



REBYC

Reduction of Environmental Impact from Tropical Shrimp Trawling through the introduction of Bycatch Reduction Technologies and Change of Management

<http://www.fao.org/fi/gefshrimp.htm>

Global National Coordinators Review Meeting

Dusit Hotel Nikko, Makati City, Metro Manila and Calbayog City, Samar,

October 9-14, 2006

INTRODUCTION

1. At the 3rd International Project Steering Committee (IPSC) meeting held in Iran in May 2006, it was decided to organize a Global National Coordinators Review meeting in the Philippines to present and evaluate the results of activities so far undertaken by the participating partners.
2. The Global National Coordinators Review Meeting was accordingly hosted by the Philippines through the Bureau of Fisheries and Aquatic Resources (BFAR), held at Dusit Hotel Nikko, Makati City, Metro Manila and Calbayog City, Samar, on October 9-14, 2006.
3. The objectives of the meeting were to present and discuss achievements of the participating countries, project performance indicators, develop joint regional work programmes and provide information on administrative procedures.
4. The meeting was attended by the National Coordinators and representatives from Cameroon, Colombia, Costa Rica, Cuba, Indonesia, Mexico, Nigeria, the Philippines, Trinidad and Tobago, Venezuela, FAO, UNEP and SEAFDEC-TD. The representatives from Bahrain and Iran were not able to attend.
5. The list of participants is shown in Appendix A.

OPENING PROGRAM

6. Atty. Malcolm I. Sarmiento, Jr., National Director of BFAR warmly welcomed the guests and participants. He expressed his enthusiasm for the rare opportunity of sharing experiences among participating countries to prevent the loss of biodiversity and habitat degradation through the project. He emphasized the delicate and important role of the scientists and experts attending the meeting in helping to ensure long term conservation and management of marine species. For sustainable management and exploitation, he said that a credible determination based on neutral and impartial evaluation of ongoing pilot projects make all concerned parties accept a common denominator. He was expecting a fruitful output of the meeting, and acknowledged the delicate yet important role of bycatch reduction devices.
7. In his message, Mr. Kazuyuki Tsurumi, the FAO Representative to the Philippines, acknowledged the difficult and long process which the project passed through

before it became fully operational. He stressed some major international agreements such as the UN General Assembly in 1998, that supports the project objectives including taking necessary actions to release bycatch, as further stipulated under the Code of Code Conduct for Responsible Fisheries (CCRF). He further mentioned major issues, particularly on promoting food security, and establishment of benchmarks of issues on bycatch reduction. Moreover, he is convinced that effective implementation of the project will be a major contribution towards realization of a sustainable fisheries and bio-diversified environment.

8. Mr. Jan-Erik Fogelgren, the Project Operations Coordinator FAO, stressed that the project is making good progress as demonstrated by promising results in each participating country. He also highlighted the very important role of media in advocating the project, referring to a documentary being prepared by TVE to be aired on BBC World under its "Earth Watch" program. He mentioned that the guide book on Bycatch Reduction in Tropical Shrimp-Trawl Fisheries, prepared by the project, has generated considerable interest, and demand for more copies from various from stakeholders. He further stressed that the participation and active partnership with the private sector are vital in the success and sustainability of the project.
9. Mr. Takehiro Nakamura, Senior Programme Officer of UNEP, explained the role of the implementing agency of the project. He informed that a consultant had been recruited by UNEP, Ms. Lena Westlund, to undertake a mid-term review of the project. He acknowledged that the marine habitats, particularly the nursery, breeding, and spawning grounds must be kept and preserved as they play a crucial role in the environment. He was convinced that the meeting will be a constructive, and advised that the project will be extended until June 2008.
10. In his message, Director Ernesto Hilvano of BFAR Regional Office No. VIII, took pride of the fact that his region was chosen as the area of the Pilot Project in the Samar Sea. He believed that the outcome of the pilot project will be an essential cornerstone for fisheries management particularly in reducing negative impact of shrimp trawling. He said that the success of the pilot project in the Philippines is the result of exhibiting a strong political will and support to fisheries management by the Local Chief Executive of Calbayog City.
11. Mayor Mel Senen Sarmiento of Calbayog City recalled the process and involvement of stakeholders in devising practicable solutions and management plan to address the needs and concerns of his constituents. He stressed the strict, yet smooth, implementation of the Coastal Zoning Project, which was the end-product of the vision to properly manage the fisheries of Calbayog City which had earned the local government several exemplary awards on local governance. He informed that Calbayog City has adopted an effort scheme, and the JTED was a technical intervention under the project. He underscored that Calbayog City is grateful and takes pride in contributing to the global effort to better manage fisheries, and was optimistic that the results of the project will be adopted not only in the Philippines, but also in other countries.

ELECTION OF THE CHAIRMAN

12. Mr. James Ogonna, the NC for Nigeria, recommended Dr. Jonathan Dickson, NC for the Philippines, as the Chairman for the whole duration of the meeting, which was appropriately seconded and approved by the meeting.

ADOPTION OF THE AGENDA

13. The Chairman presented the agenda, which appears as annex 1. The agenda item financial status of the project, was suggested by Mr. Fogelgren to discuss individually with the NCs, and was therefore replaced with a presentation of Mr. Moth-Poulsen, the Project Coordinator, on the Hirtshals project workshop conducted in February 2006. The agenda was supplemented with a presentation of Mr. Nakamura on the proposed project performance indicators.
14. The meeting was informed of the individual meetings between Ms. Westlund and the NCs with regard to the mid-term independent review of the project.

PRESENTATIONS OF COUNTRY REPORTS

15. Mr. Kuemlangan, FAO Legal Officer, presented and discussed the legal aspects of BRDs in the implementation of the REBYC project in the different countries. He provided the information, and discussed the legal issues to address, and the needs to be considered by each participating country, international agreements, the code of conduct, authorizing fishing gears, conservation and management measures, management approaches, and law enforcement (MCS). It was noted that countries may need to draft new, or amend, legislation if required to put into practice the BRDs and change of management, and that legislation would be country and site specific, or regional.
16. Mr. Moth-Poulsen provided an overview of the project execution and the results of the project activities in each country, underlining the technical progress that has been made. He noted the need to fine-tune devices that are being promoted to optimize the results, replicate devices with consistent performance and acceptable to the industry.
17. On the inquiry by Mr. Nakamura on how the National Steering Committee (NSC) works in the local areas, and whether the Committees are set up the same way in each country, the NC from Nigeria explained that the NSC is necessary to bring together stakeholders and NGO. In addition, Mr Dickson, from the Philippines, referred to the Technical Working Group, composed of stakeholders, as the steering and implementing committee of the pilot project in the Philippines.
18. The National Coordinator of **Colombia**, Dr. Rueda, presented the issues and status of national shrimp fisheries and the results of the national workshop, sea trials and experiments using the traditional and prototypes nets with BRDs, as well as the national work plan. The prototypes indicated good performance and positive indication on presented risk analysis and impact assessment. On the inquiry why knotted netting was used rather than knotless, Colombia explained that knotless has a higher quality, but is imported and more expensive. It also commented that it would support a law for using BRD.
19. Mr. Porras, National Coordinator of **Costa Rica** presented the progress and national workplan of the project, and highlighted the cooperation between Mexico and Costa Rica with regard to the transfer of BRD technology. During the discussion, it was clarified that Costa Rica is experimenting on different devices including fisheye, initially to evaluate and review technological aspect of the net of the devices, and whether bycatch is significant. Mr. Moth-Poulsen explained that the different designs in the regions (Asia, Latin America) are all good designs,

which concentrate on traditional codends. Dr. Bolu suggested that it is better to modify the cod end, or a specific part of the trawl net, in order to facilitate better inspection and enforcement of the regulation. Mr. Porrás added to consider the concerns of fishermen, which may necessitate the modification of only some parts of the net.

20. Mr. Chavez of **Cuba** presented the status of implementation in Cuba. It focused on the development of a new twin net design based on experiences provided by Mexico. New design indicated no differences between fish and shrimps catches obtained, however, the net showed advantages such as reduction of consumption of netting material, and lower resistance. Later, with the introduction of modifications in the design according to the practical experience, six experimental cruises with fisheye-type escape devices were carried out and they indicated a fish average escape ranging from values of 13.1 - 22.9 %. Shrimp escape reached values near 2%. Non selection for fish sizes escaping was verified for the device.
21. The representatives from **Mexico**, Messrs. Mendez and Seefo presented the background and project progress in Mexico. Bycatch reduction was observed at 30-50%, depending on trawling system, fishing grounds conditions and season. The trial tests comprised fish-eye (single and double), use of knotless nettings, and increased mesh size. based on the results, Mexico will recommend to introduce new net design/ material, increased mesh size, use of fisheye, introduce 2nd foot rope and to reduce fishing effort (number of fishing vessels). It was also emphasized that under the project, new regulation for TEDs, and the mandatory use of BRD in National Protected Areas had been introduced.
22. On the query how 30-50% reduction was achieved, and how the use of TED, or the modification of the trawl, impacts the operation, it was explained that reduction was possible using double BRDs. However, 5% shrimp loss may also result, which is not acceptable to the industry.
23. When inquired which BRD has proven the most effective, the response was that the fisheye with TED since it is easy to operate, very low cost, and easy to attach to the net. It was also mentioned that TEDs are compulsory in Mexico because of the US requirement for shrimp export, and that fisheye is only used as a 2nd BRD.
24. On Mr. Kuemlangan's query on fleet increase from 2000 to 2002, and improved quality of shrimp catches, Mexico reported that her artisanal fleet is about 50,000 units, and that lesser fish caught, meant reduced stress on the shrimp, resulting to better shrimp quality and higher price.
25. Mr. Bolu commented that using TEDs with upward/top opening are preferable in shrimp fisheries.
26. Mr. Ignacio added that TED is a US regulation which is needed to comply with, and that big effort has been exerted by the Mexican authorities to promote its use, which paved the way for continued shrimp exports. The possible shrimp loss of 5-15% in using TEDs, discourage operators to use them. However, to comply with the US regulations, Mexico advised that TEDs have to be used.
27. Mr. Oumarou indicated interest on the training activities and asked whether fishing boat operators or project staffs are the target participants. It was responded that capability building is intended for the staff, including net workers/makers since the training being planned is on gear construction.
28. Ms. Suzuette Soomai, the NC of **Trinidad and Tobago**, provided background to the national trawl fishery. She underlined the major accomplishments in public

awareness and consultation, data collection onboard and at landings, and a study on the socio-economic importance of bycatch in the demersal trawl fishery for shrimp. An assessment indicated that the population of brown shrimps is currently fully utilized, and she recommended having specific research on gear selectivity to determine the optimal mesh size for traps and gears to prevent the capture of juvenile snappers.

29. She pointed out that the project had been instrumental in drafting a new national legislation, which started in 2004. On the question if shrimps catch higher price when sold in the US, she advised that present markets target local restaurants, which pay higher prices.
30. When asked about the effect of the oil/gas explorations in the area of trawl operations, she explained that under the current environmental law, trawling is prohibited off the east coast of Trinidad and Tobago and only gillnet and line fishing are allowed during the exploration. Mr. Nakamura inquired whether there is compensation for such prohibitions. It was explained that no compensation is granted, and only economic studies (catch data, loss of catch) related to the oil and gas exploration are being done. Mr. Bolu noted that the same situation (no compensation) applies also in Nigeria. It was underlined that the issue of compensation for reduction in prime fish/shrimp or bycatch as a result of introduction/adoption of technologies needs to be addressed in all its ramifications. In the event that a shrimp trawler operation would have to close down due to closure of the fishery, Mr. Kuemlangan raised the question how to compensate those directly and indirectly affected. Trinidad and Tobago replied that socio-economic studies would likely be the basis for compensation.
31. Upon Mr. Tyas inquiry, Ms. Soomai also clarified that the socio-economic data collection is being done by fisheries technicians/staff with the use of random sampling design methodology. She offered to provide the participants copies of the questionnaires for their reference.
32. Mr. Bundit informed the meeting of the ICES Symposium to be held in Boston in November this year, and proposed that all NCs should attend. Mr. Fogelgren was concerned of the cost if all the NCs would attend, and suggested that since Mr. Moth-Poulsen will attend the Symposium, he can share the results with the NCs. Also, the ICES website can provide the results and information about the Symposium.
33. Mr. Luis Marcano made the introduction of the project in **Venezuela** and Mr. Jose Javier Alio presented the results of the testing of BRDs, 2nd footrope and fisheye for the industrial trawlers, showing lower bycatch with use of 2nd footrope catches than with traditional practice. Trials on Suripera net also showed good result, which can catch 100% shrimp and being more eco-friendly compared to beach seine and other types of gears used in shrimp fisheries. He concluded that the solutions to problems on gear efficiency and its impact on the bottom is necessary to resolve in order to reduce unwanted catch and create negative impact. Similarly, it is also necessary to educate fishermen of the correct usage of bycatch technology to effectively reduce bycatch.
34. When asked on the efficiency of the Suripera net in catching shrimp, the presenter cited that average size of shrimp catch is about 13-14 cm which is biologically an immature stage, and fishing operation is 2-3 hours, or similar to 3 hours trawling. More importantly, the technology does not consume fuel, but only wind, current and sea condition are important for its operation. Mr. Marcano added that the fish eye will not be a practicable solution in Venezuela and Costa Rica's industrial

shrimp fisheries since they also target fish and fish loss is unacceptably high with this BRD. However, the 2nd footrope causes higher and better commercial catch and reduces non-commercial bycatch. Mr. Alio added that the TED structure should be adjusted to local conditions and not necessarily to the one specified by the US since most turtles in Venezuela can be excluded with a bar separation larger than 10 cm. It was recognized that fishery condition should be considered on the implementation of BRDs.

35. Mr. Porrás commented that making the fishing fleet adapting a new and more costly technology is not easy, which is the case not only for introducing TED. However, by showing that these devices are long-term viable, the fishermen should gain more understanding for bearing the cost.
36. Clarification was made on the definition of bycatch and discard, with Mr. Bundit describing discard as the part of the catch that is thrown away, and bycatch what remains in the net and is marketable. Mr. Moth-Poulsen suggested that to simplify for common understanding, discard is described as a fraction of the bycatch. However the discard also often contains undersized target species.
37. Mr. Nakamura noted that the project should also try to promote the protection of juvenile fish near mangroves that are nursery/breeding ground of commercially important species.
38. The NC from Nigeria highlighted there is a need for strong governmental support for the project to implement necessary solutions to the problems. He informed that Mr. Fogelgren had met with the Honourable Minister of State, Ministry of Agriculture and Rural Development during his latest visit to Nigeria, and that the meeting had proven very instrumental in attracting interest at the highest political level to the results of the project. Mr. Fogelgren advised the meeting that he would be delighted to meet with ministers in other participating countries, if this would support the implementation of the project.
39. The status of the project in **Cameroon** was presented by Drs. Oumarou Njifonjou and Pierre Meke. They discussed the different BRDs tested, including the 90° turned mesh and square mesh codend window. It was concluded that BRDs and TEDs are being successfully introduced, and that the prototype net shows advantages over the traditional net. The foreseen re-certification of Nigerian shrimp fisheries to export to the United States was used as a good example, for creating opportunities for the shrimp industry of Cameroon.
40. Upon inquiry, it was explained that the most important shrimp species in Cameroon are *P. monodon* which is targeted by artisanal fishers, while white shrimps are caught with traps.
41. Mr. Bundit informed the meeting of SEAFDEC's technical assistance program to various countries and the possible training and demonstration on JTED and TED, which the participant from Cameroon gratefully welcomed. However, there was a question who will provide funds for such undertaking. Mr. Fogelgren clarified that the offer could be funded by SEAFDEC or the national allocation of the project, reminding that the allocation for Cameroon is almost exhausted.
42. Prompted by Mr. Kuemlangan, Cameroon explained that the national legal framework preparation (although not included in the presentation) is included in the workplan. Mr. Kuemlangan added that the revision of the legal framework should include BRDs. Mr. Moth-Poulsen highlighted the importance of BRDs due to the increasing catch of small fish, based on interviews with trawl skippers in Cameroon.

43. Mr. Nakamura emphasized that the project has only 18 months left, and each country must have an exit strategy how to sustain the achievements of the project without external funding. Mr. Meke anticipated that the efforts of the project will be sustainable, and even involve other countries that are currently not using JTED or TED. Mr. Porrás added that the participating countries and their respective industries have showed commitment to the project, especially with regard to national and global interventions.
44. Messrs. Ogbonna and Solarin of **Nigeria** presented the Nigerian shrimp fisheries, strategies and management component, problems on the usage of TED, MCS, and the BRDs used (square mesh window and square mesh codend). The project provides an opportunity for stakeholders to collectively find solution to a common problem on reducing bycatch. It was emphasized that management and industry are now very conscious of conservation, resulting to the present voluntary use of TEDs and contribution of fishing vessel time for the trials of BRDs. The cooperation between Nigeria and Cameroon was highly enhanced by the project, with a proposal to extend the collaboration to other countries in the Southern Gulf of Guinea. They also attributed the successful re-certification of Nigeria to export shrimps to the US to the project.
45. Mr. Kuemlangan observed that the Nigerian experience on re-legislation should not focus on revising the whole law as they already have a common part in the law (sec. 14), which allow the minister to revise and pass regulation on fisheries management.
46. Mr. Fogelgren inquired more information on trashfish. Mr. Ogbonna replied that juveniles of croakers, which is about 14% of commercially important species in the trashfish, is the most dominant. Mr. Moth-Poulsen complemented that an over-all socio-economic picture, looking at the resources and in view of 14-15% release of croakers from trashfish, should be made available to the artisanal fleet as well as the industrial fleet. It is obvious that when croakers and barracuda grow-up, they represent a higher value.
47. When Mr. Rueda asked how to approach the trading of trashfish when canoes sell and trade trashfish and use it commercially, it was explained that the market for trashfish is very low. Mr. Porrás noted that the estimated ratio of shrimp to bycatch in Nigeria is 25:75%. Mr. Moth-Poulsen asked why the fishing trips are not made shorter to accommodate all catch, rather than fishing for 15 days with limited freezing capacity for shrimp, and having to discard caught fish. Mr. Meke noted that since the income generated from the sale of bycatch is used increase the crews to compensation, the fishermen's incentive to reduce such bycatch is obviously limited. MCS should be strengthened to ensure that BRDs are implemented.
48. Messrs. Dedy H. Sutisna and I. Rosyidi presented the background and activities in **Indonesia** including several trainings, workshop and symposiums to introduce and promote TED and JTEDs. Based on their workplan, they recommended standardizing and modifying BRDs to make them appropriate for adoption.
49. Mr. Nakamura inquired on what gear will be adopted and whether the industries in Indonesia will adapt the device. The response was that TED installation for industrial shrimp trawl has been obligated in Indonesia since December 1982 and last revised by DG of Fisheries Decree No: 868/Kpts/IK.340/II/2000 about BRDs construction and fishing ground for the shrimp trawl vessels by February 10th, 2000.

50. Mr. Bundit suggested selecting a different area in Indonesia to pilot TED, and where the device is acceptable to fishermen. He said that the experiment in Sorong will be analysed to produce a scientific paper in cooperation with the Indonesian counterparts. He also commented that Indonesia so far have had four different National Coordinators in 3 years, hoping that Mr. Tyas Budiman will remain as NC for Indonesia.
51. Mr. Dickson suggested that the scientific paper hopefully will prove the efficiency of the device to be adopted not only in Indonesia, but in other places as well. Mr. Blaise suggested that this can be done, as well in policy formulation and regulation.
52. Mr. Alio commented that the use of TEDs will affect some 200 vessels. However, for the 51,000 artisanal vessels, adopting the device can be a problem, considering that these are not classified as trawl, but rather only trawl-like gears. The answer was that the gear is the same as trawl in operation and structure, but this one is smaller compared to the trawls in Latin America.
53. The status report of **the Philippines** was presented by Mr. Rafael V. Ramiscal, the Asst. Project Coordinator for the Philippines. He elaborated on the strategies and specific activities in the implementation of the project that included promotion and awareness building (demonstration and fishing trials) conducted in the major shrimp fishing ground in the Philippines. Subsequently the pilot project on JTED implementation in Calbayog City was initiated, demonstrating achievement in the reduction of juveniles and trashfish by about 40-70%, and providing a good example in directly involving local governments, fishermen and other stakeholders in the implementation of the project. It was emphasized that the pilot project is anticipated to stimulate replication in other areas and facilitate the formulation of policy framework at local and national level.
54. Mr. Moth-Poulsen commented that the results indicated that while there is a decrease in small juveniles, an increase in medium sized fish is technically reasonable as there is an increased flow in the cod-end, which may increase catch of bigger size fish. He also generally encouraged to focus on the consolidation of result of the project, as there is limited time for longer research.
55. Mr. Ogbonna asked why the JTED Pilot Project is review every quarter instead of annually, considering that quarterly may not be enough to conclude investigation of every grid. It was explained that there is a need to fast track since the implementation is very short. Besides, it is also necessary to present the regular progress and get input from participants and stakeholders.
56. On the question on the difference between shrimp and fish trawl, Mr. Bundit explained that in Southeast Asia, shrimp trawl is a two seams trawl and operates during night time, while fish trawl is 4 or 6 seams and operate during day time. He also emphasized that good team work and cooperation between the project staff, boat owners, fishermen and the local government unit in the Philippines produced good result and efficient implementation of the project.
57. Mr. Alio was clarified that the 356 trawl FBs are commercial trawls, which are mostly considered small-scale commercial (3-20 gross tons). He also inquired why trials were focused on 1-3 cm sorting grids and why only one using fisheye. It was explained that in the Philippines, and other Southeast Asian countries, fish is important to the fishermen, and since the fisheye device was observed to allow even bigger-sized fish to escape, it is not easily acceptable by the fishermen.

58. Mr. J. Dickson informed the meeting that they are interested on the introduction of alternative technologies like the Mexican Suripera net, which is environment-friendly.
59. Mr. Bundit Chokesanguan of **SEAFDEC**-Training Department, Thailand, presented the regional activities in SEAFDEC member countries as well as in regions outside Southeast Asia. He underlined plans to maintain activities with regard to the introduction of Turtle Excluder Device (TEDs) and Juvenile and Trash fish Excluder Device (JTED) in the member countries and other interested countries, and will support the implementation of the project in the Philippines and Indonesia. He also presented a video CD on the activities undertaken by SEAFDEC in member countries.
60. On the question (Mr. Porras) if the JTED is already patented under intellectual property rights, Mr. Bundit explained that it is registered in Thailand but the intention was not to prevent others from adapting it, but only to prevent its use for business purposes. On the comment that the negative aspect of property right may add cost of the device and therefore unfavourable to fishermen, Mr Bundit said that if the company make this as business, it may get license or certificate from TD and pay some rights to the manufacturer. However, this certification can be issued also for fishermen and other users, as long as they recognize that the device was designed by SEAFDEC TD.
61. Mr. Kuemlanagan congratulated SEAFDEC for its good work in the region, and posed how countries can connect to get SEAFDEC experiences on the promotion/introduction of JTED and TED. Mr. Bundit responded that this can be made with the financial support from other organizations, as they have previously done in the conduct of workshop on the estimation of discards and measures to reduce Bycatch in Indian Ocean and Western Pacific.
62. The meeting was informed that the cost of one unit JTED depends on the area and size of the trawl net, for example in Thailand US\$50, Malaysia US\$ 80 (stainless) and in the Philippines US\$ 30.
63. Mr. Moth-Poulsen proposed the participants to browse the ICES website on the manual of selectivity device, since this could be a cheaper and more informative way than conducting experiments for a longer period.
64. Mr. Fogelgren asked when the SEAFDEC JTED program will finish, and how does this will affect the project in SEA member countries. Mr. Bundit advised that one year implementation is supported through Japan Trust Fund. He added that the annual proposal by SEAFDEC Training Department (TD) sustains the project, and Indonesia may get support from TD through cost sharing.
65. On the comment from Mr. Marcano why square mesh and bigger mesh size at the codend are not used to release small fish, it was noted that it is difficult to change attitudes of the fishermen, and that the JTED (instead of mesh type and size) is a good opportunity to introduce conservation by trying to change their customs.
66. Mr. Bundit suggested that an evaluation of the project be held in Bangkok, expressing willingness by SEAFDEC to host an international meeting on BRDs and to provide a wider scope of participation than the 12 project countries.
67. As a feedback from the workshop in Hirtshals, Denmark, in February 2006, which was attended by selected NCs and project staff, Mr. Thomas Moth-Poulsen presented the flume tank testing results, highlighting the advantages and

disadvantages of different types and installation of TEDs to the codend of the trawl. Several pictures of the different types and variations of TEDs were discussed.

68. Mr. Kuemlanagan made a supplementary presentation on relevant laws in participating countries and options for regulating bycatch reduction technologies. He gave details on the procedure to access FAO legal website, particularly how to download the legal office files on national fishery laws and regulations, legal frameworks and instruments that are essential references in policy making regarding BRDs. He also emphasized the importance of process and elements of policies (e.g methodology & workplan, elements for BRD regulation, liability & sanctions, approaches to regulations, and collaboration or team work building).
69. Mr. Nakamura announced the extension of the project until June 2008, using unspent balance of the existing budget. He then presented the proposed project performance indicators, stressing that these will illustrate concrete and measurable results and achievements to be able to judge success toward the end of the project. The proposed indicators cover various levels: BRD trials, socio-economic level, on the ground impact, policy, knowledge exchange and possible replication of other countries. It was also commented that counterpart funding of participating countries can be a good indicator as it denotes the level of effort or commitment.
70. Mr. Porras spoke on behalf of many of the project partners when he expressed concern over the proposed concept of indicators, given the different situation and status of implementation in each country, and that the indicators will be introduced at this late stage of the project. For example, conducting socio-economic studies are complicated and costly, and the indicators may need to be discussed with stakeholders in each country. Mr. Bundit asked what the implications were if the indicators are not met by the participating countries. Mr. Nakamura advised that project indicators is a requirement recently introduced by GEF to measure the level of success of the project. However, the proposed indicators should be discussed, and could be revised to reflect current situations.
71. The representatives from Iran and Bahrain were unfortunately not able to participate. However, the country paper of Bahrain was submitted to the meeting as reference.

OBSERVATION TRIP TO CALBAYOG CITY

72. On October 12-14, the participants travelled to Calbayog City in Samar located in the eastern Visayan region (Central Philippines) to observe the implementation of the JTED Pilot Project in Samar Sea hosted by the local government of Calbayog City.
73. The group was warmly welcomed by local officials and residents led by the City Mayor Mel Senen S. Sarmiento and Vice-Mayor Ronaldo P. Aquino of Calbayog City. Local executives and field fisheries officers expressed pride in hosting this international event, noting that the city is being recognized globally with the project being implemented in the locality. They were also thankful to FAO and UNEP in supporting efforts towards sustaining the fishery and biodiversity in the locality, as well as in other regions.
74. The fishing boat operators, through their President of the Calbayog Commercial Fishing Boat Association Mr. Gregorio Jusayan, welcomed the participants and

voiced support to the implementation of the project, taking note of the potential benefits to general welfare of fishermen.

75. The participants joined F/B Jerome2 and F/B Nice Angelika (outriggered trawler boats) fishing in Samar Sea on October 13, 2006 to observe the nets fitted the Juvenile and Trashfish Excluder Device (JTED) with 12mm vertical and 15mm horizontal grids.

76. The participant returned to Manila on October 14, 2006.

MEETING RECOMMENDATIONS

77. Following the deliberations and activities of the meeting, the participants deliberated and agreed on the Meeting recommendations attached as Appendix B.

CLOSING OF THE MEETING

78. The Meeting Chairman, Dr. Dickson, expressed his thanks to the participants to contributing to a very constructive and fruitful meeting, and that the participants had enjoyed their short stay in the Philippines.

79. Mr. Ogbonna reiterated that the next Project International Steering Committee Meeting will be hosted by Nigeria, in March 2007.

80. On behalf of all the participants and FAO, Mr. Fogelgren expressed his sincere thanks to the organizer of the successful meeting, and officially adjourned the meeting at 18:00 hrs on October 14, 2006, at Dusit Hotel Nikko, Makati City, Metro Manila, the Philippines.

LIST OF PARTICIPANTS

Colombia

Dr. Mario Enrique Rueda Hernández
National Coordinator
INVEMAR-Colombia
Cerro de Punta Berin, Santa Marta, Colombia
Tel. No.: (575) 4211380 extension 154
Email: mrueda@invemar.org.co

Cameroon

Dr. Oumarou Njifonjou
National Coordinator
Ministry of Livestocks and Fisheries and Animal Industries
Department of Fisheries and Aquaculture
Email: njifonjo@caramail.com

Dr. Meke Soung Pierre Nolasque
Fishing Activities Control and Surveillance Brigade
Ministry of Livestocks, Fisheries and Animal Industries (MINEPIA)
Department of Fisheries and Aquaculture – Cameroon
Tel. No.: (237) 2316049/ 9932553
Email: pierremeke@yahoo.com

Costa Rica

Mr. Antonio Porras
National Coordinator
Director General Tecnico
Instituto Costarricense de Pesca y Acuicultura (INCAPESCA)
El Cocal, Puntarenas, Costa Rica
Tel. No.: (506) 6610846/ 2481196
Fax No.: (506) 6610748/ 2481585
Email: porrasantonio1@yahoo.com

Cuba

Mr. Luis Font Chávez
National Coordinator
Fishery Ministry
5th Floor 246, Playa, C. Havana, Cuba
Tel. No.: (537) 209-8066
Email: lfont@cjp.telemar.cu

Indonesia

Mr. Dedy H. Sutisna

Chief of Indonesian SC.
Directorate of Fishing Vessel and Gears
Director General of Fisheries Capture
Department of Marine Affairs and Fisheries
JL. Medan Merdeka Timur, No. 16, Jakarta, Indonesia
Tel & Fax No.: (6221) 3520726
Email: naoneta@yahoo.com

Mr. Tyas Budiman

National Coordinator
Directorate General of Capture Fisheries
JL. Medan Merdeka Timur, No. 16, Jakarta, Indonesia
Tel. No.: (6221) 7491977
Fax No.: (6221) 3520726
Email: tyas_b@yahoo.com

Mr. Imron Rosyidi

Assistant Project Coordinator
Ministry of Marine Affairs and Fisheries
JL. Medan Merdeka Timur, No. 16, Jakarta, Indonesia
Tel. & Fax No.: (6221) 3520726
Email: r_impong@yahoo.com; r_impong@dkp.gob.id

Mexico

Mr. Ignacio Mendez Gomez-Humaran

National Coordinator
Director-General de Investigacion Pesquera En El Pacifico Sur
National Fisheries Research Institute Prolongacion
Playa Abierta s/n Col. Miramar CP 70680,
Salina Cruz, Oaxaca, Mexico
Tel. No: (958) 5871056, (55) 54223006
Fax. No: (958) 5870386
Email: dgips_inp@prodigy.net.mx or imggh2000@yahoo.com

Mr. Andrés Antonio Seefó Ramos

Sub-Director De Tecnología Inp/ Mexico
Instituto Nacional De La Pesca
Prolongación Playa Abierta S/N
Col. Miramar C.P. 70680, Salina Cruz,
Oaxaca, Mexico
Tel. & Fax No.: (52971) 7145003/ 7140386
Email: y_aseefoo@yahoo.com

Nigeria

Dr. James Ogbonna

National Coordinator
Assistant Director of Fisheries
Federal Ministry of Agriculture and Rural Development
Department of Fisheries
Area 11 Secretariat, P.M. B 135, Garki, Abuja, Nigeria
Tel. No.: (234) 806-5775322
E-mail: jamescogbonna@yahoo.com

Dr. Boluwaji Solarin

Assistant Director
Nigerian Institute for Oceanography and Marine Research
3 Wilmot Point Road, Victoria Island, Lagos, Nigeria
Tel. No.: (234) 803-4669112
Email: bolusolarin@yahoo.com

Philippines

Dr. Jonathan O. Dickson (DFT)

National Coordinator
Chief, Capture Fisheries Division
Bureau of Fisheries and Aquatic Resources
PCA Bldg, Elliptical Road, Quezon City, Philippines
Tel. 632-9294296
Email: jod_bfar@yahoo.com

Mr. Rafael V. Ramiscal

Supervising Aquaculturist
Bureau of Fisheries and Aquatic Resources
PCA Bldg, Elliptical Road, Quezon City, Philippines
Tel. 632-9294296
Email : rv_ram55@yahoo.com

Mr. Efren V. Hilario

Aquaculturist II
Bureau of Fisheries and Aquatic Resources
PCA Bldg, Elliptical Road, Quezon City, Philippines
Tel. 632-9294296
Email : hilario_72@yahoo.com

Trinidad & Tobago

Ms. Suzuette Soomai

National Coordinator
Fisheries Officer
Ministry of Agriculture Land and Marine Resources
Fisheries Division
St. Clair Circle, St. Clair, Port of Spain, Trinidad and Tobago
Tel. No.: (868) 634-4504/ 634-4505
Fax No.: (868) 634-4488
Email: miau@tstt.net.tt; soomaisue@yahoo.com; ssoomai@hotmail.com

Venezuela**Mr. José Javier Alió**

National Coordinator
National Institute Agricultural Research
Edie INIA, Ave. Carupano, Caiguire Cumana,
Sucre 6101, Venezuela
Tel. No.: (58293) 4317557
Fax No.: (58293) 4325385
Email: jalio@inia.gob.ve

Mr. Luis Marcano

Instituto Nacional Investi Agrícola
URB. Caiguire, Ave. Carupano, Cumana,
EDO. Sucre, Venezuela
Tel. No.: (58093) 4317557
Email: lmarcano@inia.gob.ve

SEAFDEC**Mr. Bundit Chokesanguan**

Head of Information and Extension Division
Training Department (TD)
P.O. Box 97, Phrasamutchedi
Samut Prakan 10290, Thailand
Tel: 66-2425-6100 Fax: 66-2425-6110
E-mail: bundit@seafdec.org

Mr. Suppachai Ananpungsok

SEAFDEC-Training Department
P.O. Box 97, Phrasamutchedi
Samut Prakan 10290, Thailand
Tel: 66-2425-6100 Fax: 66-2425-6110
E-mail: suppachai@seafdec.org

Mr. Mokkara Punchuen

SEAFDEC-Training Department
P.O. Box 97, Phrasamutchedi
Samut Prakan 10290, Thailand
Tel: 66-2425-6100 Fax: 66-2425-6110
E-mail: mokkarap@seafdec.org

UNEP

Mr. Takehiro Nakamura
Senior Programme Officer
United Nations Environment Program
P.O. Box 30552, Nairobi
00100, Kenya
Tel. No.: (25420) 7623886
Fax No.: (25420) 7624041
Email: takehiro.nakamura@unep.org

Ms. Lena Westlund
Consultant for Mid-Term Review
United Nations Environment Program
148 Pinewood Cres. Dartmouth, NS, B2V 299, Canada
Tel. No.: (1902) 4355271
Email: lena.westlund@ns.sympatico.ca

FAO-Rome

Mr. Blaise Kuemlangan
Legal Officer
Food and Agriculture Organization - Legal Office
Viale delle Terme di Caracalla
00100 Rome, Italy
Tel. No.: (3906) 57054080
Fax No.: (3906) 57054408
Email: blaise.kuemlangan@fao.org

Mr. Janne Fogelgren
Project Operations Coordinator
Fishing Technology Service, Fishery Industries Division,
Fisheries Department
Food and Agriculture Organization
Viale delle Terme di Caracalla
00100 Rome, Italy
Tel: (39) 06 57052377
Fax: (39) 06 57055188
E-mail: janne.fogelgren@fao.org

Mr. Thomas Moth-Poulsen
Project Coordinator
Fishing Technology Service, Fishery Industries Division,
Fisheries Department
Food and Agriculture Organization
Viale delle Terme di Caracalla
00100 Rome, Italy
Tel: (39) 06 57052377
Fax: (39) 06 57055188
E-mail: thomas.mothpoulsen@fao.org

MEETING RECOMMENDATIONS

1. All kinds of information material produced under the project are important reference to rationalize and justify policies on BRDs.
2. Recognizing that participating countries have diverse legal systems and means of instituting policies and legal frameworks, the Meeting recommended that participating countries initiate, where appropriate, the review of existing legal framework with the view to promulgate policies and laws specific to BRDs by March 2007 and, where appropriate, identify options or provision of assistance to improve their legal framework. Within each region, encourage participating countries to follow up on identified options and technical assistance required for enhanced implementation of policies and laws, including through improved MCS and harmonization of fishery regulation.
3. As the project approaches its final phase, the participants should develop exit plans or strategies for sustainability of the results and activities achieved under the project. Such exit plan / strategy should be submitted to FAO by December 2007.
4. It is requested to define project indicators to monitor accomplishments by the project. The participating countries should review indicators provided by UNEP, and provide any comments on these to FAO by end of November 2006.
5. BRDs being developed in the various regions/ countries are diverse and are specific to countries or region. The Meeting encouraged inter-regional exchange should be undertaken where appropriate, and this may include non-participating countries. Regional institutions like SEAFDEC may play an important role in this regard. FAO will prepare a paper on the potential BRDs to be used.
6. Participating countries should update their section on the project website to include information on progress and interesting case studies, and also promote awareness of the project's website through creating links to relevant websites in their own countries.