- Fisheries management is not only governmental rules and regulation; it comprises internal arrangement and market mechanism;
- Narrow view of fisheries management as government measures underestimate the risk.
- **Total Risk=Policy induced risks + Internal arrangements induced risks + Market induced risks + Self-induced risks + External (natural) risks**

How these factor affect risk profile

Method/Arrangements	Objective	Contribution to risk
<i>Increasing fish landing and growth targets</i>	To provide for food security and export earning.	Promotes competition among the fishers.
<i>Closed season, Protected areas and marine Parks</i>	To conserve species	Leads to a rush for the fish, fishing in unsafe weather and fatigue from continuous fishing.
<i>Sharing of net revenue</i>	To give incentive to the fishers for maximum effort.	Lead the fishermen to risking their life even in bad weather as it is a no work no pay and more work more pay situation.


Linking Fisheries Management and S@S – Needs and Steps



<i>From macro to micro</i>	Understanding and incorporating micro aspects like internal arrangements, personal need of the fishers in policy making.
<i>Understanding the cross-elasticity</i>	Understanding the linkage among government policy, internal arrangement and market. Such linkages can amplify/ lessen risk and thereby S@S.
<i>Understanding relative roles</i>	Understanding the role of various stakeholders in implementing policy.




Linking Fisheries Management and S@S - Needs and steps


Regulating fisheries	Applying precautionary principles in decision making. Government commitment of a strong MCS. Building trust in the community about governments commitment and then educating them on expected net benefits of strong MCS.
Using market instruments	Institutional credit Mandatory insurance incorporating risk profile.
HRD	Building capacity among fishers and government to practice safety measures.



- 
- ### Why we need to link Fisheries management and Safety at sea
- Fisheries Management => sustainable fisheries
 - Sustainable fisheries = f (sustainable livelihood)
 - Sustainable livelihood => reduction of vulnerability
 - Reduction of vulnerability => S@S
 - No S@S => No sustainable fishery!
- 



Thanks!



Experience and lessons learned by SEAFDEC-Sida Project on safety at sea for fishing boats in the Gulf of Thailand and the Andaman Sea

20 April 2010
@Training Department, Samutprakarn

1

Introduction

- Smaller fishing vessels may encounter an increased danger of accidents at sea during fishing operation and traveling at sea → cause danger to life and property losses.
- It is necessary to learn about working conditions of people involved in fishing to be able to improve the safety.
- SEAFDEC-Sida project (2009-2011): the development of a regional initiative to establish a regional fishing vessel record and inventory.
- the concerns about safety at sea is an important element and this will be addressed by SEAFDEC accordingly.

2

Regional Initiatives on Fishing Vessel Record related to Safety at sea issues

- Workshop on the Fishing Vessel Record and Inventory was organized in July 2009, in Satun province.
- Information on safety at sea was provided by representative from IMO.
- Three instruments dealing with safety of fishing vessels were addressed
 - Torremolinos Protocol (1993);
 - International Convention on Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel (1995);
 - ILO/FAO/IMO Document on Guidance on Training and Certification of Fishing Vessel Personnel.
- Need to develop regional standards or specifications → for SEA
- It would be important to build upon the IMO's safety standards → smaller fishing boats

3

Sub-regional initiative: 2nd Meeting of the Gulf of Thailand (2009)

- key concerns: fishing capacity, IUU fisheries, vessel registration were addressed.
- Promoted importance of systems related to vessel registration, port monitoring, MCS network.
- MCS Network – need to establish cooperation among concerned agencies.
- It was proposed a draft survey form on vessel record and inventory

4

Sub-regional initiative: 2nd Meeting of the Gulf of Thailand (2009)

- MCS promotion should be promoted with efforts to:
 - provide information to increase awareness among fishers on conservation and responsible fisheries (including safety aspects)
 - Enhance human capacity building through training, workshops, study tours.
 - develop and conduct a specific course on MCS by SEAFDEC starting with GOT sub-region

5

Sub-regional initiative: 1st Meeting on the Andaman Sea (2009)

- key issues of regional concern such as habitat management, fishing capacity, IUU fisheries, vessel registration.
- Recommendations on vessel records and inventories, MCS networks and other aspects that could contribute to the improvement of safety measures.
- Better organisation is also recognized as an important framework to improve local safety standards on boats as well as on shore → Local knowledge, traditional practices and local organisations are important factors to build upon when building up capacity to adapt to climate change and in efforts to mitigate effects caused by climate change, such as impact from storms, typhoons, floods, etc

6

Way forwards to improve safety standards at sea and on shore (1)

- On shore → preparations, repairs, organization, control weather forecasts, etc.
- Recognize, and adjust as applicable to local/regional conditions, the IMO standards relevant to safety. Incorporate IMO standards, as applicable, into national legislation and adapt as suitable to address safety requirements for smaller boats.
- Promote a fishing vessel record and inventory in Southeast Asia and stress the safety aspects in connection with registration and licensing of fishing vessels, gear and crew.
- Increase attention → to the ILO Conventions and ILO standards in that improving labour and working conditions on all types of vessels

7



Way forwards to improve safety standards at sea and on shore (2)


- Explore innovative approaches to work out ways that on board materials, including ice boxes, etc.
- Improve information on approaching storms, typhoons, tsunamis, etc. for people to take protective measures.
- Explore and support traditional approaches to early warning and safety at sea.
- Promote further developments of local organizations and incorporate aspects of safety at sea in the process.
- Explore the relevance of including health aspects in the broader context of safety at sea.
- Cooperate and coordinate with other organizations in the processes referred to above.

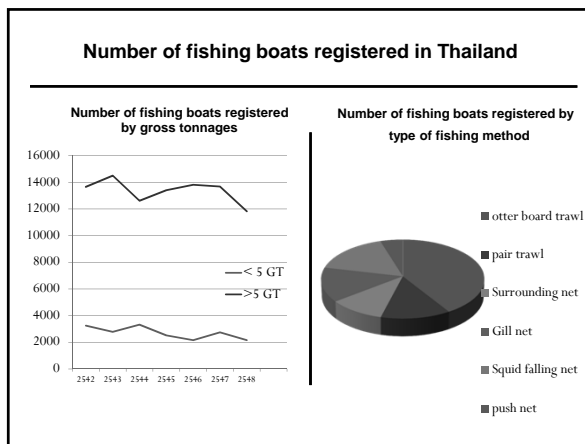
8

Safety at Sea of Trawlers and Purse seiners in Thailand (A case study in Thailand)

Bundit Chokesanguan
SEAFDEC/TD

 The Southeast Asian Fisheries Development Center (Training Department)



Fisheries management effect on Safety at Sea

- Vessel registration and fishing licensing
- Close area and close season
- Promotion of offshore fisheries and joint ventures
- Employment of foreign labors





Effect of natural disasters on safety at sea of fishing boats in Thailand

Typhoon Gay

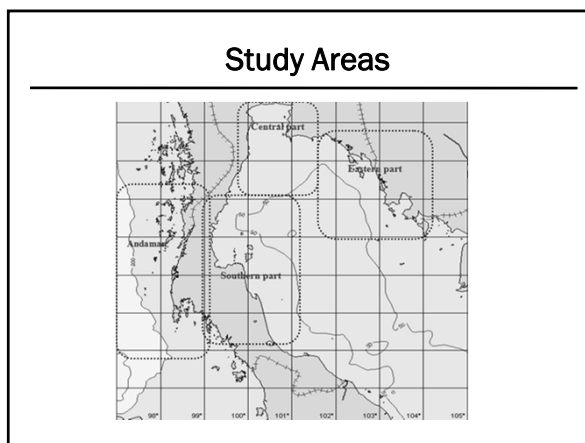
- Happened in November 1989
- About 200 fishing boats were lost
- More than 600 seamen were lost and missed

Asian Tsunami 2004

- Happened in December 26, 2004
- About 6,100 fishing boats were damaged
- More than 700 fishers died

Case study

- Objectives:
 - To assess the current situation of safety at sea on trawlers and purse seiners in Thailand
- Methodologies
 - Sets of questionnaires were used as the guideline for the observation survey/interview
- Study areas
 - Central part: Samut-prakan, Samut-sakorn and Samut-songkram provinces
 - Eastern part: Chonburi, Trat, Chantaburi and Rayong provinces
 - Southern part (Gulf of Thailand): Chumporn, Nakorn Srithammaraj, Surat thani and Songkha provinces
 - Southern part (Andaman Sea Area): Ranong, Phang-aga, Phuket and Satun provinces
- Data/information analysis



Results

Percentage of fishing boats that perform maintenance on their hull, engine, accessory gear and navigation equipments

Area	Annual inspection	Docking	Hull routine maintenance	Engine routine maintenance	Accessory gears maintenance	Navigation equipments/ Routine maintenance
Central	54.3	87.5	68.5	92.4	84.7	90.2
Eastern	48.4	68.8	72	100	100	60.2
Southern	46.9	65.6	39	55.4	54.68	85.9
Andaman	67.3	89.1	93	100	100	97

Results

Number/percentage of surveyed fishing boats that perform maintenance on their navigation equipments

Area	Radar	Well maintained	GPS	Well maintained	Echo sounder	Well maintain
Central	80	72 (92.5)	69	64 (92.7)	83	83 (100)
Eastern	47	45 (95.7)	56	50 (89.3)	56	56 (100)
Southern	43	40 (93)	43	38 (88.4)	43	43 (100)
Andaman	76	70 (92.1)	96	90 (93.75)	101	101 (100)

Results

Safety equipments

Area	No. of boat surveyed	Ship length overall < 15 m.	Ship length overall ≥ 15 m.	Boat installed life raft	Boat installed life ring	Boat installed life jacket	Fire hose or fire extinguisher
Central	92	17	75	0	35	20	92
Eastern	93	16	77	0	0	10	93
Southern	64	10	54	0	4	10	64
Andaman	101	6	95	0	41	29	101

Results

number of crew onboard trawl and purse seine fishing boats

Area	Fishing gear type	No of boat	Ship length overall	Number of crew (person).....				
				5-15	16-25	26-30	31-35	36-60
Central	Trawler	52	<15 m. ≥ 15 m.	17 boats 35 boats				
	Purse seiner	40	<15 m. ≥ 15 m.		7 boats	20 boats	13 boats	
Eastern	Trawler	37	<15 m. ≥ 15 m.	20 boats 17 boats				
	Purse seiner	56	<15 m. ≥ 15 m.		9 boats	12 boats	9 boats	26 boats
Southern	Trawler	49	<15 m. ≥ 15 m.	10 boats 37 boats	2 boats			
	Purse seiner	15	<15 m. ≥ 15 m.		3 boats	3 boats		9 boats
Andaman	Trawler	60	<15 m. ≥ 15 m.	2 boats 18 boats	1 boat 39 boats			
	Purse seiner	41	<15 m. ≥ 15 m.		2 boats	5 boats	18 boats	16 boats

Results

Comparison of fishing operation distance

Area	Fishing gear type	No. of boat surveyed	Distance from shore to fishing ground (NM.)			
			3-12 nm	12-24nm	24-50 nm	>50 nm
Central part	Trawler	52	45	7		
	Purse seiner	40				40
Eastern part	Trawler	37	19	15	1	2
	Purse seiner	56		1	6	49
Southern part	Trawler	49	5	11	24	9
	Purse seiner	15		7	8	
Andaman	Trawler	60	21	8	26	5
	Purse seiner	41	5	11	24	1

Results

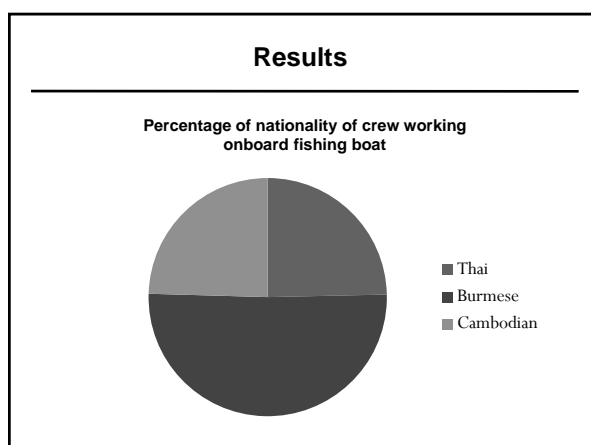
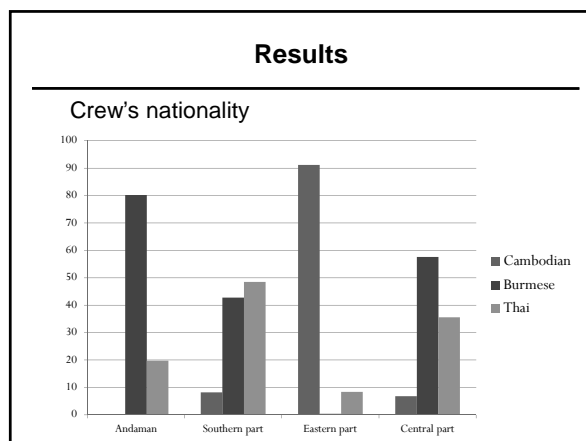
Number and size of fishing boats surveyed in relation to fishing operation distance

Area	Total boat	Size of boat	5-15 crew	16-25 crew	Install life raft	0-12 mile	> 12 mile
Central part	52	<15 m.	17 boats		0	15	2
		≥ 15 m.	35 boats		0	28	7
Eastern part	37	<15 m.	20 boats		0	19	1
		≥ 15 m.	17 boats		0		17
Southern part	49	<15 m.	10 boats		0	5	5
		≥ 15 m.	37 boats	2 boats	0		39
Andaman	60	<15 m.	2 boats	1 boat	0	2	1
		≥ 15 m.	18 boats	39 boats	0	19	20

Results

Crew's nationality

Area	No of boat	No. of crew	Nationality		
			Thai	Burmese	Cambodian
Central part	92	1980	705	1140	135
Eastern part	93	1778	149	7	1622
Southern part	64	827	423	373	76
Andaman	101	2860	564	2296	0
Total	350	7490	1841	3816	1833



Results

Crew's basic safety knowledge in different parts of Thailand

Area	No. of boat surveyed	No. of crew	Basic safety knowledge (%)
Central part	92	1980	9.29
Eastern part	93	1778	10.46
Southern part	64	872	14.68
Andaman	101	2860	7.06

Results

Working and resting period of crew

Area	Fishing gear type	No. of boat	Working period		Working hr. per day	Resting hr. per day ≥ 12 hrs	Fishing operation >8 months
			1-7 days	>7 days			
Central part	Trawler	52	45	7	30	25	45
	Purse seiner	40	40	0	15	12	20
Eastern part	Trawler	37	35	2	25	12	31
	Purse seiner	56	32	24	18	30	36
Southern part	Trawler	49	3	46	3	4	47
	Purse seiner	15	10	5	15	14	13
Andaman	Trawler	60	6	54	27	29	58
	Purse seiner	41	39	2	32	11	35
Total		350	170	180	165	137	285

Results

Crew's ability to respond to safety on board

Area	No. of boat	No. of crew	% of boat accident onboard	Basic safety knowledge	Swimming ability	Medicine kit onboard
Central part	92	1980	43%	9.29	100%	100%
Eastern part	93	1778	48%	10.46	100%	100%
Southern part	64	872	44%	14.68	100%	100%
Andaman	101	2860	58%	7.06	100%	100%

Results

Number and percentage of fishing boats encountered accident in different parts of Thailand

Area	Type of fishing boat	No. of boat	Working <12 hr/D	No. boat accident	Working >12hr/D	No. boat accident	Total boat accident	Total boat accident in %
central	Trawler Purse seine	52 40	32 18	10 (31.3%) 6 (33.3%)	20 22	8 (40%) 16 (72.7%)	40	43.47
Eastern	Trawler Purse seine	37 56	27 21	9 (33.4%) 8 (38.0%)	10 35	4 (40%) 24 (68.6%)	45	48.39
Southern	Trawler Purse seine	49 15	30 8	12 (40.0%) 3 (37.5%)	19 7	8 (42.1%) 5 (71.4%)	28	43.75
Andaman	Trawler Purse seine	60 41	32 25	16 (50.0%) 13 (52%)	28 16	18 (57.7%) 12 (75%)	59	58.42
Total		350	193	77	157	95	172	

Results

number of fishing boats with broadcasting receiver

Area	No. of boat	1 hour notice broadcasting	zone weather Broadcasting	no. boat receive information in the sea
Central	92	yes	yes	92
Eastern	93	yes	yes	93
Southern	64	yes	yes	64
Andaman	101	yes	yes	101
Total	266			266

Area	No. of boat	CB transceiver	SSB	VHF	TV	Public radio	Facsimile	Handy phone
Central part	92	92	15	0	35	92	0	85
Eastern part	93	93	51	0	19	93	0	90
Southern part	64	64	9	0	5	64	0	60
Andaman	101	101	6	0	26	101	0	100

Results

Environmental Responsibility

Area	No. of boat	Collect the inorganic garbage	Collect the damage fishing gears	Collect the waste oil
Central part	92	80	85	75
Eastern part	93	81	68	59
Southern part	64	27	55	59
Andaman	101	84	100	50

Results

Ship facility

Area	Number of Fishing boat	Mess room	Toilet	Relaxation tools	Working suit		
				(TV, Radio and Magazine)	Helmet	Gloves	Boots
Central part	92	5	10	100%	0%	45.00%	25.00%
Eastern part	93	6	0	100%	0%	44.10%	24.73%
Southern part	64	4	2	100%	0%	10.00%	10.00%

Conclusion

- The study results on the safety at sea for trawlers and purse seiners in Thailand show different safety conditions which vary according to areas and sizes of fishing boats.
- Safety conditions of about 50% of fishing boats on average met the standard set by the Marine Department and Fisheries Department.
- More than 70% of fishing boats perform good maintenance on their navigation equipments.
- Sanitation facilities and safety equipments are not well prepared onboard.
- Crew's basic ability to respond to safety on board does not meet the standard.
- More than 40% of fishing boats have experienced accidents onboard, which is considered high. This may be because their crew who lack competency are working in poor working conditions for example a long period of working.
- The weather forecasting systems have been improved very much after fatal natural disasters

Thank you



The Safety of fisherman in the Fishing Boat Operations

Junji Kawasaki
(National Fisheries University)

The project to improve the safety of
fisherman in the coastal fisheries.

2009:

- Promoted by Fisheries Agency.
- Working group mainly by JF Zengyoren
(Japan Fisheries Cooperative)

The main contents(2009)

- ①How to reduce the number of the
accidents and sea disaster in the coastal
fishing boat.
- ②How to rescue from the accidents,
mainly Man-Overboard.

In the future:

To make sure the similarity and difference about
fisheries circumstances between the countries
or region



- ① Learn from the skilled fisherman
about their knowledge and experience
- ②Share the knowledge about safety

National Research Institute of Fisheries Engineering, NRIFE
 Fisheries Research Agency, FRA
 Jun MIYOSHI

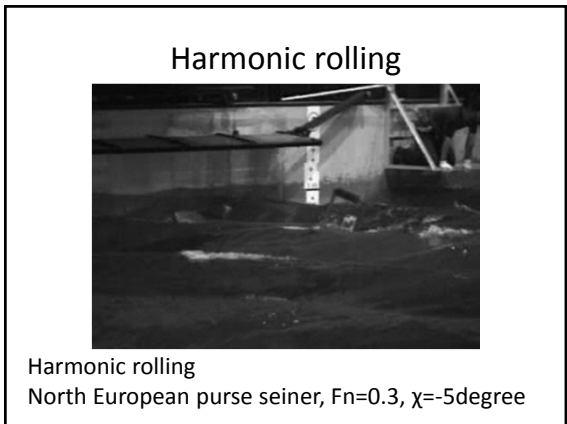
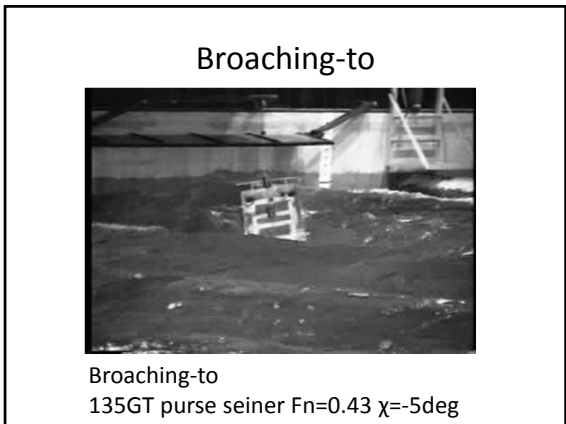
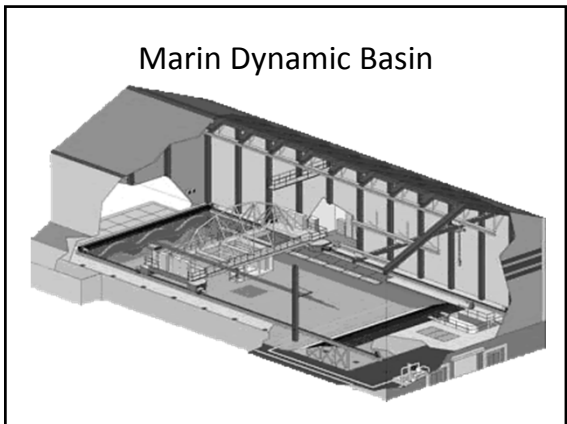
Contents

1. Organization of NRIFE, FRA
2. Video of model experiments of capsizing

Organization of NRIFE, FRA especially for fishing vessels

Fishing Technology Division
 Fishing Vessel and Fisheries Machinery Research Group

- Safety and Stability Research Team
- Fishing Vessel Performance Research Team
- Engine and Machinery Research Team



How can we improve safety for small fishing boat in ship congestion area



UMITAKA-MARU IV
TUMSAT
Fishing Boat Safety Engineering
Seiichi Takeda

1

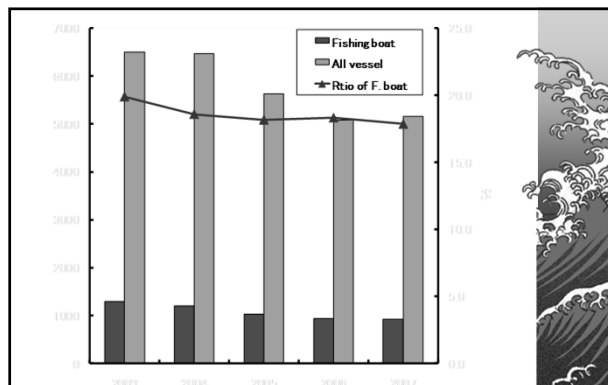
Marine accident in 2007

	Collision	Grounding	Wreck	Capsize	---	Total
Fishing boat	350	72	4	40	---	921
Passenger ship	25	23	0	0	---	420
Cargo ship	265	487	1	1	---	1,827
Oil tanker	76	83	0	0	---	434
Plesure boat	125	58	1	31	---	363
-----	-----	-----	-----	-----	-----	59
計	1,085	966	9	88	---	5,158

2

Marine accident of fishing boat in 2003-2007

	2003	2004	2005	2006	2007
Collision	456	476	351	333	369
Grounding	98	96	81	66	72
Wreck	7	2	4	7	4
Capsize	45	46	49	34	40
-----	-----	-----	-----	-----	-----
Total	1293	1203	1023	931	92
All vessel	6502	6474	5631	5081	5158
Ratio of F. boat (%)	19.9	18.6	18.2	18.3	17.9

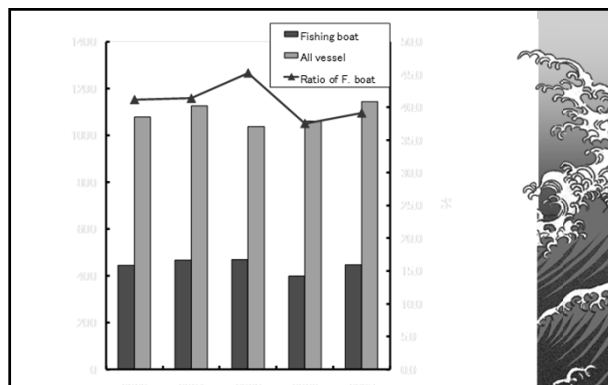


Marine accident of fishing boat in 2003-2007

Judged number by JMTT* in 2003-2007

(*Japan Marine Accident Tribunal)

	2003	2004	2005	2006	2007
Collision	283	286	272	239	264
Grounding	14	51	66	43	46
Wreck	58	5	1	2	2
Capsize	1	11	15	15	13
-----	-----	-----	-----	-----	-----
Total	444	466	469	398	447
All vessel	1079	1127	1037	1061	1143
Ratio of F. boat (%)	41.1	41.3	45.2	37.5	39.1



Judged number by JMTT in 2003-2007

Current situation of marine accident by fishing boat in 2007

•447 fishing boats	
collision	247 boats (55%)
engine trouble, fire	73 boats (16%)
grounding	46 boats (10%)
•Decease, missing	
	29 boats (36 fishermen)
collision	14 boats
killing and injuring	9 boats
capsize	4 boats

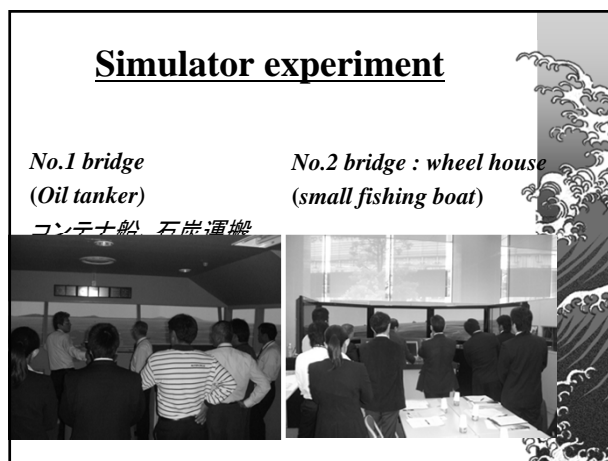
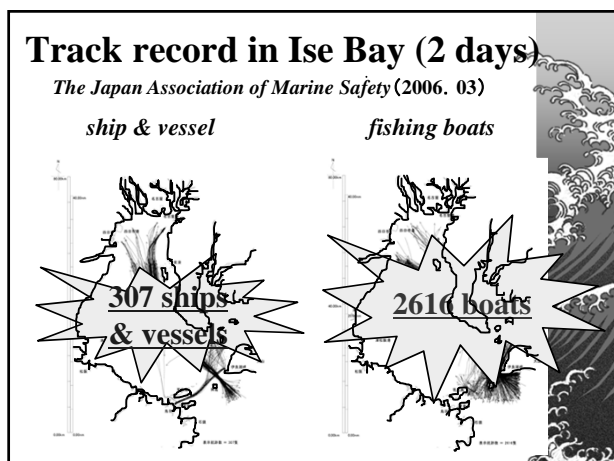
Causation of collision

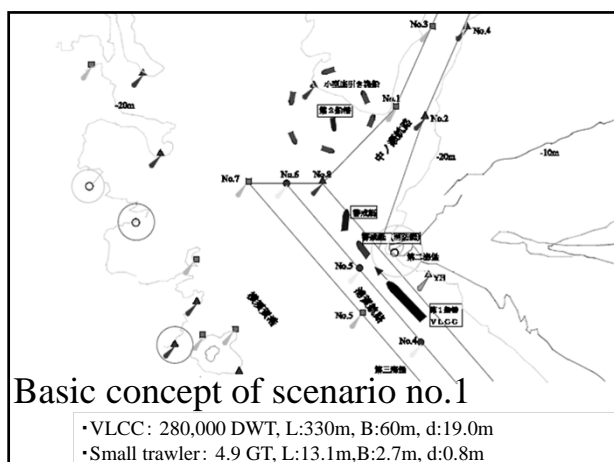
233 fishing boats (causation known)

lack of lookout	178 boats (76%)
none of lookout**	63 boats (35%)
not aware of other ship	76 boats (43%)
inadequate lookout	39 boats (22%)
** under fishing operation	36 boats

- Factor affect on safety for small fishing boats**
- Stability
 - Strength
 - Fishing method & operation
 - Machinery maintenance
 - Life saving equipment
 - Seaworthy (sea keeping quality)
 - Relation with other ship & vessel

- Ship congestion area in Japan**
- Tokyo Bay
 - Ise Bay
 - Seto Inland Sea
 - Kammon Straits &
- traffic congestion
active fishing operation
- ↓
- Need to keep safety for not only small fishing boat but also other ship & vessel¹⁰





Example of Questionnaire item

- Distance between each other
- Maneuverability of VLCC
- Fishing method of small trawler
- Effect of ship waves
-

Answer form navigation officer

Distance between each other
(from view point of fishing boat)

① safely	11
② nothing to worry about	10
③ little bit near but not so worry about	17
④ worried	8
⑤ others	3

Answer form fishermen

Distance between each other
(from view point of VLCC)

① safely	2
② little bit near but not so worry about	5
③ worried	18
④ worried about collision	9
⑤ others	2

Answer form fishermen

Maneuverability of VLCC

① good	3
② not so poor	6
③ poor	15
④ bad	11
⑤ others	1

Steerability is poor (rudder is not so effective)

How to keep safety for not only small fishing boat but also other ship & vessel

- Cooperative operation
- Communication
- Give way
- Mutual understanding (situation, capability, and etc.)
- Early intension

↓


Mutual harmony and benefit



**Thai – Maritime Enforcement
Coordinating Center (Thai-MECC)
“SORNCHON”**

Capt. Apichal Sompolgrunk
Director of Maritime Security Division, NOD

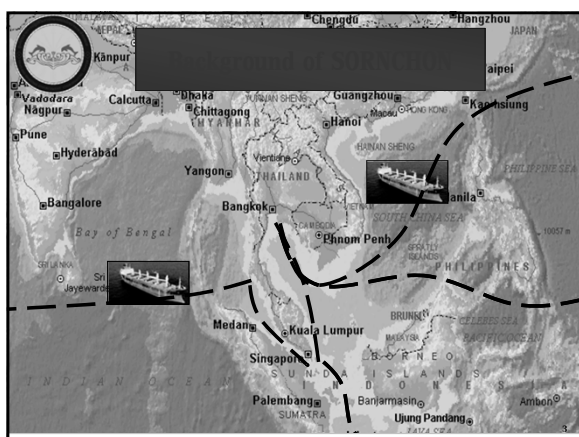
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**Initiatives related to safety
for small fishing boats**

- Background of SORNCHON
- Roles and Missions
- Area of Operations
- SORNCHON’s Initiatives

2



Organisational Structure

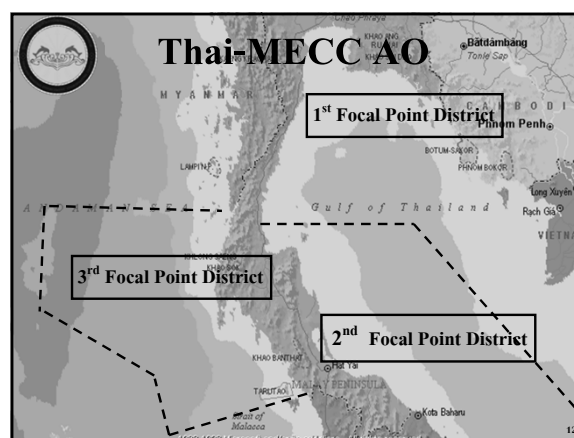
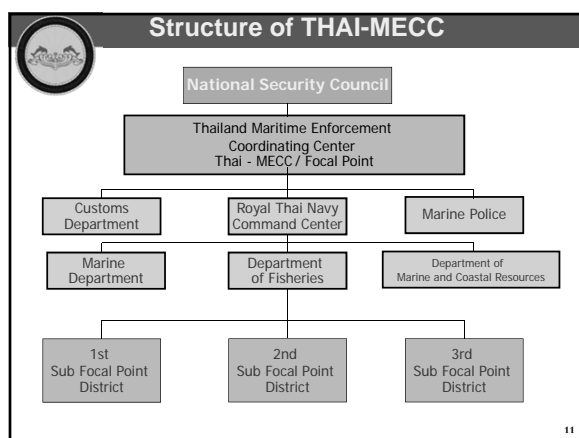


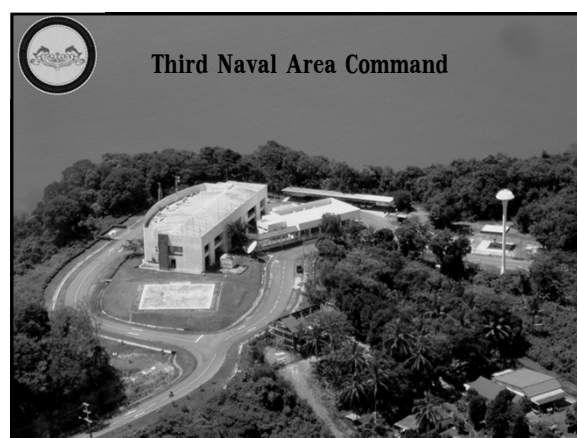
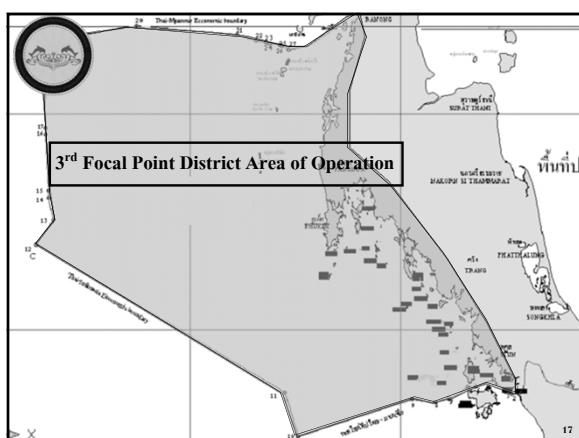
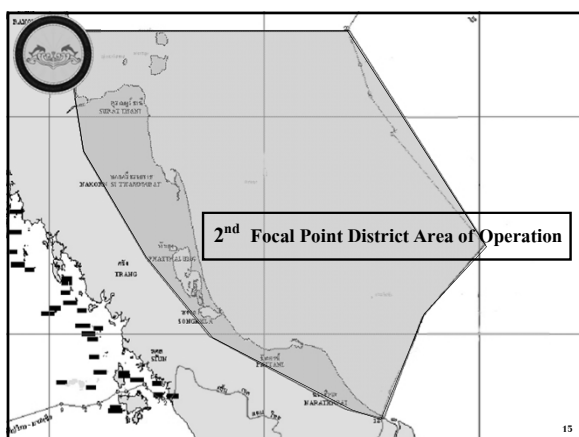
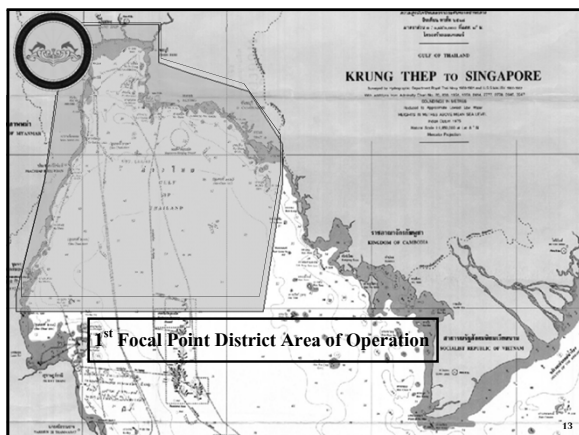
6



MARITIME AUTHORITIES

- Main organizations**
 - Royal Thai Navy
 - Marine Police
 - Customs
 - Marine Department
 - Department of fisheries
 - Department of Marine and Coastal Resources
- Joint organizations**
 - Ministry of Foreign Affairs
 - Ministry of Labour
 - Tourism Authority of Thailand
 - Immigration Bureau
 - Royal Forest Department
 - Excise Department
 - Pollution Control Department
 - Etc.









Arresting illegal Rohingya migrants

25



Maritime Environment Conservation

27



Oil spill cleanup from the Leo ship's wreckage

29

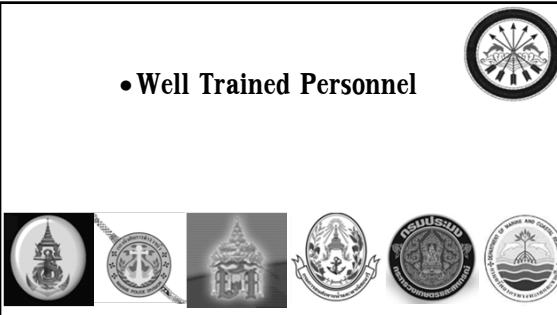


SORNCHON's Initiatives
Related to
Safety at Sea for Small Fishing Boats

30



• Well Trained Personnel

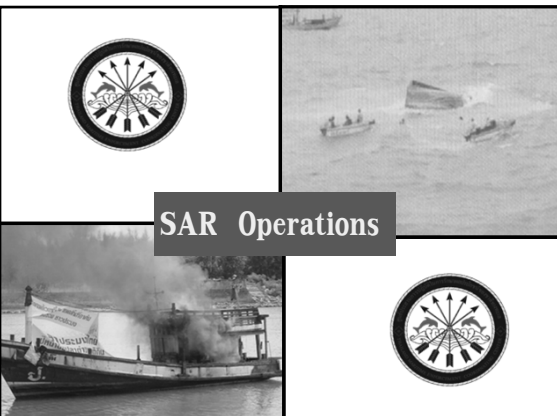
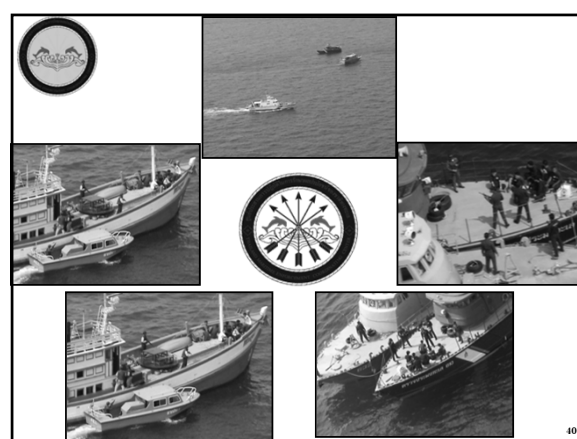


34



• Effective Operation – SAR

37



SAR Operations

40



Obstacles

Country Paper

BRUNEI DARUSSALAM INITIATIVES ON SAFETY AT SEA FOR SMALL FISHING BOATS

By Bidin Suru

INTRODUCTION

Brunei Darussalam is located in the northwestern part of Borneo. It has a land area of about 5,765 km².and 130 km long coastline fronting the South China Sea. The total marine territorial area is estimated at about 41,160 km². covering the Brunei Fishery Limit. The coastal waters of Brunei Darussalam are characterized by narrow continental shelves, having a total area of about 8,600 km².

The fishing area is divided into four fishing zones as shown in Figure 1. The capture fisheries of Brunei have a potential yield of about 21,300 mt annually that is almost fully exploited especially the demersal resources in fishing zones 1 to 3. The zone 1 extends from 0 to 3 nautical miles offshore and is exclusively for small-scale fishermen with small boats, operated only using traditional fishing gears. (e.g: set bottom net, trammel net, traps, hook and lines). While zone 2 extends from 3 to 20 nautical miles offshore and is operated by inboards vessels having engine range of 0 to 350 horsepower with gross tonnage not more than 60 tons. Zone 3 extends 20 to 45 nautical miles offshore and is open for purse seiners having engines with 351 to 600 horsepower and gross tonnage from 60.1 to 150 tons. The zone 4 extends from 45 to 200 nautical miles offshore and is open for larger vessels as follow: - Purse seiner and Tuna Long Line having engines range of 600 to 800 Horsepower and gross tonnage of 150 to 200 tons.



Figure1. The fishing area and fishing zonation of Brunei Darussalam's waters.

In the global and regional development of the capture fisheries, the quality of fishing gears and methods is an important factor especially in the exploitation of the marine fisheries resources and its impact on the marine environment. In Brunei Darussalam, capture fishery is almost completely exploited and recently showing symptoms of fatigue from fishing such as indicated by the decline in the CPUE among trawlers. About 30% share of the total production from commercial fisheries sector is contributed by the bottom trawlers, purse seiners and long liners that operates mainly in zones 2 and 3 of Brunei fishing limits. The bottom-set long liners and the purse seiners that re-started operating in 1999 and 2001, respectively, has yet to boost up its minimal contribution to the total commercial fisheries production.

In general, the marine capture fisheries have continuously provided more or less of 50% of the country's supply of fish for over 20 years. And in recent years, the small-scale fisheries sector plays important rule by contributing 70% of the capture fisheries production. Majority of the fishermen in this sector are operating in zone 1 or fishing areas from the shoreline moving seaward to within 3 nm offshore. They generally use fiberglass fishing boats propelled by one or two units of outboard engines to reach their fishing destinations and operate small-scale fishing gears such as trammel nets, hooks and lines, pots to name a few. Most have modernized their fishing techniques using electronic devices such as the Global Positioning System (GPS) receivers, echo sounder or fish finder and even mobile phones for communication have become very common among the small-scale fishermen.

OBJECTIVE

The objectives of the Workshop as follow;

- 1.1 To review international, regional and national initiatives related to safety for small fishing boats.
- 1.2 To review the progress of national works on improvement of safety at sea.
- 1.3 To discuss on how to establish the system or mechanism at the national level for recording accident at sea of small fishing boats.
- 1.4 To establish a collaborative efforts among the relevant agencies/authorizes for improvement of safety at sea for fishing vessels; and
- 1.5 To prepare regional guidelines for safety at sea of small fishing boats

SAFETY AT SEA IMPLEMENTATION IN BRUNEI DARUSSALAM FOR SMALL FISHING BOATS

Brunei Darussalam initiatives and status regarding the safety at sea of fishing boats, the commercial fishing boats are inspected and certified by the Marine Department for safety requirements such as navigational lights, life jackets and navigational instruments and electronics. The Fisheries Department requires the commercial fishing boats to possess functional radar, echo sounder, GPS, VHF radio and proper navigational lights prior to issuance of fishing license. GPS plotter, life raft and SSB (single side band) radio are optional but the usage are encouraged.

PROBLEMS ENCOUNTERED IN THE IMPLEMENTATION

Most of the captain / skipper of the fishing vessel are foreign worker. They don't have the license for bring the vessel out to the sea, only by experience. When they going out for

fishing, captain / skipper of the fishing vessel did not acknowledge using radio the authorities during going out for fishing.

SUGGESTION AND RECOMMENDATIONS

Most of small fishing boat pilots are not formally trained in seamanship and navigation therefore it is suggested that each seagoing fisher must undertake training and certification in seamanship and navigation especially on the RULES OF THE ROAD at sea and COLLISION AND AVOIDANCE.

All small fishing boats must be properly registered to proper authority for safety reasons. Registration must require safety guidelines to ensure safety of fishers a sea including the seaworthiness certification of each boat.

Require the use of handheld VHF radios in tandem with mobile phones among small fishing boat operators. VHF radios are commonly used by big ships and are monitored 24 hours a day by authorities and seagoing vessels therefore in case of emergency nearby boats within the 5 nm radius can provide assistance using channel 16.

Fishing vessel owner and/or skipper shall provide on-board occupational safety and health awareness training. Insurance for fisher is also advised for fishing vessel owner. It can contribute the improvement of safety on fishing vessel by highlight the factor that causes accidents.

All navigation and communication equipments working must in satisfactorily condition. The quantity of navigation and communication equipments that installation on board should complied at least on the level of SOLAS regulation.

All safety equipment and fire fighting appliance is working in satisfactorily and sufficient for all persons on board. All safety equipment and fire fighting appliance should be in validity not expiration. If spare parts is lacking, the skipper should inform to company for supplying.

For the health and work period, all persons onboard who are assigned duties as duty watch or fishing will be provided a minimum of 10 hours of rest in any 24 hours period. The hours of rest may be divided into no more than 2 periods, one of which shall be at least 6 hours in length. All person on board shall has enough safety living, working and good health and medical care at sea and sufficient rest and the same social security protection as other workers.

**THE 2ND REGIONAL TECHNICAL
WORKSHOP ON SAFETY AT SEA FOR
SMALL FISHING BOATS**

**BRUNEI DARUSSALAM INITIATIVES ON
SAFETY AT SEA FOR SMALL FISHING BOATS
COUNTRY REPORT**

BY

**MR BIDIN SURU
AND
MR HAJI ABIDIN HJ TENGAH**

FISHING ZONE

- The fishing area is divided into four fishing zones as shown in Figure 1.
- The capture fisheries of Brunei have a potential yield of about 21,300 mt annually that is almost fully exploited especially the demersal resources in fishing zones 1 to 3.
- The zone 1 extends from 0 to 3 nautical miles offshore and is exclusively for small-scale fishermen with small boats, operated only using traditional fishing gears. (e.g: set bottom net, trammel net, traps, hook and lines).
- The zone 2 extends from 3 to 20 nautical miles offshore and is operated by inboards vessels having engine of not more than 350 horsepower with gross tonnage not less than 60 tons.
- The Zone 3 extends 20 to 45 nautical miles offshore and is open for purse seiners having engines with 351 to 600 horsepower and gross tonnage from 60.1 to 150 tons.
- The zone 4 extends from 45 to 200 nautical miles offshore and is open for larger vessels as follow: - Purse seiner and Tuna Long Line having engines greater than 600 Horsepower and gross tonnage greater than 150 tons.

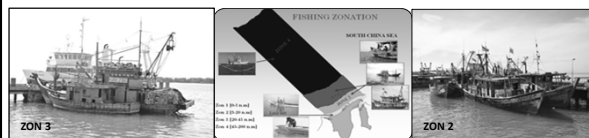


Figure 1

**SAFETY AT SEA IMPLEMENTATION IN BRUNEI DARUSSALAM
FOR SMALL FISHING BOATS**

•The commercial fishing boats are inspected and certified by the Marine Department for safety requirements such as navigational lights, life jackets and navigational instruments and electronics.

•The Fisheries Department requires the commercial fishing boats to possess functional radar, echo sounder, GPS, VHF radio and proper navigational lights prior to issuance of fishing license. GPS plotter, lift raft and SSB radio are optional but its use is encouraged.

PROBLEM ENCOUNTERED IN THE IMPLEMENTATION

MOST OF THE CAPTAIN/SKIPPER OF THE FISHING VESSEL ARE FOREIGN WORKER

THEY DON'T HAVE PROPER LICENCE JUST USING THEIR EXPERIENCE

LACK OF KNOWLEDGE USING RADIO THE AUTHORITIES DURING GOING OUT FOR FISHING

THANK YOU



The Current Situation of Safety at Sea of Small Fishing Vessels of Cambodia

Presented by: Chhoun Kim Chhea
Deputy Director of Fisheries Affairs Department

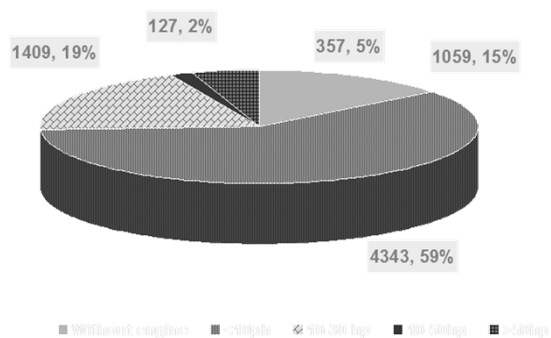
General Issues

- The coastal fisheries are generally of small-scale nature
- The fishing fleet consists mainly of traditional fishing boats exhibiting problems in quality of timber, fastenings and design
- Storms and bad weather are significant risks for the fishers but accidents at sea are not perceived as a serious problem by fishermen

General Issues

- The information on small fishing boat accidents were not found.
- National Committee for Disaster Management was established, but it mainly focus at inland area.
- The proclamation on fishing boat management was finalized early 2010 and the application of this document has not been started yet

Fishing boat statistics in 2006



Concern Agencies at Sea

- Navy
- Marine Fisheries Inspection
- Marine Border Police
- Custom office
- Port authorities

Some Kinds of Accident at Sea

- Boats sank because:
 - fishing gear hit big reef
 - Fishing rope detached
 - boats hit each other when all crews sleep
 - Boats could not tolerate with strong win and wave
 - Pumping system did not work while water was leaking into the boat
 - Gas explosion on boat

Some Kinds of Accident at Sea

- When boat sank, fishermen lost their lives because:
 - Boats did not equip with safety equipment
 - No intervention by concern agencies at sea

CURRENT PRACTICES
OF SMALL SCALL
FISHING BOAT
REGARDING TO SAFETY
AT SEA

Safety Equipments

- Generally fishing boats use navigation light, compass
- Some boats equipped GPS
- Most of small fishing boats do not equip with:
 - lifejacket and life buoy
 - Fire equipment

“Fishermen perceive that if they bring with safety equipments, it will be a bad presage”
- Fishermen are using gas for cooking without taking into consideration of explosion

Communication onboard

- All fishing boats are using communication system at sea such as:
 - Radio transmission: AM and FM
 - Mobile phone
- Radio FM for receiving in any information broadcasted from various Radio station

Information on Weather Forecast at sea

- The ministry of water resources and meteorology provides information on weather forecast
- but the information on marine weather is still limited such as wind velocity, wave level and wind direction
- So fishermen are using Vietnam and Thai weather forecast

REGULATION ON
SAFETY AT SEA FOR
SMALL SCALE FISHING
BOAT

Proclamation on Technical Management of Fishing Boat

- All fishing boats with more than 500kg gross tonnage must follow the regulation on technical management of fishing boat to ensure boat safety and crew lives.
- Regulation on technical management includes technical requirement fishing condition

Technical Requirement

- All fishing boats have to follow the following condition:
- Put national flag
 - Put registration plate, light and other sing of identity
 - Equip with radio communication, fire equipment, life jacket, lifebuoy, binocular, compass, medicine for emergency rescue, navigation light, emergency light and emergency whistle
 - Good quality of engine and boat

Work Plan to Improve Safety at Sea

Measures to improve safety at sea and reduce vulnerability for fishers

Outputs	Activities	Year							
		Y 1	Y 2	Y 3	Y 4				
Assessment of accidents and their causes as information base	Design information gathering system and data base								
	Implement data gathering, processing and analysis								

Outputs	Activities	Year							
		Y 1	Y 2	Y 3	Y 4				
Awareness of dangers and hazards among stakeholders	Design awareness raising campaigns								
	Conduct regular awareness raising								
	Assess level of awareness of targeted groups								

Outputs	Activities	Year							
		Y 1	Y 2	Y 3	Y 4				
Enhanced disaster preparedness in coastal communities	Identify disaster preparedness measure								
	Design and provide training in disaster preparedness								
	Provide equipment to improve disaster preparedness								

Output	Activities	Y 1	Y 2	Y 3	Y 4
Training of fishers and boat builders in fishing boat safety	Identify and assess training needs				
	Design training course and materials				
	Conduct training courses for fishers and boat builders				
	Assess training impact				

Output	Activities	Y 1	Y 2	Y 3	Y 4
Communication system in place to enhance safety at sea	Identify communication means and opportunities				
	Provide access to communication tools				
Early warning systems (e.g. weather reporting) improved	Assist local radio/TV stations to improve weather reporting				
	Identify and promote opportunity to broadcast other fisheries topics				
	Assess impact of improved reporting				

Conclusion

- Small scale fishing boat is under risk due to low quality, lack of safety equipment, poor crew ability
- Information system on weather forecast and accident at sea were overlooked and need to be improved

**THANK YOU FOR
YOUR
ATTENTION**

Current situation of safety at sea :

Progress of the Indonesia on improvement of safety at sea for small fishing vessel.

By

Suharyanto - Jakarta Fisheries University

Agus Santoso – DG of Capture Fisheries

Yusuf Fathana – DG of Capture Fisheries

Introduction

Indonesia has huge maritime zone, some 5.8 km² consisting of archipelagic waters, territorial seas, and exclusive economic zone. Capture fisheries product increases annually at a mean rate of 2.9 %, e.g. about 4.8 million MT in 2002 to about 5.0 million MT in 2007 of which marine capture fisheries of 4.7 million MT of which mostly contributed by little tunas, skipjack tunas, and tunas.

Although fishing mostly dirty, dangerous, and difficult, it has contributed to more than 2.2 million people livelihood spreadly in more than 300 coastal municipal/district. Infact, fishing makes an important contribution to nutrition, food security, and sustainable livelihoods.

In other hand, accident of fishing is high at certain time each year due to both of the fishing vessels (FV) and the fishers/fishing vessel personnel (FVP) aspects, but the fishing community only recorded / known the fatality accident of their community. Based on data 2007 of Safety Investigation Agency, FV accident was 10% of the 110 total marine casualty in Indonesia Waters.

This condition unfortunately is not making direct stakeholders to be aware of the safety which comprises FV safety and FVP competency. The owner of FV and the FVP themselves feel safety aspect not urgent to be provided, so that they have also no competency of using safety equipment. They have not recognized yet that safety increasing productivity and decreasing accident. Solving the problem, it should make coordination between key stakeholder such FV owner, FVP, fisher community/local leader and the local fisheries office, and of course have to be supported by their fisher family.

Standard of FV

Small scale fishing can both use certain size of outboard and inboard motor at not more than 7 nautical miles. Out-board motor with < 10 horse power (HP) or FV with size of < 5 gross tonnage (GT) operated at zone 1 can be classified as small scale, or at zone 2 for inboard motor with < 50 HP or FV with size of < 25 GT.

According to power used, FV classified into non-powered boat, outboard motor and inboard motor.

Non-powered boat consists of dug-out boat and plank built boat, while inboard motor differs from its GT. From total more than 590 thousand unit of FV, non-powered boat contributes 40%, outboard motor 31% and in-board motor 27% of which 26% of the FV is less than 30 GT or only about 1% of FV more than 30 GT. Related to FV < 30 GT, FV with < 5 GT contributed as more than 70%.

As regard of size, FV of >30 GT has regulated on standard safety requirement, with size of >60 GT as the earlier size and FVP safety training. Considering this regulation need appropriate minimum requirement for small FV by size (as small FV is FV with length < 24 meter).

Standard of FVP

We established standard of FVP based on length of FV adopted of the STCW-F 1995 in year of 2005. We issued three class of both deck and engine officer namely Deck/Engine Officer Certificate of Competence Class I until Class III. Class I regarding to FV length more than 24 meter, class II for FV length between 12 to 24 meter, and class III for FV length below 12 meter. Until now time we also are progressing equivalency of the former certificate namely Certificate of Competency 60 mile to the Certificate Class III.

The training and education to get certificate both carried out by formal and non-formal. The examination is conducting in 8 difference areas by Executing Committee for Examination on behalf mandte of Board of Examination and Assessment for the Certification of Seafarers.

According to the need of fisher we have been conducting training for rating and even for certain type of fishing vessel which can vary by areas due to mostly FVP in small scale fishing as 84% of the total FVP. The training is conducted spreadly in the province by the implementing unit of the Agency for HRD or of the Fisheries Office. Competence covered in the training both for the safety and responsible fishing operation (some cases they have enough experience in fishing operation).

Highlightly, the most factor on human regarding safety of FV are low access of training, inappropriate procedures, and no further information of new working environment in FV.

Regulation Concern

Mainly there are three ministry concern to the fishing activities i.e. Ministry of Marine Affairs and Fisheries (MoMAF), Ministry of Communication (MoC), and Ministry of Manpower (MoM). The regulation further is issued as Decree and followed by Ministerial Regulation also Government Regulation to support implementation. The regulation concern as follow

- Decree 45 (2009) as development of Decree 3 (2004) of Fisheries: fisheries in general; fishing activities
- Decree 7 (2008) of Shipping: seafarers certification
- Decree 3 (2003) of Manpower: occupational health and safety
- Government Regulation 07 (2000) of Seafarers: FVP

- Ministry Regulation 30 (2008) of Seafarer Identification Document: seaman book, safety training
- Ministry Regulation 09 (2005) of Training and Education, Assessment and Certification for FVP: training and education; certification for FVP
- Ministry Regulation 46 (1996) of Fishing Vessel Safety and Manning Certificate: safety of FV; manning of FV

Responsible Agency

Related implementing level of the ministry that responsible to FV safety are on the Directorate General of Capture Fisheries (MoMAF), Agency for Marine and Fisheries HRD (MoMAF), and Directorate General of Sea Communication (MoC). Activities covered of the Directorate or the Agency such licencing and registration; information, training and education; and FV safety and manning.

Fishing port, fish landing center and even fishing community have also responsibility regarding the FV safety that means of for FV and FVP. Both fishing port and fish landing center have records at least number of going-out FV from their areas but the FV accident except fatality accident. Fishing community generally only knows of their community activities without records.

Related to the safety of FV, preliminary study conducted in Cilacap, Pekalongan and Tegal. Result of study indicated that capsized was most caused of fatality as more than 45% from total fatality, followed by man-overboard, sick and fatigue, and fishing operation.

Discussion

1. Based on regulation, term of fishing vessel has adopted on the international regulation. Size of FV mostly still in GT while some regulation initiate to use length of FV. Any confuse come out for small FV if using length as size of the FV which varies by areas.
2. Base data of FV accident need to develop and establish method of collection due to autonomy era and varies of key /driven stakeholder.
3. Scheme of insurance has initiated to more than 2.000 FVP in Java to encourage safety awareness and accident recording. This activities need to support by regional guidelines for better integration measures for FV safety.

CURRENT SITUATION OF SAFETY AT SEA :


Progress of the Indonesia on improvement of safety at sea for small fishing vessels.



Sharyanto – Jakarta Fisheries University
 Agus Santoso – DG of Capture Fisheries
 Yusuf Fathana – DG of Capture Fisheries


OUTLINE

- INTRODUCTION
- STANDARD OF FISHING VESSEL
- STANDARD OF FISHING VESSEL PERSONNEL
- REGULATION CONCERN
- RESPONSIBLE AGENCY
- PRELIMINARY STUDY OF SAFETY
- DISCUSSION




INTRODUCTION

- Fishing ~ 3D ; dirty, dangerous, and difficult
- High accident on FV
- Lack of awareness of stakeholders
- Lack of safety competency
- Lack of coordination between stakeholders
- Lack of awareness of safety culture
- Low access of training and education



STANDARD OF FISHING VESSEL

- Small scale
 - Outboard engine: < 10 HP; < 5 GT;
Zone 1 (3 nm)
 - Inboard engine: < 50 HP; < 25 GT;
Zone 2 (3 nm - 7 nm)



- Non powered boat : 40.9 %
- Outboard motor : 31.4 %
- Inboard motor : 27.7 %
 - < 5GT : 19.4%
 - 5GT – 10GT : 5.1%
 - 10GT – 30GT : 2.3%
 - > 30GT : 0.9%
- Total : 590 314 unit

FV Composition by Size

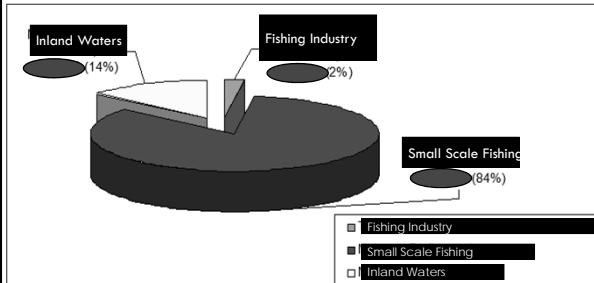
	Size of Vessel (inboard motor)	%
1	< 5 GT	70.1
2	5 – 10 GT	18.5
3	10 – 20 GT	5.1
4	20 – 30 GT	3.4
5	30 – 50 GT	0.6
6	50 – 100 GT	1.1
7	100 – 200 GT	0.9
8	> 200 GT	0.3

STANDARD OF FVP

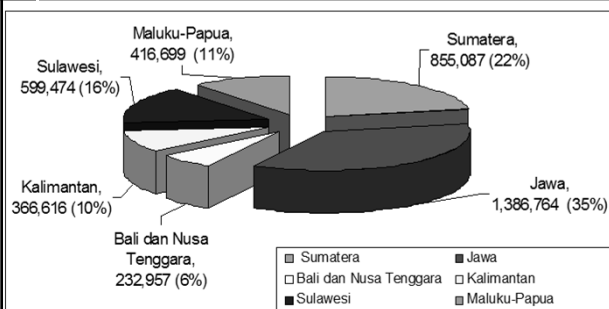
- Size of FV
- Process of equivalency
- Local need



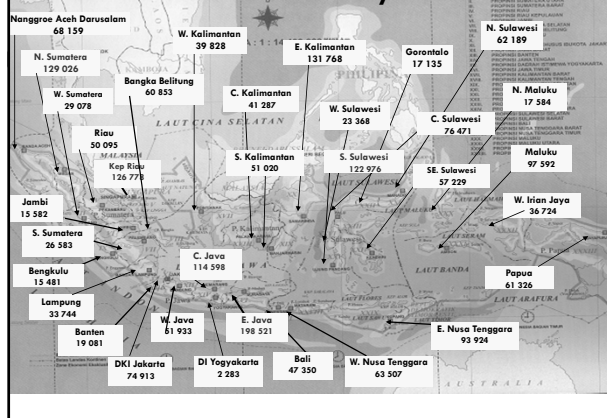
FVP by Fishing Type



FVP Distribution by Area



FVP Distribution by Province

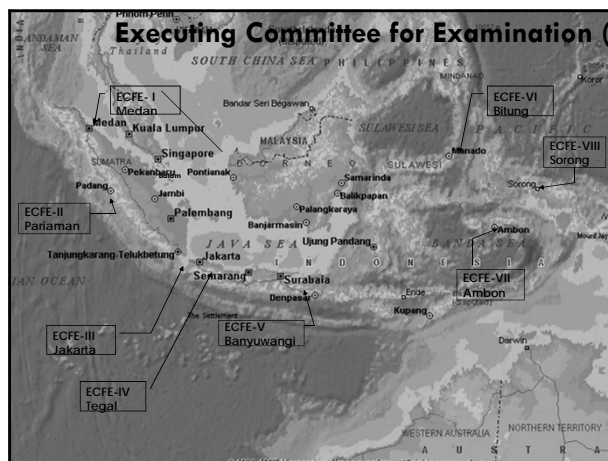
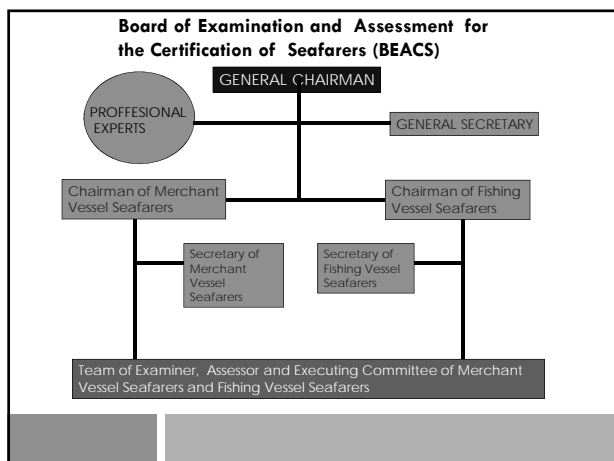
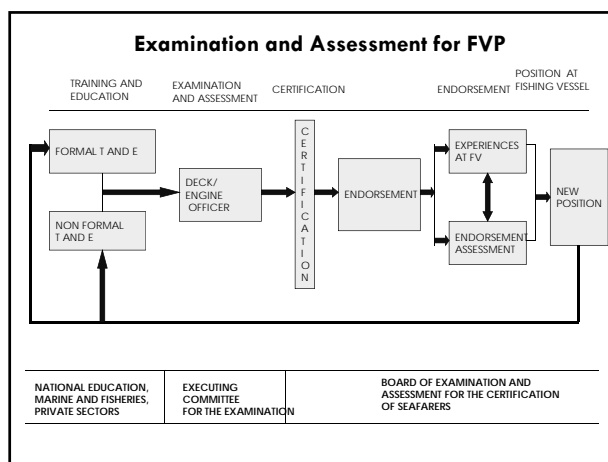
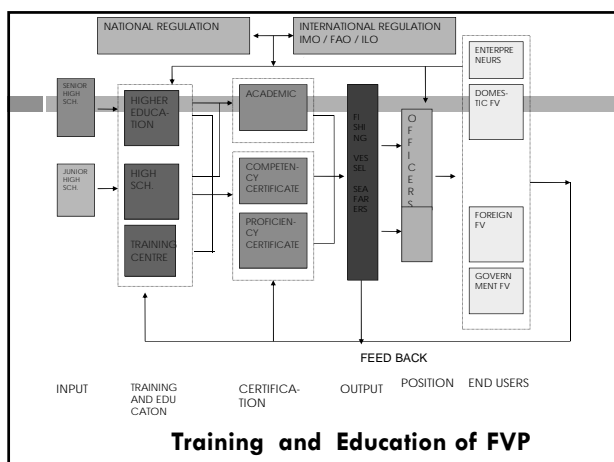


Human Factor on FV Safety

- Lack of training
- Uncompetent
- Inexperience
- Neglect
- Lack of manning
- Inappropriate SOP
- Fatigue
- New working environment

Safety Awareness

- FVP
- Owner
- Training and Education Institute
- Marine and Fisheries Service
- Local Leader
- NGO
- FVP family



- REGULATION CONCERN**
- Decree 45 (2009) of Fisheries
 - Decree 17 (2008) of Shipping
 - Decree 13 (2003) of Manpower
 - Gov Regulation 07 (2000) of Seafarers
 - Ministry Regulation 30 (2008) of Seafarer Identification Document
 - Ministry Regulation 09 (2005) of Training and Education, Assessment and Certification for FVP
 - Ministry Regulation 46 (1996) of Fishing Vessel Safety and Manning Certificate

- RESPONSIBLE AGENCY**
- DG of Capture Fisheries, MoMAF
 - Agency for Marine and Fisheries HRD, MoMAF
 - DG of Social Commun...

Competent Authority

- Safety and health training
- Minimum requirement of FVP
- Manning regulation based on size and type of FV
- FV inspection
- Health and safety management
- Insurance access
- Report and investigation system

PRELIMINARY STUDY OF SAFETY

- Random of 66 fishing vessels
 Tegal : Danish-seiner
 Pekalongan : Purse-seiner
 Cilacap : Mini Long-liner; Gill-netter



- Fatal accident of 68 person
 - 45.6% capsize
 - 26.5 % man-overboard
 - 20.5% sick and fatigue
 - 7.4% fishing operation
- Capsize
 Cilacap 80.6% and Tegal 19.4% due to rough sea (stability)

- Man-overboard
 - Mini long-liner, Gill-netter in Cilacap 44.4%
 - Danish-seiner in Tegal 38.9%
 - Purse-seiner in Pekalongan 16.7%
 - Size of FV: Tegal and Cilacap < Pekalongan
- Sick
 - Fishing base Pekalongan 58.3%
 - Percentage of total fatal accident 20.5%
 - Att. fishing days of Purse seiner 34 days to 89 days, average 60 days
- ILO Convention 188 (2007)
 - > 3 days of fishing : health certificate, first aid, medical care, hygiene food, health control

- Fishing operation
 - Lack of FVP competency
 - Lack of information and emergency drill
 - Low lighting support at night fishing
 - Att. IMO Model Course 1.33 as training guideline

DISCUSSION

- Term of fishing vessel
- Base of FV size
- Accident record
- Regional guidelines



Current Situation of Safety at Sea

-Progress of the Japan on Improvement of safety at sea for small fishing boats-

Akihiko Matsuda
National Research Institute of Fisheries Engineering,
Fisheries Research Agency, JAPAN

1

Contents

- Standard of Fishing boat
- Standard of Crew
- Regulation Concern
- Responsible Agency for Safety at Sea

Contents

- Standard of Fishing boat
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Standard of Fishing boat

Size of Fishing vessels	Inspection Organization
Less than 20GT	Japan Craft Inspection Organization
Over 20GT	the Japanese Government (the Ministry of Land, Infrastructure, Transport and Tourism)

4

Standard of Fishing boat

- Standard of Fishing boat is composed of 14 chapters as follows;
 - General provision,
 - Hull,
 - Machinery installation,
 - Drain system,
 - Rudder, mousing and anchor systems,
 - Life-saving appliance,
 - Fire protection,
 - Crew accommodation,
 - Navigation equipment,
 - Electrical installation,
 - Special installation,
 - Stability,
 - Maneuvering,
 - Others.

Contents

- Standard of Fishing boat
- Standard of Crew
- Regulation Concern
- Responsible Agency for Safety at Sea

Standard of Crew

- License of small boat skipper




7

License of small boat

Small boat

- Less than 20GT
- 1 person can drive
- Less than 24m

License of small boat skipper

1st class	No limits
2nd class	Flat water or less than 5 nautical miles from coast
Special class	Personal water craft 

License of small boat skipper

- The term of validity : 5years
- Renewal license
 - Medical examination
 - Eye tests
 - Color blind tests
 - Hearing tests
 - Physical examination of disable
 - Lecture class (50 min)
 - Video (20 min)
 - Presentation of safety (30 min)

Contents

- Standard of Fishing boat
- Standard of Crew
- Regulation Concern
- Responsible Agency for Safety at Sea

Regulation Concern

- Fisheries fundamental standard
- Fisheries standard
- Fishing vessel standard
- Fishing port standard
- Regulation of fisheries resource control etc.....

12

Responsible Agency for Safety at Sea

- Safety lecture classes
- Pamphlets and booklets of safety at sea
- Poster of safety at sea
etc.....

13

Contents

- Standard of Fishing boat
- Standard of Crew
- Regulation Concern
- Responsible Agency for Safety at Sea

Safety lecture class

- Some fishermen's cooperatives hold safety lecture class for themselves.
- Example.
Hasaki fishermen's cooperative holds safety lecture class every year.

Safety lecture class

- Lecturer
Japan Coast Guard
Professor of University
Researcher of Institute
etc.....

Safety lecture class


- Contents of safety lecture class
Life-Saving
Mechanism of fishermen's accidents
Mechanism of Capsizing
etc.....

Pamphlets of safety at sea


- Fisheries Agency,
- Fisheries Research Agency,
- Fishing Boat and System Engineering Association,
- Osaka University,
- Osaka Prefecture University
make a pamphlet, together.

Pamphlets of safety at sea


Close hatches

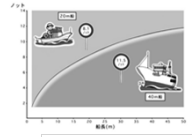


Slow speed in following seas



Fix fishing gears and nets







Keep a speed limit

Pamphlets of safety at sea


Attention about top heavy



★重心の高さと危険度のグラフ



Attention about Rolling period



Poster of safety at sea

ひとりの乗組のライフジャケット着用義務範囲の拡大について
乗組全員を着用して下さい
ライフジャケットの着用が必要です!
平成29年4月1日より



ついでに! ライフジャケット!!

**あなたを守る
3つの習慣!**

- 1 複数人での操業
- 2 ライフジャケットの着用
- 3 慎重な気象判断



浦河海上保安署 海上保安協会浦河支部
TEL 0146-22-0118 / 海のもしもは 118番

Poster of safety at sea

Japan Coast Guard



海上保安庁は、海を渡る人の
パライ(仲間)です。
118番

ライフジャケットは、あなたの命を守ります。




ライフジャケット
乗船必須品
118番

乗船時には
必ず着用 必ず着用 必ず着用
必ず着用 必ず着用 必ず着用



行大船1234


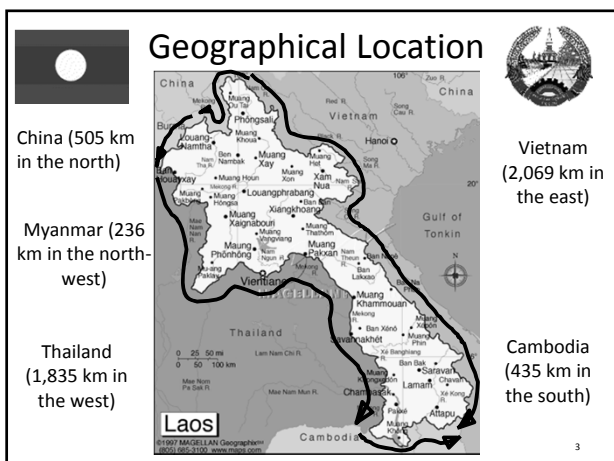
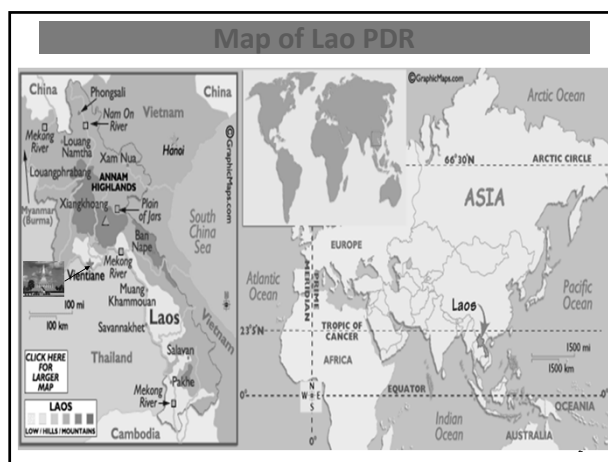

Thank you



ສາມັນ ພອມສວນ

The Current Situation of Safety at Sea for Small Fishing Vessels in Lao PDR

Akhane Phomsouvanh
Fisheries Division
Department of Livestock and Fisheries







LOCATION

- Lao PDR is in the heart of the Indochina peninsula in Southeast Asia (the land of a million Elephants) & rich in natural resources (land).
- Lao PDR is a **land-linked** country, *not* land-locked.
- Land Area **236.800 Km²**, three-quarter of which is mountains and plateaus & criss-crossed by many rivers and stream
- The Mekong River flows through **1.865 km** of the country from north to south.

Background

- 8% of GDP from Fisheries Sector,**
- Food Security (>50% Protein comes from Aquatic animal),**
- Poverty reduction,**
- Income generation and provide job opportunity.**

Fisheries Production 2007

Types of Fisheries	Water Resource	Total Area (ha)	Production (Tonnes)
Capture Fisheries	Mekong River & Tributaries and five N.E Rivers	304,704	21,329
	Large Reservoirs (hydro):	96,030	8,405
	Shallow lakes, small natural pools, peat swamp, and wet lands	114,800	17,220
	Irrigation Reservoirs, and irrigation weirs	60,000	9,000
	Rice Fields, small streams and Flood Plains	662,850	33,143
Sub – Total:		1,238,384	89,097
Aquaculture	Fish Ponds	22,000	33,000
	Oxbow and irrigation weirs for aquaculture	15,000	9,000
	Rice Fish Culture	5,000	1,500
	Cage Culture	-	11,250
Sub – Total:		42,000	54,750
TOTAL		1,280,384	143,847

Mekong River



Reservoirs



Fishing boats



Current status of Safety at Sea for Small Fishing Vessels

- No Safety equipment
- No fishing License
- All fishing boats are not registered.
- Fishers are not registered
- No full-time fishers, only part-time
- No certification system for fishers

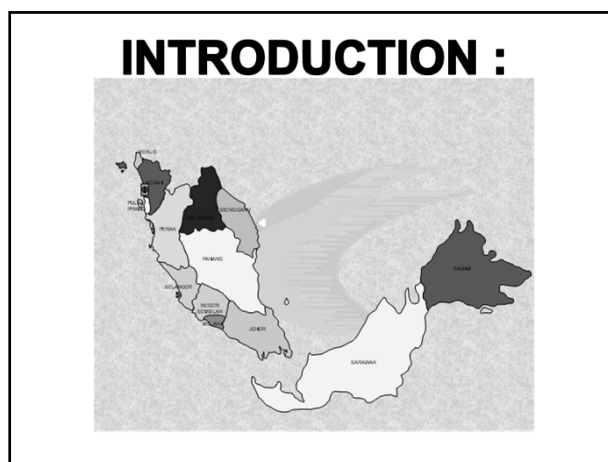


Work Plan to improve Safety at Sea

- HRD for fishers
- Create awareness on “safety in inland waters”:
- Establish of Fishing Boats Registration System
- Set up reporting network
- Establish system of recording fishers (even if part-time only)


Thank you for your kind attention





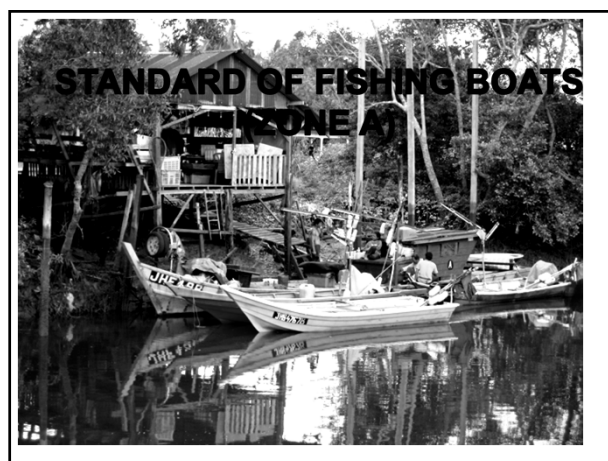
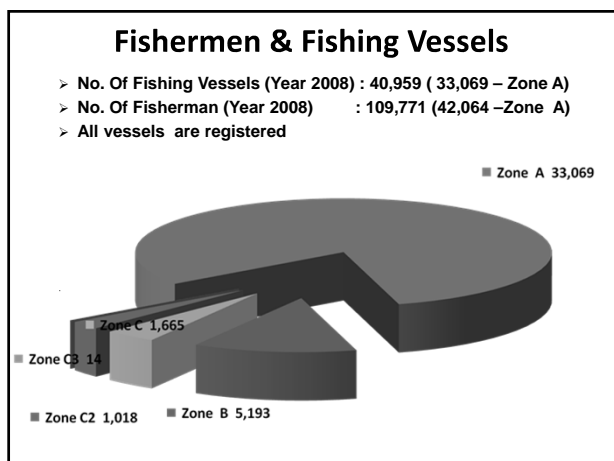
MALAYSIA

- Geophysicals:
- Land area:
 - 329,733 km²
 - Peninsular 40%
 - Sabah 22%
 - Sarawak 38%
- Coastline:
 - 4,675 km
- Coastal area:
 - 373,500km²
- EEZ area:
 - 548,800 km²
- Sarawak 29% Sabah 16%



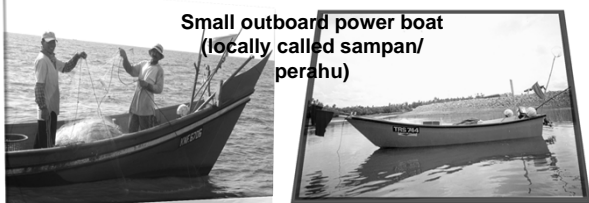
Classification of Small-Scale Fisheries

Zone	Area	Classification
A	Operating in all zones but concentrating in Zone A	<p><u>Reserved solely for artisanal (traditional) or small scale fishermen using traditional fishing boats of less than 40 gross registered tonnage (GRT) and owner operated;</u></p> <p>Traditional Appliances</p> <ol style="list-style-type: none"> 1. Trap 2. Hook-and-line 3. Drift net or gill net 4. Seine net 5. Hand lift net 6. Bag net or stow net 7. Barrier net



STANDARD OF FISHING BOATS

**Small outboard power boat
(locally called sampan/
perahu)**



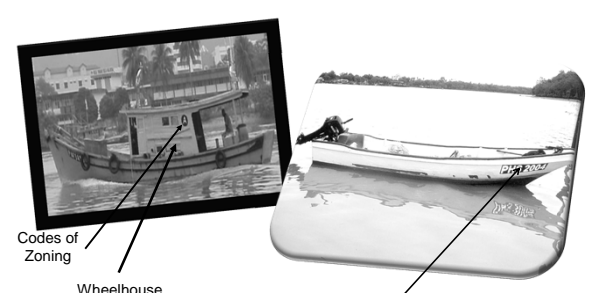
State	Lenght (Outboard Powered/ Non Powered)	HorsePower
Peninsular Malaysia	< 9m	< 60
Sarawak	< 15m	< 140
W.P.Labuan	< 10.67m	< 80

STANDARD OF FISHING BOATS

**Inboard powered boat
less than 40
Gross
Registered
Tonnage (GRT)**



Fishing Gear	Tonnage (GRT)	HorsePower (Maximum)
Traditional	Less than 25	200
	25 to 40	300



The vessels must be registered and will be identified through various markings such as fixed registered number, code zone, colour of the wheel house (inboard-powered boat)

MARKING AND IDENTIFICATIONS

- Wheelhouse of the fishing vessel must be painted with color specified for the state :
- ? = Identification of the vessels so that they would not encroached into another states water
- The permanent letters of the registration number is according to state

State	Color
Pulau Pinang	Light Blue
Perak	
Selangor	Orange
N. Sembilan	Dark Green

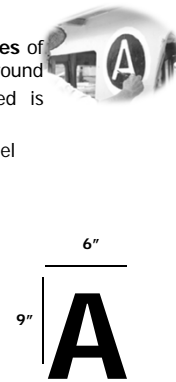
State	Permanent Letters
Melaka	MKF
Johor	JHF
Pahang	PAF
Terengganu	TRF
Kelantan	KNF
Labuan	LNF

MARKING AND IDENTIFICATIONS

Code of Zones:

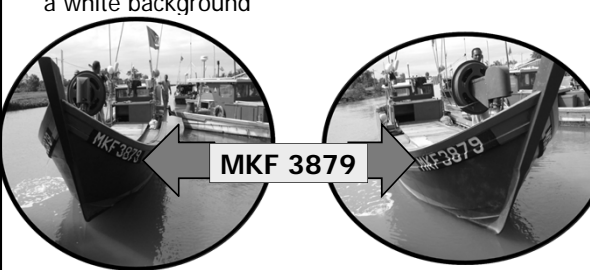
- Code of Zones must be painted on **both sides** of the wheelhouse in white with a black background
- Size of the code of zone to be painted is according to the vessel size
- ? = To determine the fishing area of the vessel

Vessel Size	Code Zone
< 25 GRT	9" x 6" x 1.75"
25 - < 40 GRT	12" x 8" x 2.5"
40 & > 40 GRT	18" x 12" x 4"



REGISTRATION NUMBER

- The Registration number must be carved on both sides of the fore part of the hull of the vessel
- The carved number must be painted in black with a white background



STANDARD OF CREW



STANDARD OF CREW

1. THE NUMBER OF CREW

Type	Max. Crew
Sampan/ perahu	2
Inboard- powered boat	3

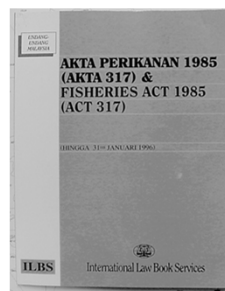
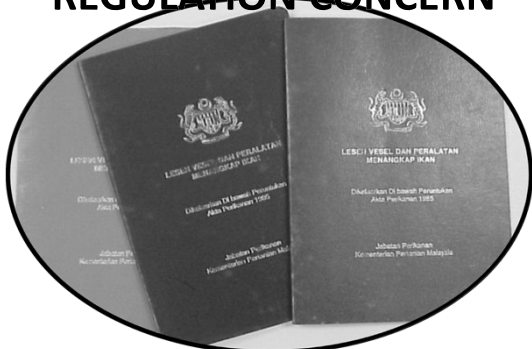
- Safety and comfort

2. FISHERMEN REGISTRATION CARD



- Genuine
- 120 days/year as fishermen
- Working only on licensed fishing boats

REGULATION CONCERN




- Fisheries (Maritime) (Licensing Of Local Fishing Vessel) Regulations 1985 Act 1985
- The fishing vessel registration system is under responsible of the Department Of Fisheries Malaysia.
- Safety at sea –
 - Vessel inspection for every renewal of licences

VESSEL INSPECTION (COMPULSARY)



RENEWAL OF LICENCE

- A. Registration number;
- B. Fishing vessel base.
- C. Name, address and identification card number of owner or owners;
- D. Type of vessel;
- E. Length, breadth, width, depth; Gross Registered Tonnage (GRT)
- F. Power of main engine or engines
- G. Safety equipment
- H. Equipment
- I. Vessel condition-seaworthy of vessel
- J. Vessel originality
- K. Type of fishing method or methods;



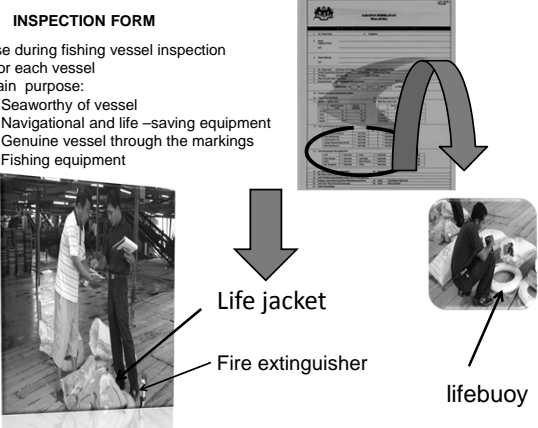
Plastic Vessel Number Plate is issue out each year while renewable of the fishing licence.

Purpose:



1. Seaworthy of vessel
2. Safety – crew

INSPECTION FORM

- Use during fishing vessel inspection
- For each vessel
- Main purpose:
 - i. Seaworthy of vessel
 - ii. Navigational and life –saving equipment
 - iii. Genuine vessel through the markings
 - iv. Fishing equipment



1. Seaworthy
 - a. vessel
 - b. engine
2. Navigational and life – saving equipment such as
 - a. Life jacket
 - b. Fire extinguisher
 - c. Life buoy

RESPONSIBLE AGENCY FOR SAFETY AT SEA

- **Department Of Fisheries (DoF)**
 - Licencing and Resource Management Division
 - Plan and supervise the development of coastal fishery/ deep sea fishery/ inland fishery resources
 - Resource Protection Division
 - Maintaining law & order
 - Coordinating search and rescue operations in the Malaysian Maritime Zone
 - Fisheries Extension Division
 - Training , guidance and advisory services
 - Transfer of new technology to fishermen

- Fisheries Training Institute Malaysia (IPM, Chendering, Terengganu)
 - Produced skilled fishermen
 - Provide training for fishermen to upgrade their technical capabilities in various aspect
- Fisheries Development Authority of Malaysia (LKIM)
 - Provide and supervise the effective use of credit for the adoption of new fishing technology and for investment in related fisheries industry sub-sectors
- Malaysian Maritime Enforcement Agency (MMEA)
 - Maintaining law & order
 - Coordinating search and rescue operations in the Malaysian Maritime Zone


Malaysia



Thank you



Safety of Small Fishing Boat In Myanmar




Nyunt Sann
Tin Thant Htwe
Department of Fisheries
Myanmar

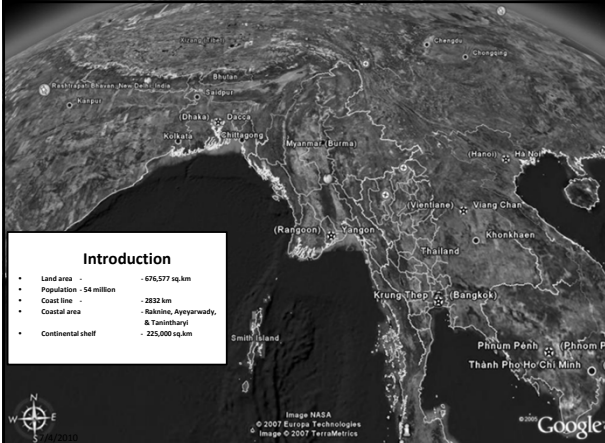
7/4/20101

Introduction

- Land area - 676,577 sq.km
- Population - 54 million
- Coast line - 2832 km
- Coastal area - Rakhine, Ayeyarwady, & Tanintharyi
- Continental shelf 225,000 sq.km



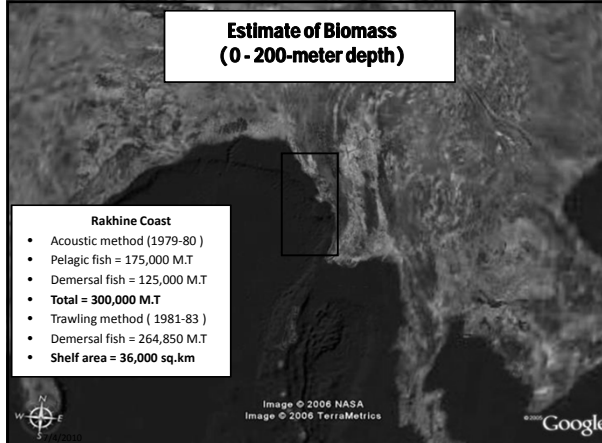
7/4/20102



Introduction

- Land area - 676,577 sq.km
- Population - 54 million
- Coast line - 2832 km
- Coastal area - Rakhine, Ayeyarwady, & Tanintharyi
- Continental shelf - 225,000 sq.km

Pointer: 17°06'14.70" N, 93°08'35.41" EStreaming: 100%Eve alt: 1433.76 mi

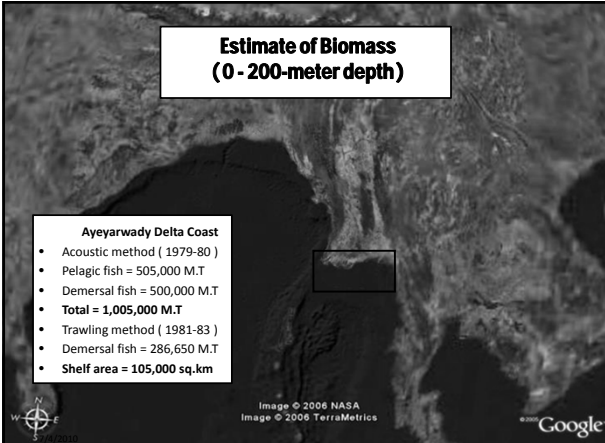


Estimate of Biomass (0 - 200-meter depth)

Rakhine Coast

- Acoustic method (1979-80)
- Pelagic fish = 175,000 M.T
- Demersal fish = 125,000 M.T
- **Total = 300,000 M.T**
- Trawling method (1981-83)
- Demersal fish = 264,850 M.T
- Shelf area = 36,000 sq.km

Pointer: 17°21'23.71" N, 93°27'56.42" EStreaming: 100%Eve alt: 1630.80 mi

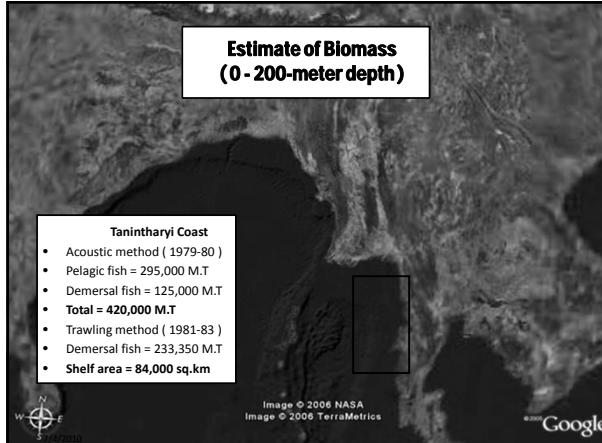


Estimate of Biomass (0 - 200-meter depth)

Ayeyarwady Delta Coast

- Acoustic method (1979-80)
- Pelagic fish = 505,000 M.T
- Demersal fish = 500,000 M.T
- **Total = 1,005,000 M.T**
- Trawling method (1981-83)
- Demersal fish = 286,650 M.T
- Shelf area = 105,000 sq.km

Pointer: 17°21'23.71" N, 93°27'56.42" EStreaming: 100%Eve alt: 1630.80 mi

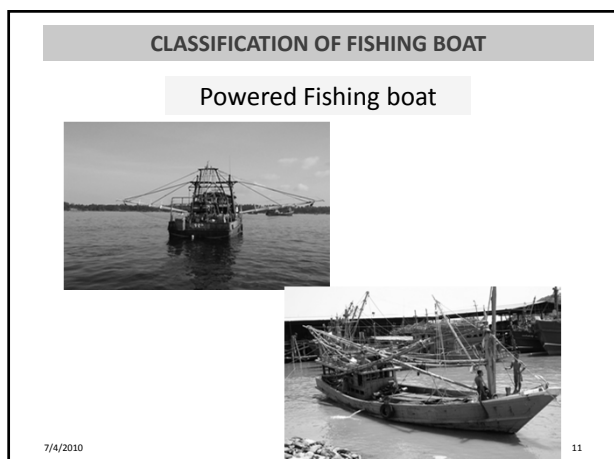
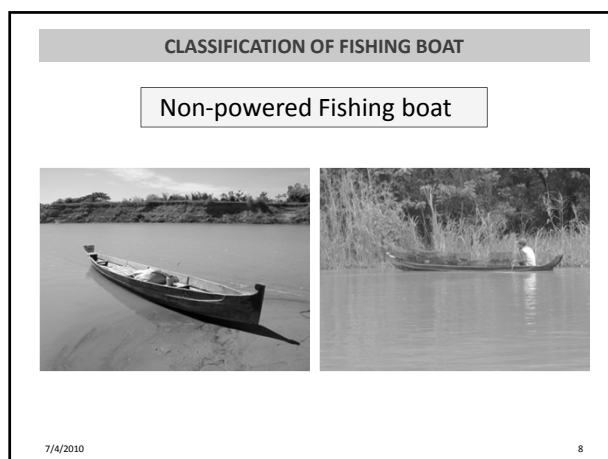
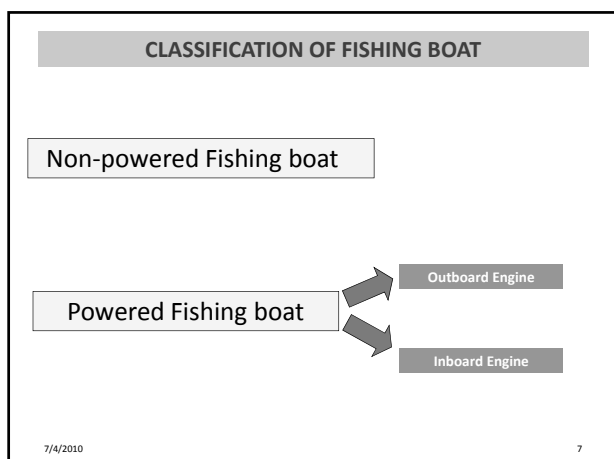


Estimate of Biomass (0 - 200-meter depth)

Tanintharyi Coast

- Acoustic method (1979-80)
- Pelagic fish = 295,000 M.T
- Demersal fish = 125,000 M.T
- **Total = 420,000 M.T**
- Trawling method (1981-83)
- Demersal fish = 233,350 M.T
- Shelf area = 84,000 sq.km


Pointer: 17°21'23.71" N, 93°27'56.42" EStreaming: 100%Eve alt: 1630.80 mi



MARINE FISHERIES


a. In-shore Fishery

- 5 nautical mile from shore (*Rakhine coastal*)
- 10 nautical mile from shore (*Ayeyarwady & Taninthayi*)
- no more 12 h.p engine & 30 Feet length of the boat.



b. Off-shore fishery

- Outer area of inshore to end of EEZ
- More than 12 H.P engine boat
- Bottom trawl, Purse seine, Surrounding net, Drift net & Long line.



7/4/2010 12

Number of fishing vessels engaged in Inshore and offshore fishery

Inshore Fisheries

Year	Mechanized Boat	Non-mechanized Boat	Total
2003-2004	13664	16335	29999
2004-2005	14176	16687	30863
2005-2006	14099	16361	30460
2006-2007	14284	16284	30568
2007-2008	14289	15219	29508

Offshore Fisheries

Year	Total
2003-2004	2121
2004-2005	2150
2005-2006	1858
2006-2007	1983
2007-2008	1863

7/4/2010

13

Marine Fishery Production

Year	Total (Thousand Metric Ton)
2003-2004	1132.34
2004-2005	1228.71
2005-2006	1375.67
2006-2007	1525.32
2007-2008	1689.76



7/4/2010

14

Safety for Small-Scale Fishing Boat

- Check in Check out reporting system.
- Daily weather report announce system.
- Use local make floating equipment for life saving equipment.
- Use traditional medicine for health.
- No facilities for communication equipment onboard.



7/4/2010

15

Management Measures

- Strict law enforcement on fishing activities (problems of illegal fishing & Safety at Sea.)
- Department's namely
 - Myanmar Navy
 - Myanmar Coast guard
 - Department of Fisheries
 - Customs Department
 - Myanmar Police Force

7/4/2010

16

Data recording

- DOF is responsible for Data recording, analysis and necessary feed back.
- Another competent authorities are Myanmar Navy, Coast guard, and Myanmar Police Force.
- Every Dept have their own team to collect data, and analysis. Needs synchronize among agencies.
- Authorities provide the helps and necessary thing through specific team.

7/4/2010

17

Accidents, related to fishing operation (2003-2009)

Year	Dead Case			Total
	Drop into sea	Accident	Serious by sick	
2003-2004	10	5	2	17
2004-2005	8	2	4	14
2005-2006	5	1	7	13
2006-2007	10	4	1	15
2007-2008	26	6	7	39
2008-2009	17	1	14	32

7/4/2010

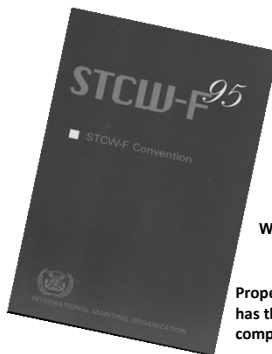

18

The Statistics shows that there is a great need to improve the safety record of fishing industry

Detailed causes of some accidents and casualties in the industry have been analysed and countermeasures identified

Lessons must be learned from accident reports

7/4/2010 19

Training Provisions in the 1995 STCW-F Convention

Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel

Properly implemented and administered, STCW-F has the capacity to supply well trained and competent Fishing Vessel Personnel for the future.

7/4/2010 20

Training Program for Fishermen

Two main responsible Department and Training Institute

Department of Fisheries
Institute of Fisheries Technology

- Fishing Technology
- Fish Handling
- Safety at sea

Department of Marine Administration
Institute of Marine Technology

- Navigation
- Seamanship
- LSA

7/4/2010 21

Training Program

Training to cover :

- Fishing methods and fishing gear
- Handling, storage and care of catch
- Fishing gear construction and maintenance
- Fishing vessel operation in port
- Fishing vessel management
- Human relationships and social responsibilities
- Sail training
- FAO Code of Conduct for Responsible Fisheries

7/4/2010 22

Training and the STCW-F 1995 Convention

The standards of competence that have to be met by fishing vessel personnel are defined in the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995.

Training – curriculum development

- Personal survival and life saving
- Emergency procedures
- Fishing vessel manoeuvring and handling
- Fishing vessel construction and stability
- Medical and first aid
- Search and rescue
- Prevention of marine pollution

7/4/2010 23

Accidents Decrease by after proper training program in 2009-2010

Year	Dead Case			
	Drop into sea	Accident	Serious by sick	Total
2003-2004	10	5	2	17
2004-2005	8	2	4	14
2005-2006	5	1	7	13
2006-2007	10	4	1	15
2007-2008	26	6	7	39
2008-2009	17	1	14	32
2009-2010	1	3	2	6

7/4/2010 24

Conclusion

- To conduct proper training program
- To carry out extension program for awareness of safety at sea for fishermen.
- To collecting Information for Accident causation.
- To promote Community Base Fisheries Management System. (CBFM)
- To collaborate and cooperate with International/Regional organization for safety at sea.

7/4/2010

25

Thanks

7/4/2010

26

Current Situation of Safety at Sea: Progress of the Philippines on Improvement of Safety at Sea for Small Fishing Boats

Mr. Fileonor O. Eleserio



Philippine Marine Resources

Resources	Area (km ²)
Total territorial waters (including EEZ)	2,200,000
a.coastal	266,000
b.oceanic	1,934,000
Shelf area (depth 200m)	184,600
Coral Reef area	27,000
Coastline (length)	17,460 km

Classification of Fisheries

- Aquaculture
- **Municipal (boats < 3GT; within 15 km)**
- Commercial (boats > 3GT; outside 15 km)

Contribution by Sector (4.7million MT)

- Aquaculture (47.0%)
- **Municipal (27.7%)**
- Commercial (25.3%)

Geographically, the Philippine archipelago comprised of 7,107 islands, located between 16° 34' E. longitude, and 4° 40', and 21° 10' N. latitude, and borders the Philippine Sea on the east, the South China Sea on the west, and the Celebes sea on the South.

Maritime Accident related to Fishing Municipal Fishing Boats (less than 3 Gross Tons)

Year	Area (Province and Region)	Type of Boat				Cause of Distress or Capsizing	Type of Fishing Operation	No. of Rescued Fishing Boats	No. of Officers and crew
		Wood	Fiberglass	Steel	Outrigger				
2008	Fbca "Princess Florabel" Sarangani / Reg. XII	x			x	Aground	Municipal Fishing		
2008	Fbca "Jigger" Sarangani/ Reg. XII	x			x	Missing	Municipal Fishing		
2008	Fbca "Sharen" Davao / Reg. XI	x			x	Capsized	Municipal Fishing		
2008	Fbca "Reyche"	x			x	Aground	Municipal Fishing		
2009	Unnamed Fishing Boat Davao del Sur / Reg. XI	x			x	Capsized due to big waves and strong winds	Municipal Fishing		

Safety Aspects

Common Causes of Accidents of Small Boats

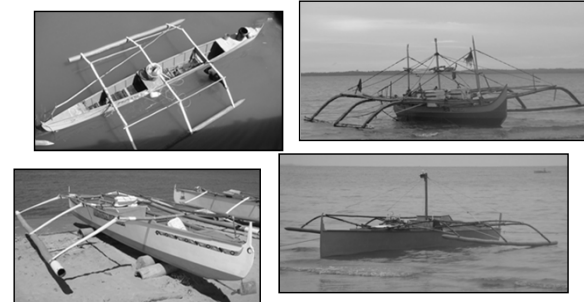
- Capsizing / Sinking (Poor Stability; Heavy loads on Decks; Water Trapped on deck; Bad Construction and Maintenance)
- Drifting (Bad Engine Installation and Maintenance; Lack of Fuel; Lack of Troubleshooting Experience)
- Collision (Lack of Navigational lights; Tired Crew; Bad Weather Condition)
- Fire (Bad Engine Installation; Bad Installation of Cooking Stove)
- Work Accidents (Slippery Decks; Unprotected Machinery; Tired Crew)

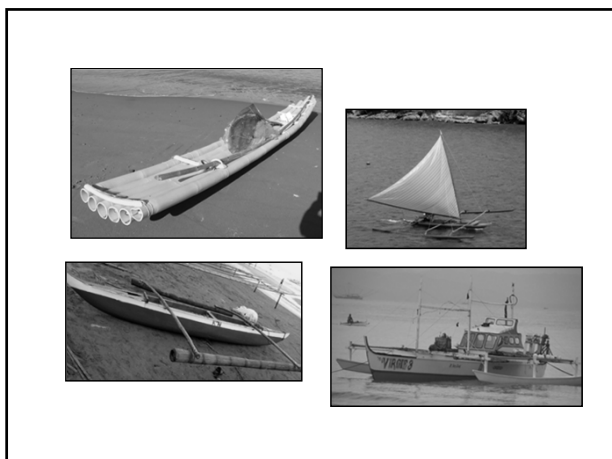
Standard of Small Fishing Boats

- less than 3 gross tons
- Operates in Municipal Waters but can go beyond 15 km

Region	Motorized	Non-motorized	Total
CAR	49	611	660
I	11641	6037	17,678
II	1502	1802	3,304
III	18375	8663	27,038
IV	26569	43358	69,927
V	19453	35262	54,715
VI	16234	25574	41,808
VII	19100	37042	56,142
VIII	16255	41813	58,068
IX	13280	32370	45,650
X	2472	6569	9,041
XI	11382	12717	24,099
XII	2671	8088	10,759
XIII	11202	20081	31,283
ARMM	7442	12193	19,635
TOTAL	177,627	292,180	469,807

Typical Small-Scale Fishing Boats in the Philippines





Standard of Crew
 Republic Act No. 8550 *"The Philippine Fisheries Code of 1998"*
 Article I
MUNICIPAL FISHERIES


Sec. 19. Registry of Municipal Fisherfolk. - The LGU shall maintain a registry of municipal fisherfolk, who are fishing or may desire to fish in municipal waters for the purpose of determining priorities among them, of limiting entry into the municipal waters, and of monitoring fishing activities and/or other related purposes: Provided, That the FARMC shall submit to the LGU the list of priorities for its consideration.

Such list or registry shall be updated annually or as may be necessary, and shall be posted in barangay halls or other strategic locations where it shall be open to public inspection, for the purpose of validating the correctness and completeness of the list. The LGU, in consultation with the FARMCs, shall formulate the necessary mechanisms for inclusion or exclusion procedures that shall be most beneficial to the resident municipal fisherfolk. The FARMCs may likewise recommend such mechanisms. The LGUs shall also maintain a registry of municipal fishing vessels by type of gear and other boat particulars with the assistance of the FARMC.


Regulation Concern


- R. A. # 8550 (Philippine Fisheries Code of 1998)
- R. A. # 7160 (Local Government Code)
- R. A. # 9522 (Baseline Law)
- FAO # 201 (Prohibition on fishing using active gears in municipal waters, bays and fishery management areas.)
- FAO # 204 (Restricting the use of superlights in fishing)
- FAO # 222 (Regulation on the Operation of Danish Seine)
- FAO # 226 (Regulation on the Mesh Size of Tuna Purse Seine Nets and Trading of Small Tuna)
- Other FAOs


Responsible Agency for Safety at Sea


 REPUBLIC OF THE PHILIPPINES
 MARITIME INDUSTRY AUTHORITY

- FARMC
 (FAO # 196)







Conclusion / Recommendations:

- Registration of Small boats
- Regulation (Safety Regulation / Safety Information / Safety Enforcement)
 - provision of life jackets, compass, etc.
- Boatbuilding / Boatyard Certification (High Quality in Construction Equipment / Maintenance of Boat and Equipment)
- Training (Safe Operation / Good Maintenance / Sea Condition / Emergency at Sea)
- Guidelines for the Safety at Sea for Small Fishing Boats (proposal for member countries)

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Safety of small fishing vessels in Thailand



Mr. Kanit Chuapan
Upper Gulf Marine Fisheries Research and Development center
Department of Fisheries


Small scale fisheries

- ⦿ Vessel of less than 5 GT operating in Zone 1 (0-3 nm.)*
- ⦿ Type of fishing gears
 - Traps
 - Gill net
 - trawl
 - bait, hook
 - etc.



* reference: Regional Guideline for Responsible Fisheries in Southeast Asia : Responsible Fishing Operation page 11-13

Fishing vessels




After Tsunami in Year 2004

- ⦿ There were lost and damaged fishing boats more than 5,000 boats
- ⦿ Department of Fisheries, Royal Thai Navy and other organizations have brought the fiber fishing boats to replace the lost for affected fishers.
- ⦿ This type vessels have more safety design and construction than that of wooden type considering easily built.

Fiber fishing boats



According to His Majesty the King's initiative, there is an activity on experimental in installation of sail in fiber fishing boat for reduction of fuel consumption.



Fiber fishing boats with sail



Safety tools in small fishing boats

- ⦿ In general, there are some tools in small fishing boat that could be assumed for safety such as gloves, buoyancy materials, navigation equipments and communication radio, etc.
- ⦿ However, all small scale fishers can swim 100%

Safety tools



Due to combating of IUU fishing

- ⦿ Department of Fisheries has encouraged commercial vessels to work with fishing logbook and to come up with small scale also. The initiative with small-scale such as fishing vessel record could facilitate safety at the sea in the future

Thanks for you attention



MINISTRY OF AGRICULTURAL
AND RURAL DEVELOPMENT

**Current Situation of Safety at Sea for small fishing
boats in Viet Nam**

Presenter: Tran Van Luan
OFFICE: DEPARTEMENT OF CAPTURE
FISHERIES AND RESOURE PROTECTION

outline

1. Fishing fleet structure
2. Labor resource in Viet Nam Fisheries
3. Regulation Concern
4. Responsible Agency for Safety at Sea

1. Fishing fleet structure

1.1. The number of fishing boats

The total number of fishing vessels Vietnam is 130,963 corresponding to the total engine more than 5.7 million CV. (shown in figure 1)

The total catch by fishing gears and methods is shown in figure 2

In the group with capacity in CV from 90 upwards, there are 17,969 vessels including: the seine (consisting 44%), trawl (consisting 13.2%), gillnet (13.9%), hook and line (12.6%) and others (16.3%).

The group with the capacity of vessels smaller than 90 CV has total about 112,994 units, in which 68,682 vessels have engine power smaller 20 CV; operating mainly in the coastal areas by different traditional fishing gears.

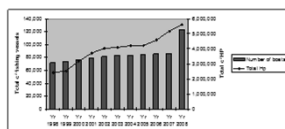


Figure 1: Number and total engine power of fishing vessels in Vietnam

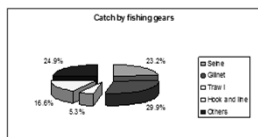


Figure 2: Catch by fishing gears

1.2. Fishing vessel design agencies, boat building

- Fishing vessel design agencies :

Presently, there are 8 main facilities designed fishing vessels in Vietnam. There are also a number of establishments which operate in retail and in a small range. Those establishments have duty in designing complete profile of vessels according to the norms of Law.

- Boat buildings:

- Vietnam fisheries has about 300 fishing buildings, but most of them are still small in scale. Numbers of buildings which can build vessels according to design profiles are not much (under 10 units). They almost gathered in some provinces in the North and Middle of Vietnam. The rests mainly build small fishing vessels with the hulls are made by timber. Those buildings even build fishing vessels according to the experiences summarizing from time and working process.

- This shows that in order to have qualified fishing fleet, which can operate off-shore safely and effectively according to the policies of the Vietnam fisheries guidelines, it needs adequate attention: supporting for improving equipments and techniques to the dockyards so that they can satisfy, serve well for the new strong fishing fleet.

1.3. Technical standards applied to fishing vessels

- Before the year 2000, most of the technical standards applied to all ships (include merchant ships and fishing vessels) are shipbuilding standards in general. In the current stage, it is not appropriate to economic technical conditions of Vietnam fisheries sectors any more, they make the feasibility not high, especially the requirements about safety equipments.
- In recent years, the Vietnam Fisheries has issued a number of technical standards for fishing vessels. The applicable range, however, is applied to fishing vessels with the capacity in CV from 50 upwards. To the group of vessels which have capacity in CV from 50 downwards, the technical standards are still being researched.

1.4. The characteristics of fishing fleet in Vietnam

- Most of fishing vessels are small, diversified and multi-gears but the fishing area of this fishing fleet is rather large (50 - 70 kilometers far away from the shore) . .
- The equipments on-board are simple, especially safety equipments. Besides a number of vessels operating off-shore with large engine power have been equipped with minimum safety standards accordance with the norm of Law, the safety of others are mostly less cared.
- The radiotelegraphy equipments are equipped primarily on large fishing vessels, be capable of contacting with the coastal radio stations and other transport ships.

1.5. Technical elements

- As the characteristics of Vietnam fisheries and economic conditions of fishermen, the requirements about safety equipments, exploitation equipments which equipped on board not ensure the safety conditions stipulating in the terms of law.
- The vessels do not guarantee about sinking prevention features because of the wooden structure holds of vessels which do not ensure about watertight features. Those leads risk and dangers for vessels operating at sea.
- Moreover, the vessels are being used for long time. Therefore, at present in Vietnam there are a lot of vessels operating without capabilities about safety. Many accidents occurred because of the hulls were too old, decayed and absorbent.

1.5. Technical elements

- The main engines installed on fishing vessels in Vietnam are often old, second-hand. More than 88.5 % off-shore fishing vessels have old engines or are not kept in accordance with the time period needed.
- Safety equipments include life equipments, fire-fight equipments, sinking preventing equipments, radiotelegraph equipments, and navigational equipments. But in Vietnam, only a few big fishing vessels are well-equipped these equipments.
- According to general standards, the total value of the safety equipment installed on-board was about 10% the value of the vessels, but the fishing vessels in Vietnam this percentage under 3. In some vessels the number of life jackets is less than the number of crew of vessels.

➔ The cause of accidents

- Some accidents happened at sea because of the mistake from fishermen, namely:
 - Not sufficient professional experience, knowledge of marine safety.
 - The carelessness of fishermen while working on board
- Fishermen do not pay attention in their watch
- Equipments and fishing boats are not guarantee safety on technique follow rules, especially fishing boats with small scale.
- Changing in weather: typhoon, whirlwind, flood.

Table1: The total report about damage and accidents at sea In Vietnam in 2008, 2009

Year	HUMAN			VESSELS				
	Injured	Disappear	Dead	Collision	Aground	Broken engine	Fire	Others
2008	59	71	63	66	18	92	39	421
2009	4	37	16	6	2	5	1	535

2. Labor Resource in Vietnam Fisheries

Decree 77/2008/QĐ-BNN of Ministry of Agricultural and Rural development has regulated about training standard of fishing vessel crews with each kind of vessels. Decree given up all of fishing boats have engine power from 20 HP upward, which have category of suitable certifications. The fishing crews have to train and issue certifications.

Number of workers involved directly in the field of capture of fisheries is around 723,000. The labor resource is plentiful in quantity but weak in quality. Educational and intellectual standards of fishermen have been improving but presently the rate of literate fishermen is about 60%, and about 50% of literate are educated from middle school. This is related directly to the Vietnam fisheries situation is small, single and hereditary.

Table 2: THE REPORT OF NUMBER OF FISHING SKIPPER, CHIEF MACHINE AND CREWS

Skippers (1)				Chief machine (2)				Total (1)+(2)	Crews	Mechanics	In total
Small rank 20 < 90HP	5 th Rank 90 < 400 HP	4 th Rank >= 400 HP	Total	Small rank 20 < 90HP	5 th Rank 90 < 400 HP	4 th Rank >= 400 HP	Total				
16628	24148	3470	44246	6080	17417	2465	25962	70208	19301	45	89554

2. Labor Resource in Vietnam Fisheries

- There are some limitations in using the safety equipments of fishermen as well as emergency capabilities and human rescue capabilities from danger.
- They have not been fully aware of the importance of those on-board safety equipments yet. Fishermen are superstitious, they think that taking the safety equipments (life jackets, rafts for e.g.) along with the boat is understood similarly with taking dangers on boat, therefore fishermen do not want to equip them during the journey.

3. Regulation Concern

Some remarkable laws about human and fishing vessels safety assurance

3.1 Fisheries Law of the Congress and the Decree 66/2005/ND-CP of the Government

- Vietnam Fisheries Law was promulgated in 2003. This Law is the highest official paper about Fisheries sector in Vietnam; it stipulated many aspects of Fisheries Sector such as fisheries resources protection and development, capture fisheries, aquaculture, fishing vessels management, international cooperation about fisheries activities.
- After Fisheries Law, there were many law and under-law papers which instructed executing that Law in details. Up to now, one of those law papers is the Decree 66/2005/ND-CP; it was created to make the safety assurance issues for human and fishing vessels change into a better way.
- The Decree 66/2005/ND-CP mainly focuses on measures which require fishermen to have enough safety equipments when operating in the sea, it also brought the regulations about the more specific responsibilities to individuals, organizations in marine fisheries sector. Especially, it mobilized all the forces of other sectors to take part into it, for example: Ministry of Transportation, Ministry of Defence, Ministry of Resources and Environment of Vietnam...

3.2 The Circular No. 02/2007/TT-BTS of the Minister

This Circular is an under-law paper, which instructed more detail the Decree about the safety assurance duties. It stipulated the duties of boat-owners, boat controllers,

4. Responsible Agency for Safety at Sea

- **Ministry of Agriculture and Rural Development (MARD)**
the responsibilities of the Ministry of Agriculture and Rural Development through Department of Capture Fisheries and Resources Protection (DECAFIREP) in the management of state about safety assurance for human and fishing vessels operating at sea. MARD has to organize for all fishing vessels and fishermen must be registered.
- **Other involved ministries**
 - + The responsibilities of other involved ministries in the cooperation with MARD, guiding the navigation safety assurance such as in waterway traffic safety duties, in preventing floods and storms, in controlling all activities of fishing vessels coming in and out fishing ports, landing sites, storm-avoiding anchoring areas.
 - + The responsibilities of local offices: the local offices propagandized and educated fishermen and boat owners to make them understand the importance of compliance with regulations about safety for human and fishing vessels.
 - +The inspecting activities to all fishing vessels operating at sea were done by Inspectors and Survey Organizations in coordination with other involved offices.
 - + Fisheries Management Forces must supervise all the activities of fishing vessels about fishing exploiting.
 - +The fisheries Inspectors must supervise and inspect the activities of all individuals and organizations operating in fisheries.
 - + There are some other coordinated forces: Coastguard Auxiliary, Navy, Coast Police, Waterway police forces joining the State fisheries management activities.

4. Responsible Agency for Safety at Sea

4.1 License Issuing and Register Mission

Capture Fisheries and Resources Protection system and now the content of management activities have being completed and detailed. These legal documents primarily focused on the content:

- Regulations of leveled management assignment
- Regulations of the management profiles
- The sanctions

4.2 Monitoring the activities of fishing vessels

- Due to practical requirements, fishing vessels monitor activities in Vietnam was deployed in the early of 1988 in some local provinces. Until 1995, this duty was implemented in all coastal provinces in the country.
- This monitor mission was practiced under 2 forms:
 - Direct Monitor: Monitoring on-site through the controlling activities of fisheries officer forces.
 - Indirect Monitor: monitoring the activities of fishing vessels through the equipments and intermediaries.
- In 2009, the monitoring, control and surveillance center of fishing vessels was established in DECAFIREP.
- **sub-department of fisheries have to survey or check ensuring the safety for fishing vessel belong to local government of management.**

4.3 Statistics, collection, data and information synthesis mission

- Department of Capture Fisheries and Resources Protection in collaboration with local coastal Branches had contributed a system of statistics, collection, data and information summarization. This activity mainly focuses on building mechanism, organizing training and guiding for local officers in setting up plans, analysis methods. So these Branches of Capture Fisheries and Resources Protection are responsible for synthesis, analysis and report activities especially the consequences of accidents and storms. The Units which are responsible for statistics duties
 - + The central Government
 - + Local Branches
 Type of statistics:
 - Regularly: weekly, monthly, and yearly
 - Statistics through investigation
- The Units has gradually built a team of collaborators in the collection of information. However, in many locals, the Provincial People's Committee has not been approved plan and budget, adding human resources; it makes difficulties in implementing statistics. Currently, the general data statistics activities in Vietnam are weak, lack of information in forecasting for the safety assurance management and production directing mission.
- Therefore, building a completed Statistics, collection, data and information synthesis system in Vietnam is a main task at present.

THANK YOU FOR YOUR
ATTENTION



**Fishing Vessel
Accident Factor**

**Presentation
by Anurak Loog-on
SEAFDEC / TD**

Accident

something bad which happens that is not expected or intended, and which often damages something or injures someone

Cambridge Advanced Learner's Dictionary

Accident Factor

- 1 : Collision
- 2 : Grounding
- 3 : Flooding
- 4 : Machinery Damage
- 5 : Listing and Capsize
- 6 : Fires and Explosions
- 7 : Vessel Losses
- 8 : Drifting
- 9 : Injuries to Fishermen
- 10 : Other

ACCIDENT FACTORS

Collisions and groundings

- Human factors, with poor lookout and poor watchkeeper

Flooding and foundering

- poor operational practice
- lack of maintenance
- unsatisfactory design

Capsize

- weather conditions
- overloading
- skipper's lack of knowledge of stability

Fire and explosion - accident factors

- Poor housekeeping
- low standards of fire-fighting

Vessel losses

- flooding
- listing and capsizing
- groundings

Injuries to fishermen

- Carelessness and / or negligence
- Involving Fishing Gear and Equipment
- Washing Inboard, Ship Movement and Slippery Surface

Drifting

- Bad engine installation
- Bad maintenance of engine
- Lack of trouble shooting experience
- Lack of fuel

Fishermen fatalities

- vessel foundered

- Causes of the accident**
- Internal causes
 - External causes
 - Underlying factors
 - Latent factors

- Internal causes**
1. Human violations or errors by the crew
 - Human violations
 - Human error
 2. Human violations or errors by the pilot
 3. Structural failures of the ship
 4. Technical failure of machinery / equipment including design errors
 - Failure of propulsion machinery
 - Failure of essential auxiliary machinery

4. Technical failure of machinery / equipment including design errors
 - Failure of steering gear
 - Failure of closing arrangements or seals
 - Failure or inadequacy of navigational equipment
 - Failure of electrical installation
 - Failure or inadequacy of communication equipment

- Failure or inadequacy of lifesaving appliances
- Ship design error (i.e. insufficient stability)
- 5. The ship cargo
 - Cargo shifting
 - Fire or explosion in cargo
 - Improper stowage of cargo
 - Spontaneous combustion
 - Cargo liquefaction

- External causes**
1. Another ship or ship (improper actions, etc.)
 2. The environment
 - Heavy sea
 - Wind
 - Current or tides
 - Storm
 - Tsunami
 - Restricted visibility

3. Navigational infrastructure
 - Failures in aids to navigation
 - Inaccurate charts or nautical publications
 - Chart or nautical publications unavailable for the sea
4. Criminal acts

Underlying factors

1. Fatigue
2. Stress
3. Alcohol/ illegal drug
4. Prescription medicine

Latent factors

1. Fatigue
2. Stress
3. Alcohol/ illegal drug
4. Prescription medicine

Sample of accident reporting forms

Incident Report Form

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

Marine Accident Investigation Branch
Mountbatten House, Grosvenor Square,
Southampton,
SO15 2JU, United Kingdom

Section A

Date of Incident: Time of incident (UTC or Local time?):

Name of Vessel:

Location of incident (e.g. Lat/Long, name of port or other geographic reference):

Natural Light	Visibility	Sea State	Wind Force (Beaufort)
Light	Good (>5nm)	Sheltered waters	Force 0-3
Semi dark	Moderate (2-5nm)	Calm	Force 4-6
Dark	Poor (1000m-2nm)	Moderate	Force 7-9
Unknown	Fog - If <1000m please specify: <input type="text"/>	Rough	Force 10-12
		Other	> Force 12

Did the incident occur within the operational limits of a port?

Wind Direction:

Consequences of Incident (tick as many boxes as apply):

Fatal Injury Non-Fatal Injury No injury or damage

Vessel damaged Vessel lost or abandoned

Pollution No pollution

Section B: Vessel Details

IMO Number (if applicable): Call sign:

Fishing vessel port letters and numbers (if applicable): RSS/SSR number:

Length of vessel (State whether LOA, Registered length): Year of build (if known):

If applicable, type of fishing vessel: Hull material:

Number of crew onboard: If applicable, number of passengers onboard:

Date and time of departure from last port: Voyage from: to:

If applicable, extent of damage sustained to your vessel/pollution caused:

Name & address of manager or owner:

If applicable, name & port of registry or flag of any other vessel involved:

Tel. No:
Email:

Section C: Details of person(s) killed, missing or injured
(This section should be completed if any person has been killed or injured)

How many person(s) suffered injuries preventing performance of normal full range of duties for 3 days or more after the day of the accident? How many person(s) killed or missing?

Position (e.g. rank, rating, passenger)	Gender (M/F)	Age	What was injured? (e.g. left leg, finger)	Kind of injury (e.g. "fracture" or "missing" if appropriate)	Place on vessel where injury sustained	Did injury mean 3 days or more off work or greater than 48 hrs in hospital? (Y/N)	On duty (Y/N)*	Hours on duty prior to accident*	Duration of last off duty period*	Days since last leave (days at sea for FVE)*

If more than 5 persons suffered reportable injuries please continue on page 4 * For operational staff only

Section D

Please give a brief description of the sequence of events leading to the incident.

(Please continue on page 4 or a separate sheet if required)

Section E

1. Please state why you think the incident happened.

2. Has any action been recommended by you or anyone else as a result of this accident and if so, what and by whom?

3. Has any action been taken and if so what, by whom and when?

(Please continue on page 4 or a separate sheet if required)

Section F

Person completing form	To be completed by ship's safety officer (if applicable)	Designated person (if applicable)
Name: <input type="text"/>	Name: <input type="text"/>	Name and address: <input type="text"/>
Position: <input type="text"/>	Signed: <input type="text"/>	Tel No: <input type="text"/> Email: <input type="text"/>
Signature: <input type="text"/>	Date: <input type="text"/>	
Date: <input type="text"/>		

Section G For completion by Safety Representative (if applicable)

If the incident involved a reportable personal accident and there is an elected Safety Representative on board the vessel, they must be shown the completed report and allowed to write in this section any comments which they may wish to make. If the injured persons are represented by different Safety Representatives, each may make additional comments if desired in the space below but in any event, they should all sign the form.

Signed:

Safety Representative

Name: Date:

This space may be used as an extension of Sections C, D, E and G. Please state clearly which sections are being expanded

If there is insufficient space in any part of this form for your answers or comments, please use a blank sheet of paper as a continuation sheet and fasten it securely to this form. Please indicate in the box below the number of sheets used.

Number of continuation sheets:

4 DFT 1598

Initial reports of accidents should include as much of the following as possible:

- (a) name of vessel and IMO, official or fishing vessel number;
- (b) name and address of owners;
- (c) name of the master, skipper or person in charge;
- (d) date and time of the accident;
- (e) where from and where bound;
- (f) latitude and longitude or geographical position in which the accident occurred;
- (g) part of ship where accident occurred if on board;
- (h) weather conditions;
- (i) name and port of registry of any other ship involved;
- (j) number of people killed or injured together with their names, addresses and gender;
- (k) brief details of the accident, including sequence of events leading to the accident, extent of damage and whether accident caused pollution or hazard to navigation.
- (l) If the vessel is fitted with a voyage data recorder, the make and model of the recorder.

References

Accident Reporting System for Small Fishing Vessels , SSPA Sweden AB October 2008
Report on the Analysis of Fishing Vessel Accident Data 1992 to 2000 , Marine Accident Investigation Branch , United Kingdom
2008 , Annual Report Marine Accident Investigation Branch , United Kingdom
Accident particulars to be recorded according to IMO's guidelines for accident investigation checklist

Accidental recording form for fishing boat

Type of accident _____
 Ship's name _____ official no. _____ LOA _____ bredth _____
 GRT _____ tons building year _____
 Power of main engine _____ HP Brand of engine _____
 type of fishing gear _____ Ship's flag _____
 No. of crew/Nationality _____
 Name/address of ship's owner _____

 Name/address of skipper _____

Date/time of accident	
Position of ship	
area of incident in the ship	
Source of accident	
Seacondition/weather	
Method to solve problem	
mean of report/destination	
detail of loss by accident	

Issues to be discussed on Safety at Sea

Group A

1. Boats & Boat design & Construction
2. Equipments & Tools and Facilities
3. Awareness & Capacity building programs

1. SEAFDEC should produce a model legislation/regulations for small fishing boats to help countries in the region developing or revising their own legal instruments governing the safety of small fishing boats
2. In order to produce the model legislation/regulations, SEAFDEC should use existing international instruments and guidelines such as the FAO/ILO/IMO Voluntary Guidelines and Safety Recommendation

Awareness raising and capacity-building:


3. SEAFDEC should train national trainers and extension workers in safety at sea for small fishing boat, in particular those conducting follow-up training and awareness-raising campaigns in their own country.
4. Awareness raising materials such as posters, booklets, DVDs, mainly targeting the stake holders (fishermen groups, younger fishermen, fishermen family, boat builders, etc) should be developed by SEAFDEC (in Eng) using relevant materials yet produced by member countries and other regional/inter-governmental/international organizations. Each country will translate these materials in their own local language.
5. Considering that sea safety is a national responsibility, countries should include sea safety in their curriculum for fisheries colleges and primary schools as appropriate.



INTRODUCTION

A. Divide the fishing vessel to 3 categories;

- a) <5m (motorized and non-motorized),
- b) 5- <12m (motorized),
- c) 12-24m (motorized)



B. Registration and licensing

- Licensing to the particular vessel (size/zone/gears)
- Number of crew - must sufficient (size/zone/gears)

- C. Safety program with own budget
- D. Monitoring



Safety fishing operation and working procedure

Public awareness programs

- i. Audio visual -Video clips/Posters/stickers/handout/laminated pamphlet
- ii. Seminar
- iii. Family concern (safety culture)
- iv. Learning and doing
- v. Weather forecast
- vi. Fishing trip planning
- vii. Vessel condition and fishing safety (include the sufficient light for fishing)
- viii. Safety /protection equipment for the crew (depend on the location and gears)
- ix. Communication- handphone /VHF /hand held radio

**Crews and fisherman
knowledge standards and
certifications**

Training/Education -regarding to the size of the vessel

- Basic safety training /navigation
- Different program for skipper/crew

**Awareness and capacity
building program**

- Strengthen the local institution within the community
- Information, education and communication (IEC)
- Setup programs for the trainers (TOT)
- Strengthen the training institution
- Insurance program (life and asset)





RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

Bundit Chokesanguan
SEAFDEC/TD

 The Southeast Asian Fisheries Development Center (Training Department)

RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

1. Leave the definition of 'small fishing boats' and 'operational range' up to individual countries.
2. Promote the registration of small fishing boats.
3. Promote coordination between concerned authorities on monitoring and control of small scale fishing boat safety as well as socio-economic considerations.

 The Southeast Asian Fisheries Development Center (Training Department)

RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

4. Strengthen local authorities and promote policies of safety at sea within the coastal communities.
5. Promote technical and financial support from authorities, including subsidies, at all levels for issues of safety at sea.

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RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

6. Identify and promote basic requirements for safety at sea in the areas of;
 - research on the design and construction of small fishing boats including the modification of traditional type boats
 - safety equipment including fire fighting and life-saving appliances
 - regular boat inspection systems.

 The Southeast Asian Fisheries Development Center (Training Department)

RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

7. Implement training & education programs for all stakeholders including fishers and boat builders, for the basic requirements of:
 - boat design and construction
 - equipment and its correct use
 - search & rescue
 - occupational health and safety awareness, including the avoidance of dangerous fishing practices
 - awareness of environmental factors.

 The Southeast Asian Fisheries Development Center (Training Department)

RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

8. Develop and promote the use of appropriate communication systems for;
 - weather forecasting information
 - search & rescue systems
9. Development of appropriate incident reporting and investigation systems for the purpose of improving safety at sea.

 The Southeast Asian Fisheries Development Center (Training Department)

RECOMMENDATIONS ON SAFETY AT SEA FOR SMALL FISHING BOATS IN SOUTHEAST ASIA

1. Development the appropriate incident reporting and investigation systems for the purpose of improving safety at sea, taking into account the following considerations:
 - ▶ The guidelines on accident reporting and analysis currently being developed by FAO;
 - ▶ The possible establishing of incentives for fishermen, indemnity programs, registration systems for fishing vessels, MCS systems and subsidies to the fishing industry; and
 - ▶ The objective of the systems should be appropriate for the size of vessels and types of fishing operations or facilities onboard.
2. Promote the registration of small fishing boats.
3. Promote and ensure that safety aspects, including considerations on working conditions and socio-economic development , are incorporated and addressed by concerned authorities while improving the monitoring and control of the status and use of small scale fishing vessels
4. Strengthen local authorities and local organizations and promote application of safety at sea standards among the coastal communities.
5. Promote technical and financial support from authorities, including subsidies, at all levels for issues of safety at sea, including considerations on working conditions and socio-economic development.
6. Identify and promote basic requirements for safety at sea in the following areas:
 - ▶ research on the design and construction of small fishing boats including the modification of traditional type boats;
 - ▶ safety equipment including fire fighting and life-saving appliances;
 - ▶ regular maintenance and repair of boats, gear and equipment; and
 - ▶ development of regular boat inspection systems.
7. Implement training & education programs for all stakeholders including the fishers , family members, boat builders and others, for basic requirements of:
 - ▶ boat design and construction;
 - ▶ equipment and its correct use (including avoidance of dangerous fishing practices);
 - ▶ search & rescue operations;
 - ▶ occupational health, working conditions and safety awareness; and
 - ▶ awareness of environmental factors.
8. Promote awareness among policy makers, central authorities and broader public on the safety hazards facing people involved in fisheries in order to:
 - ▶ attract more attention and resources to be allocated to safety at sea aspects;
 - ▶ provide knowledge on the working conditions and hardship facing by fishers (which are increasing following the impact of climate change); and
 - ▶ raise political will to address safety at sea and in strengthening the local organizations.

9. Develop and promote the use of appropriate communication systems for:
 - ▶ weather forecasting information; and
 - ▶ search & rescue systems.
10. For definition of 'small fishing boats' and 'operational range', reference should be made on the respective rules and laws of individual countries.

CLOSING REMARKS

Mr. Kenji Matsumoto

SEAFDEC Deputy Secretary General & Deputy Chief of TD

2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats

SEAFDEC Training Department, 20-23 April 2010

Distinguished Guests, Participants, Ladies and Gentlemen, Good evening!

First of all please allow me to thank all of you, for your active participation during our three-day workshop.

We are indeed very thankful to the representatives from the member and non-member countries of SEAFDEC as well as from the regional and international organizations attending this workshop.

We have specifically noted the efforts done and the achievements made by the other organizations in terms of safety at sea not only for fishing vessels but also for the fishermen as well.

SEAFDEC could therefore anchor from such experiences for our continued efforts towards improving the conditions of fishing vessels as well as the living conditions of the fishermen.

We wish to ensure you that SEAFDEC would strive to enhance the collaborative efforts that we have started at this workshop in order to come up with the most appropriate strategies for safety at sea for the Southeast Asian region.

Safety of fishing vessels has been our concern for a long time. The causes of sea accidents vary vessel by vessel, and also depend not only on the vessels (Hardware), but also on human factors (Software). We would like to make efforts to solve these problems in cooperation with the Member Countries through our SEAFDEC activities.

Please allow me to reiterate what the SEAFDEC Secretary-General mentioned in his Opening Speech, that the success of our efforts in promoting safety at sea would be SEAFDEC's contribution to the overall promotion of safety and welfare in the fisheries sector in order to attain sustainable development of fisheries in the Southeast Asian region.

SEAFDEC would therefore continue to make efforts to promote the improved safety conditions of the region's fishing vessels and the fishermen on board in accordance with the international standards and practices. I am sure that our recommendations during this workshop would contribute to a number of activities in the future that could alleviate the conditions of the fishing industry.

It is the wish of SEAFDEC to continue what we have started in the aspect of safety at sea, for the sake of the fisheries industry in our region. Let this be our assignment as drivers of change, and it is also my wish that we will all be successful in our future endeavors.

Ladies and gentlemen, let me now declare this Workshop closed. Lastly, I wish you all safe journey on your return to your respective countries. Thank you once again and good day.

CLOSING OF THE WORKSHOP

Mr. Bundit Chokesanguan

**Head of Information and Training Division, SEAFDEC/TD
2nd Regional Technical Workshop on Safety at Sea for Small Fishing Boats
SEAFDEC Training Department, 20-23 April 2010**

My Colleagues in Responsible Fisheries Development and Drivers of Change in the Promotion of Safety at Sea, Participants, Ladies and Gentlemen, Good evening!

Please allow me also to thank all of you, for coming all the way to Samut Prakarn, Thailand in the midst of some unique, interesting and color-tainted political activities in the country. I also want to thank you for your active participation during our workshop. We are also glad that the travel of our FAO representative in this Workshop was not affected by postponements and cancellations of international flights due to the clouds of ash spewed by an erupting volcano in Iceland, blanketing many parts of Europe. We are also very thankful to the representatives from the member for updating the workshop on the current safety at sea activities in their respective countries. The information on the current initiatives and activities undertaken by the international, regional, and national organizations and institutions in the aspect of safety at sea had been eye-opening for all of us in the Southeast Asian region.

I should mention here that your cooperation and support during the workshop had led us to achieve our goals and enabled us to come up with the expected outputs of the workshop. Again, for all your efforts we are very thankful. I would also wish to thank the Secretariat of the Meeting for their hard work that made our workshop successful.

However, we still have some assignments that we all need to accomplish in the next one to two weeks. For SEAFDEC, we will put all the information together in order to come up with the Proceedings of the Workshop. In order for us to do that, your assignment would be to provide SEAFDEC/TD with the narrative version of your reports to facilitate the production of the Proceedings. We are thankful for the slide presentations that you brought with you, but we also urgently need the narrative version. We would therefore appreciate it very much if you could send the narrative reports to us as soon as possible. Thank you.

But we have not really completed our workshop yet for we will have the study trip tomorrow to two nearby areas to observe the activities that could be relevant to our workshop. Thank you once again and see you tomorrow.