



REVERSING ENVIRONMENTAL DEGRADATION TRENDS IN THE SOUTH CHINA SEA AND GULF OF THAILAND

REGIONAL WORKING GROUP ON FISHERIES



Report of the Second Meeting
Phuket, Thailand, 7-11 October 2002



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***Reversing Environmental Degradation Trends
in the
South China Sea and Gulf of Thailand***

REPORT

**Second Meeting of the Regional Working Group for
the Fisheries Component**

Phuket, Thailand 7th – 11th October 2002

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Report of the Meeting

1. OPENING OF THE MEETING

1.1 Welcome address

1.1.1 The Project Director, Dr. John Pernetta, opened the meeting on behalf of Dr. Klaus Töpfer, the Executive Director of UNEP and Dr. Ahmed Djoghlaif, Director, Division of Global Environment Facility (DGEF) Co-ordination. He noted that the agenda was very extensive and that, there were numerous items requiring discussion and decision during the course of the meeting. He noted further that this was a critical meeting in the development of the project, as it would elaborate the overall framework for the work plan for the first two years; determine whether this could be completed on time; and agree any adjustments to the work plan that were required.

1.1.2 Dr. Pernetta noted with regret that a number of members were unable to be present but that, some of these had sent designated alternates. He expressed the belief that this would not compromise the completion of the work before the meeting, which was quite extensive as demonstrated by the large quantity of documents in front of the meeting for their consideration. He noted further that an important task before the meeting was to initiate discussion on the testing of a blast fishing device and welcomed Dr. George Woodman who would make a presentation later in the day on a device that offered some potential for real-time detection of blast fishing.

1.1.3 Dr. Pernetta welcomed all members of the committee, and the observers from Thailand who had kindly arranged the field visit that would take place on Thursday. He expressed the wish that the second meeting of the RWG-F would be as productive and enjoyable as the first. He noted that Mr. Wannakiat, Focal Point for fisheries in Thailand, elected Chair of this Regional Working Group had been transferred to a newly created Department under the restructuring of the Government of Thailand and consequently Mr. Ing Try, Focal Point from Cambodia elected as Vice-Chair during the first meeting was automatically, under the rules of procedure, the Chairperson for this meeting.

1.2 Introduction of members

1.2.1 Mr. Try welcomed participants to the meeting and invited them to introduce themselves. There followed a brief *tour de table* during which participants introduced themselves and briefly outlined their responsibilities and roles in the project. The list of participants is attached as Annex 1 to this report.

2. ORGANISATION OF THE MEETING

2.1 Designation of officers

2.1.1 Mr. Ing Try proposed Dr. Dao Manh Son as Vice Chairperson and Dr. Johannes Widodo as the rapporteur for the meeting. Dr. Son and Dr. Widodo were elected by acclamation.

2.2 Documents available to the meeting

2.2.1 Mr. Kelvin Passfield introduced the documentation available to the meeting (UNEP/GEF/SCS/RWG-F.2/INF.1) noting that these documents were extensive and included the published reports of the first round of regional Working Group meetings. He briefly outlined the contents of the meeting folders noting that a brief summary of Mr. Woodman's presentation had been added, together with a revised listing of the members of the Thai National Committee, which had been received only last week and therefore had not been previously circulated. The list of documents is attached as Annex 2 to this report.

2.3 Organisation of work

2.3.1 Mr. Passfield outlined the administrative arrangements for the conduct of the meeting, and the proposed organisation of work detailed in the draft programme of work (UNEP/GEF/SCS/RWG-F.2/INF.3). He noted that the meeting would be conducted in English and in plenary as far as possible, sessional working groups may be formed as deemed necessary, although the small size of the group meant that it would probably not be necessary.

3. ADOPTION OF THE MEETING AGENDA

3.1 The Chairperson invited members to consider the revised provisional agenda prepared by the Secretariat as document UNEP/GEF/SCS/RWG-F.2/1.Rev.1, and propose any amendments or additional items for consideration. The agenda was adopted without change and is attached as Annex 3 to this report.

4. REPORT OF THE SECRETARIAT CONCERNING THE MID-YEAR REVIEWS AND REPORTS FROM PARTICIPATING COUNTRIES

4.1 The Chairperson invited the Secretariat to present document UNEP/GEF/SCS/RWG-F.2/4 containing a summary of the findings of the Project Co-ordinating Unit (PCU) following receipt of the 6 monthly progress reports, expenditure statements, and cash advance requests from the Specialised Executing Agencies (SEAs), together with document UNEP/GEF/SCS/RWG-F.2/5, containing the six monthly progress reports of the Specialised Executing Agencies.

4.2 Mr. Passfield outlined the issues and problems encountered by the PCU and reported in this document. The subsequent discussion centred on the resolution of the problems identified and the necessary courses of action required to minimize the problems encountered in future submissions. It was noted that the PCU would continue to issue pro-forma reports for the project in advance of the deadline for their final submission and that the Specialised Executing Agencies were in turn expected to complete and return these documents promptly, in electronic form, to facilitate any necessary amendments recommended by the PCU.

5. CONSIDERATION OF THE LISTS OF SHARED AND TRANSBOUNDARY FISH STOCKS, AND DRAFT LISTS OF GLOBALLY THREATENED AND ENDANGERED SPECIES FOR THE SOUTH CHINA SEA, BY COUNTRY

5.1 Mr. Passfield introduced the listing of threatened fish species for each country, for the Gulf of Thailand and for the South China Sea that had been extracted from Fishbase and were presented in document UNEP/GEF/SCS/RWG-F.2/6.

5.2 Mr. Pirochana Saikiang noted that, some of the species on the list for Thailand were not known from Thai waters and that in other respects the listing was incomplete. A closer examination revealed that the initial listings taken from the fishbase database did not appear to correspond to the government agreed lists of endangered and threatened species in the cases of Cambodia, Indonesia, and Vietnam. It was agreed that the Secretariat would consolidate the available lists from the countries for subsequent discussion and comparison with the lists derived from the Fishbase database.

5.3 During subsequent discussion it was further agreed that, the IUCN status categories of endangered, threatened, rare, vulnerable etc. would be used by the countries, in compiling these lists.

5.4 There followed a discussion of the transboundary and shared stock listing of pelagic fish species prepared during the first meeting and it was agreed that there was a need for a common understanding of the definitions of "shared stocks" and "transboundary stocks". In addition it was noted that the list presented in Annex 6 of the report of the first meeting covered only pelagic fish species but it had been previously agreed to include, both demersal fish, marine mammals and invertebrate species of transboundary significance.

5.5 It was agreed that the Chairperson and Mr. Passfield would work on the information presented by the countries in order to produce a consolidated listing of demersal fish species and invertebrates that included either shared fish stocks or stocks of transboundary significance for further consideration by the meeting.

5.6 The preliminary listing was presented to the meeting, discussed, expanded, and amended to include demersal fish species, cephalopods, crustaceans, and transboundary species of marine mammals and reptiles. This listing was subsequently reviewed by the members overnight who assigned a rank score for the transboundary importance of these species on a scale of 1 to 5 with five being the highest. These scores were subsequently consolidated by the Secretariat into an average score assigned to each species, which was then reviewed by the working group in plenary.

5.7 At this point it was agreed to combine some species which were either difficult to distinguish and/or for which catch data were aggregated at the point of landing. The final agreed lists of pelagic and demersal fish species, cephalopods, and crustaceans are attached as Annex 4 to this report.

5.8 A preliminary draft list of threatened and near threatened fish species was prepared to which were added the threatened and near threatened species of marine mammals and reptiles. This listing is presented as Annex 5 to this report. It was agreed that participants would review these lists and propose any modifications or amendments to the PCU within 15 working days of the end of the meeting.

6. PRESENTATION ON THE DEVELOPMENT AND TRIALS OF A BLAST FISHING DETECTION DEVICE

6.1 The Chairperson invited Dr. George Woodman from, Marine Sensors and, Biosensors Group, Hong Kong University of Science and Technology, Hong Kong, to present a new technology under development allowing the automated detection of the blast generated by a fish bomb and the capability to determine its location at ranges up to tens of kilometres.

6.2 Dr. Woodman's presentation provided a brief introduction to the problem of blast fishing, including the nature of the bombs and their impacts; the technology for blast detection; and the results of recent monitoring work in Malaysia; alongside anticipated research and development.

6.3 Dr. Woodman noted that during field trials in Sabah in July 2002 a single hydrophone array based in Tunku Abdul Rahman National Park had detected 15 blasts in a ten day period from up to eight kilometres away. The system would enable detection of the location of the blasts to within 30 metres of the site of the explosion at a 10-kilometre distance using three hydrophone arrays.

6.4 It was noted that general information regarding who is bombing, where and why is required in order to evaluate the scale of the problem. In order to assess whether or not the system would be acceptable or valuable in the detection and control of blast fishing one needed to know who is interested in controlling the activity, and what plans exist to involve communities in the regulation process. Authorities with responsibility for marine resources, marine protected areas, artificial reefs, spawning areas, marine wildlife, tourism and dive sites could all potentially have some interest in developing enforcement based on such a detection system.

6.5 Dr. Woodman noted that a full-scale test of a location finding system was planned for Hong Kong which would enable calibration of the simpler single hydrophone systems which potentially had value in initial determination of the extent and frequency of bombing in different areas. For this initial test, high quality, more expensive hydrophones would be used. Alongside these, testing would begin of cheaper hydrophones suitable for use in prototype systems. This trial blast location system would be operated in close co-operation with the marine police and fisheries divisions in Hong Kong, both of whom have considerable interest in the system. At the simplest level the low technology option could serve as a simple event logger; a slightly more complex system would consist of a single recording hydrophone; whilst the triple hydrophone array and networks of triple arrays represented more

complex options, which enhanced the value of the system. A brief tabulation of the characteristics of these systems is provided in Annex 6.

6.6 During the discussion a number of questions were raised regarding the relationship between bomb size and damage; the power requirements of the system; and the costs and availability. It was generally agreed that there was a need for precise location and frequency data in order to determine the extent of reef degradation; and a need for local community involvement and enhanced public awareness in order to stimulate the will to act at local level.

6.7 The Focal Points from Cambodia and Vietnam both expressed strong interest in testing such a system whilst for Thailand blast fishing was not so critical in the Gulf of Thailand, though other destructive fishing methods were a problem.. Indonesia also expressed keen interest in applying this system within the framework of ongoing community based management activities.

6.8 In the absence of the Philippines Focal Point Mr. Len Garces of ICLARM suggested that blast fishing was a persistent problem in the Philippines and he expressed the view that the system would be valuable in the Philippines. He noted that the Philippines Government had taken a loan from the Asian Development Bank for a Fisheries Resources Management Programme and thus the possibility existed, to trial the system through the Bay Management Councils established under this programme.

7. REPORTS FROM THE FOCAL POINTS ON INTER-SESSIONAL ACTIVITIES AT THE NATIONAL LEVEL

7.1 Presentations by countries of their draft reports, following the outline agreed at the first meeting of the Regional Working Group on Fisheries

7.1.1 The Chairperson noted that at the first meeting of the RWG-F, it was agreed that draft National Reports following the agreed outline would be made available from each country by September 30th, 2002, for review at this meeting. He noted further that reports were available from Cambodia, Indonesia, Thailand, and Vietnam but that regrettably reports were not available from either Malaysia or the Philippines.

7.1.2 The Chairperson invited Dr. Son to present the draft report from Vietnam. Dr. Son presented a summary of the draft report, based on the document UNEP/GEF/SCS/RWG-F.2/7Viet, which was before the meeting.

7.1.3 Following the presentation, a number of questions were raised by the participants, in particular concerning the degree of aggregation of the catch per unit of effort (CPUE) data, which were reported as tons, per horsepower, per year, for the whole fleet, and indicated a decline in CPUE of approximately 60 to 70% over the 15 years from 1985 to 2001. Dr. Son explained that these data were prepared for this preliminary report, and that more detailed data were available, from 1998 onwards. Mr. Passfield noted that, the draft questionnaires, which were to be discussed later, under agenda item 9 would encourage the provision of more detailed data, where these were available. For example, fishing effort by gear was included in the questionnaires.

7.1.4 Mr. Somsak Chullasorn expressed some concern at the policy of encouraging the expansion of offshore fisheries. He asked whether sufficient research had been completed for the offshore fishing areas to justify this policy, to which Dr. Son replied that some acoustic and other stock assessment surveys had been undertaken, and more were planned in the near future

7.1.5 Dr. Widodo presented a summary of the draft report for Indonesia, based on the report, which was tabled at the meeting as document UNEP/GEF/SCS/RWG-F.2/7Ind. He explained that he was a last minute alternate for Ir. Salim for this meeting, who had been instructed to attend another fisheries management meeting in Indonesia.

7.1.6 Dr. Widodo said that this report should be considered a rough first draft. One of the areas that he noted still needed considerable input was in the ranking of the habitats associated with species of

trans-boundary significance. He also noted that there was some information in the report dealing with fresh water species, which it was not necessary to include.

7.1.7 He informed the meeting that although there had been a ban in Indonesia since 1982 on trawling, the ban was never very effective as trawlers continued to operate by re-designating and/or redefining their fishing gear as a fish net, or shrimp net, instead of a trawl. The Government was now going to reopen the trawl fishery, but with controls, including limiting vessel size, and banning the use of bobbins and chains on the gear. Indonesia was also refining the legal definition of "trawl gear". Another management initiative that will be introduced is transferable effort quotas at the provincial level.

7.1.8 In reply to a question on how the baselines for the application of input controls, such as effort limitations, were determined, Dr. Widodo replied that these were based on estimates of the maximum sustainable yield (MSY), and then determination of the optimum effort required to harvest 80% of the MSY.

7.1.9 Mr. Pirochana presented a summary of the draft report for Thailand, based on the document UNEP/GEF/SCS/RWG-F.2/7Tha. He informed the meeting that there was still some work to be done to finalise the report, and he also required some clarification from the meeting and the Secretariat on how to complete certain sections, such as the ranking of species with regard to food security.

7.1.10 In response to a question from Dr. Widodo regarding evidence of recovery of stocks or habitats after management interventions, Mr. Pirochana stated that, both the round scad (*Decapterus* spp.) and the Indo-Pacific mackerel (*Rastrelliger* spp.) stocks had recovered substantially.

7.1.11 Mr. Passfield requested clarification on the catch rates reported in table 14 of the report, which in general showed an increase, despite the assertion in the presentation that catch rates had declined by up to 90%. Mr. Pirochana noted that the increase was mainly due to an increase in size and efficiency of the fishing gear. Mr. Somsak said that if useful comparisons were to be made, then some standardised measurements of CPUE would be needed, and that where reasons were known for anomalies such as in these, the reasons should be explained in the report.

7.1.12 Mr. Garces informed the meeting that there were some country reports prepared under the Asian Development Bank (ADB) funded TrawlBase project that might be useful to the participants in preparing these reports.

7.1.13 Mr. Try presented a summary of the draft report for Cambodia, based on the report, which was tabled at the meeting as document UNEP/GEF/SCS/RWG-F.2/7Cam. He explained that the report was still preliminary, and that there were a lot of gaps to be filled. One of the problems faced by Cambodia in preparing this draft report was the lack of available data. There were some reports completed by a Russian team between 1983 and 1986, but these were in French and had not been translated into English. Much of the information regarding trends in the fisheries was anecdotal.

7.1.14 In response to a question on the reason given by the fishermen for the decline in catch per unit effort (CPUE) for shrimp, Mr. Try said that they blamed the Government for ineffective management of the fishery.

7.1.15 Mr. Somsak stated that in Thailand, fishermen now demanded proof to substantiate any management interventions to be implemented by Government on fisheries. Mr. Try noted that this was also true in Cambodia, but existing laws that had been in place since colonial rule were still in effect, despite the fact that there was not necessarily any research which justified the restrictions.

7.1.16 In response to a question on the enforcement of closed season and closed area regulations, Mr. Try said that there was not 100% compliance, though any offenders that were caught were fined. He also informed the meeting that pair trawling and the use of lights as an attraction device were banned fishing methods in Cambodia.

7.2 Discussion on progress to date on the draft reports

7.2.1 Members of the working group recognised that there remained substantial work in order to complete the reports and that it would not be possible to finalise these in advance of the meetings of the Regional Scientific and Technical Committee (RSTC) and the Project Steering Committee (PSC) scheduled for December of this year. In this connection it was noted that documents for consideration by these two meetings must be distributed to members no later than 4th November.

7.2.2 Following an extensive discussion it was agreed that Mr. Passfield in consultation with the Chairperson would put together a combined report for consideration by these meetings. It was agreed that individual Focal Points would advise Mr. Passfield on which sections and/or parts of their individual reports were most suitable for presentation and that these would be combined into a joint report for presentation to the RSTC and PSC. Members agreed to advise Mr. Passfield no later than 19th October and to send any additional data and/or information, which they wished, included.

7.2.3 It was agreed that Mr. Passfield in consultation with the Chairperson would consolidate the information into a single report which would be circulated to all members for clearance prior to being dispatched to the members of the RSTC and PSC.

7.2.4 It was further agreed that Mr. Passfield and the other members of the Project Co-ordinating Unit would review the drafts presented to the meeting and provide feedback and review comments by mid-November to assist the Focal Points in expanding and amending the drafts.

7.3 Membership of the National Committees

7.3.1 The lists of members of the National Committees contained in Document UNEP/GEF/SCS/RWG-F.2/8 were reviewed and it was agreed that amendments and corrections would be provided to the PCU no later than Friday 19th November.

7.3.2 It was further agreed that the lists containing details of the expertise of the members and their institutional affiliations would be posted on the project website at <www.unepscs.org>.

8. PRESENTATION ON TRAWL BASE PROJECT OF THE WORLD FISH CENTRE, AND ITS POSSIBLE APPLICATION TO THE FISHERIES COMPONENT

8.1 The Chairperson invited Mr. Len Garces, Fisheries Biologist with the Coastal and Marine Resources Research Programme, of The World Fish Centre, (ICLARM) in Penang, Malaysia, to make a presentation on the Trawl Base project.

8.2 Mr. Garces presented the highlights and key results of this collaborative project entitled "Sustainable Management of Coastal Fish Stocks in Asia" (ADB-RETA 5766), also known as the TrawlBase project. The project was implemented from 1998 to 2001 with funding from the Asian Development Bank (ADB) with eight participating Developing Member Countries of the Bank (i.e., Bangladesh, India, Indonesia, Malaysia, Philippines, Thailand, Sri Lanka, and Vietnam) and ICLARM. Mr. Garces noted that the objective of this project is to promote sustainable management of coastal fish stocks in Asia, and that data have been collected from five of the countries involved in the UNEP/GEF Project (Indonesia, Malaysia, Philippines, Thailand and Vietnam).

8.3 Mr. Garces highlighted the key results of the project, which include:

- Development of the database called "Fisheries Resource Information System and Tools" (FiRST), which contains resource and socio-economic data for the marine fisheries sector in South and Southeast Asia, and relevant tools for analysis. The FiRST database is now an important regional repository of information for sustainable management of coastal fish stocks in developing Asian countries;
- Documentation of the decline in coastal fishery resources throughout the region. Alarming, stocks are down to 10-30 % of original unfished levels in most countries. The assessments have also shown that the relative abundance of the more valuable fishes (such as groupers,

snappers, sharks and rays) has decreased sharply and that there has been a proportionate increase in smaller, less valuable species (such as cardinal and trigger fishes). These results provide a clear picture of the extent of stock rehabilitation required to restore maximum economic value to the fisheries of the region;

- Identification of the extent of excess fishing in selected coastal areas. In the case of the Philippines, for example, the level of fishing on the grossly modified stock is 30% higher than it should be, resulting in economic losses (via rent dissipation) of about US\$ 125 million per year;
- Evaluation of fisheries management in the participating countries, in consultation with key stakeholders, resulting in strategies and action programs that should improve productivity of coastal fish stocks on a sustainable basis. These strategies and action programs define the critical issues and opportunities at the national level, and the regional assistance required to support the national efforts; and
- Improved capabilities in coastal fisheries assessment, planning, and management within national institutions.

8.4 The presentation included examples of the resource analysis results relative to the Gulf of Thailand and South China Sea area (e.g., western Philippines, Sabah – Sarawak area), which were highly relevant to the work of the Regional Working Group and the UNEP/GEF.

8.5 Mr. Garces concluded by presenting the key elements of the proposed follow-up activities and noted that, Cambodia will be invited to participate in the Phase II project. Mr. Garces also enumerated the areas for possible collaboration between the TrawlBase and the South China Sea Project, including:

- Joint inputting & analysis of data by respective countries (Cambodia, Malaysia, Philippines, Thailand & Vietnam)
- Joint consultation and uptake of management measures/interventions by national institutions (Philippines, Thailand, Vietnam)
- Joint development of guidelines for MPAs & ecosystem analysis
- Joint stock structure analysis (PISCES project)
- Pilot sites for the “Coastal Challenge Program”

8.6 It was agreed that Focal Points in each country would contact the National Focal Points for the TrawlBase project with a view to obtaining copies of the data and analyses for review and possible inclusion in the national reports currently being prepared in the context of the UNEP/GEF project.

9. PRESENTATION AND REVIEW OF THE OUTCOMES OF THE GIS WORKSHOP JOINTLY CONVENED BY THE PROJECT CO-ORDINATING UNIT AND SOUTHEAST ASIA START¹ REGIONAL CENTRE IN AUGUST 2002

9.1 Outcomes of the workshop

9.1.1 Mr. Passfield presented the report and outcomes of the GIS workshop convened by the PCU in collaboration with the SEA START RC (UNEP/GEF/SCS/EW.1/3) concerning the technical aspects of the regional GIS database and the formats to be used in the compilation of the regional meta-database.

9.1.2 Mr. Passfield drew the attention of members to the objectives of the workshop, which stemmed from the need for GIS support in each component and sub-component of the project and the need to ensure comparability and compatibility between all components and countries participating in the project. He noted that the questionnaires developed by SEA START RC had been

¹ START = the Global Change **S**ys**T**em for **A**nalysis, **R**esearch and **T**raining

based on the agreed data and information requirements identified by the various regional working groups during their initial meetings.

9.1.3 He referred the meeting to the fisheries component discussions and in particular the GIS meeting agreements regarding actions at the national level. In particular there is a need to review and advise the PCU on the workability of the geographic units initially identified; ports of landing; and habitat distributional data relating to spawning, nursery, fishing and feeding areas.

9.1.4 He drew the attention of the meeting to the agreements regarding the responsibility of country representatives to the GIS workshop, to support the SEA, Focal Points and the agreement of that meeting that initial work on baseline maps would be completed in advance of the second meeting of the Regional Working Group. He noted with regret that this had not occurred and drew the attention of the meeting to Annex 10 of the workshop report, which contained the workplan for the GIS related activities.

9.1.5 In response to a query raised by the Chairperson Dr. Pernetta explained that the arrangements for GIS database entry were to have been discussed and agreed at national level and that these arrangements would need to be fully agreed and understood by all concerned. He noted that the primary responsibility of the Specialised Executing Agencies and the Focal Points was to assemble the data and information needed to complete the national reports. The arrangements for entering these data into the agreed formats would need to be discussed and agreed between the Focal Points and the GIS specialists in each country.

9.2 Questionnaires developed by the SEA START RC and workshop participants

9.2.1 Mr. Passfield introduced document UNEP/GEF/SCS/RWG-F2/9 containing copies of the questionnaires developed by the SEA START RC on the agreed outline for the National Reports for the Fisheries Component. Participants noted that there were a number of issues and problems with these questionnaires that needed to be taken into account before the members of the group could effectively use them.

9.2.2 Mr. Passfield undertook to convey these concerns to Dr. Anond and the staff of SEA START RC and to see whether these could be amended in the immediate future.

9.2.3 During the discussion the Chairperson, Mr. Try expressed on behalf of all members, his strong concerns that the GIS representatives from each country who had participated in the GIS workshop had failed to contact or communicate adequately with the Fisheries Focal Points, hence the noticeable lack of progress in the GIS related work.

9.3 Review of progress in the creation of national meta-databases

9.3.1 Participants reviewed the meta-database formats developed by SEA START RC and presented in document UNEP/GEF/SCS/RWG-F.2/10. Members were of the opinion that this might be less detailed than required. In response it was noted that this form was far simpler than the NOAA meta-database format and somewhat more complicated than the ASEAN agreed format, and had been constructed to meet the need for some of the levels of detail required by the components and sub-components of the project.

9.3.2 It was noted that in a number of instances data sets were not well organised at the national level and that this regional metadatabase format might assist countries in developing their own databases. During discussion the notes associated with each cell in the questionnaire were briefly reviewed. It was agreed that the PCU would be happy to review initial entries and provide comments. It was further noted that this meta-database format would be loaded on the project web-site and that the meta-database itself would be loaded sometime around the middle of 2003.

10. REVISION OF THE WORKPLAN AND ACTIVITIES FOR THE REGIONAL WORKING GROUP ON FISHERIES

10.1 During the first meeting of the Regional Working Group a flow chart of activities and workplan and timetable were developed and agreed. The workplan and timetable were presented to the meeting by Mr. Passfield for consideration, review, and updating.

10.2 It was noted that in order to agree upon the length of time needed to complete various actions it would be necessary to agree on the final list of species that would be considered in detail during the analysis of existing data and information. The tables prepared and revised by the Secretariat were then presented and it was agreed that the top 13 pelagic and 9 demersal fish species, together with 10 cephalopod and 11 crustacean species, as indicated in Annex 4 would be the priority focus of the work of the National Committees. In this context it was agreed that any additional information relating to the remaining species on these lists could be included at the discretion of the individual Focal Points.

10.3 Having finalised the scope of work involved in completing the national reports the meeting agreed that these could be completed by the end of the first quarter of 2003. In this context the draft meeting schedule contained in document UNEP/GEF/SCS/RWG-F2/11 was examined and it was noted that the third meeting of the Regional Working Group had been scheduled for February 2003. If this schedule were maintained then this would mean that, it would not be possible to review the national reports during the meeting.

10.4 Participants agreed that the third meeting would therefore be rescheduled to 1st to 5th April; that the draft national reports would be made available to the PCU for distribution on 21st March; and that the habitat chapter of the report would be made available to the PCU on February 21st for distribution to the Regional Working Groups for the habitat sub-components, in order that these working groups will be able to take the findings into consideration when discussing and deciding upon priorities for habitat related demonstration sites.

10.5 The revised meeting schedule, and amended workplan and timetable as agreed are attached as Annex 7 to this report.

11. DATE AND PLACE OF THE THIRD AND FOURTH MEETING OF THE REGIONAL WORKING GROUP ON FISHERIES

11.1 Dr. Pernetta outlined the rationale for the schedule of meetings indicating that the original intention had been that the outcome of the fisheries national reviews, particularly in relation to the importance of the habitats for transboundary stocks would be made available to the Regional Working Group's for the habitat sub-components as background to their discussions regarding the choice of demonstration sites. Having decided to re-schedule the third meeting to 1st – 5th April the group agreed that the habitat chapter of the report would be made available in advance of the habitat Regional Working Group meetings.

11.2 Members noted that Mr. Noel Barut had indicated the willingness of the Philippines to host the third meeting but that this offer was based on the original set of dates in February. The meeting instructed the Secretariat to contact Mr. Barut to ascertain the suitability of the new dates. The Secretariat contacted Mr. Barut who noted that the changed dates would be suitable provided that they did not conflict with the Easter festival. He noted that should the meeting so decide then it would be acceptable to convene the third meeting in an alternative location and the fourth meeting in the Philippines.

11.3 Given uncertainties regarding the timing of Easter it was agreed that the offer of Mr. Ing Try to host the third meeting would be accepted and that the fourth meeting would be held in the Philippines. Participants acknowledged with thanks Mr. Barut's flexibility in this regard.

11.4 Mr. Ing Try then proposed for consideration of the meeting three alternative sites in Cambodia and following some discussion it was agreed to convene the third meeting in Siem Reap.

12. ANY OTHER BUSINESS

12.1 The Chairperson invited members to propose any further items of business under this agenda item. No additional items were proposed.

13. ADOPTION OF THE REPORT OF THE MEETING

13.1 The Rapporteur, Dr. Widodo, presented the draft report of the meeting prepared by the Secretariat. The meeting reviewed the draft, considered, amended, and adopted the report as contained in this document.

14. CLOSURE OF THE MEETING

14.1 The Chairperson, invited members to make any final comments. Dr. Somsak expressed his pleasure at being invited to participate in the meeting and on behalf of the participants expressed his thanks to the Secretariat for their hard work in preparing the meeting.

14.2 All participants expressed their appreciation for the constructive manner in which the meeting had been conducted and the excellent organisation. They also expressed the hope that the next meeting would have in front of it substantial reports from the individual countries and would be as enjoyable as the present one.

14.3 On behalf of UNEP and the participants Dr. Pernetta expressed his appreciation to the Thai hosts for the organisation of an excellent and instructive field trip during the previous day; to Mr. Try for guiding the meeting to a successful conclusion, and his thanks for the hard work and constructive approach of all participants to the work of the meeting.

14.4 Mr. Try, Chairperson of the Working Group expressed his thanks to all concerned for their hard work and for the successful conclusion of the work of the meeting. He noted with pleasure that he would be able to host the group during its next meeting and promised that he would ensure that the members had an opportunity to visit various sites of significance in Cambodia.

14.5 Mr. Try formally closed the meeting at 1530 on Friday 11th October, 2002.

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ANNEX 2

List of Documents

Discussion documents

UNEP/GEF/SCS/RWG-F.2/1	Provisional Agenda
UNEP/GEF/SCS/RWG-F.2/2	Provisional Annotated Agenda
UNEP/GEF/SCS/RWG-F.2/3	Report of the Meeting
UNEP/GEF/SCS/RWG-F.2/4	Report of the Project Co-ordinating Unit Concerning the Mid-year Reviews and Reports from the Specialised Executing Agencies.
UNEP/GEF/SCS/RWG-F.2/5	Six Month Progress Reports from the Participating Countries.
UNEP/GEF/SCS/RWG-F.2/6	List of Globally Threatened and Endangered Species for the South China Sea, as well as for each Participating Country.
UNEP/GEF/SCS/RWG-F2/7.Cam	National Report for the Fisheries Component from Cambodia . <i>Tabled at the meeting.</i>
UNEP/GEF/SCS/RWG-F2/7.Ind	National Report for the Fisheries Component from Indonesia .
UNEP/GEF/SCS/RWG-F2/7.Tha	National Report for the Fisheries Component from Thailand . <i>Tabled at the meeting.</i>
UNEP/GEF/SCS/RWG-F2/7.Viet	National Report for the Fisheries Component from Vietnam .
UNEP/GEF/SCS/RWG-F.2/8	Members of the National Fisheries Committees in the Participating Countries.
UNEP/GEF/SCS/RWG-F.2/9	Questionnaires for Data and Information Entry into the Regional GIS Database for Fisheries.
UNEP/GEF/SCS/RWG-F.2/10	Meta-data Formats for Entries in the South China Sea Regional Meta-database.
UNEP/GEF/SCS/RWG-F.2/11	Draft Meeting Schedule for the UNEP/GEF Project for 2003.
UNEP/GEF/SCS/RWG-F.2/12	State of Coastal Fisheries in Developing Asian Countries. Presentation by Mr. Len Garces, ICLARM.
CD-ROM	Overview of Fish Blasting and Detection Technology. Presentation by Dr. Woodman, Marine Sensors and Biosensors Group, Hong Kong University of Science and Technology.

Information documents

UNEP/GEF/SCS/RWG-F.2/INF.1	Provisional List of Documents
UNEP/GEF/SCS/RWG-F.2/INF.2	Provisional List of Participants
UNEP/GEF/SCS/RWG-F.2/INF.3	Draft Programme

UNEP/GEF/SCS/EW.1/3	UNEP/GEF/SCS and SEA START RC, GIS Workshop in Support of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”, <i>Report of the meeting</i> , UNEP/GEF/SCS/EW.1/3, Bangkok, Thailand, 7-9 August 2002.
UNEP/GEF/SCS/PSC.1/3	First Meeting of the Project Steering Committee for the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/PSC.1/3. UNEP, Bangkok Thailand.
UNEP/GEF/SCS/RSTC.1/3	First Meeting of the Regional Scientific & Technical Committee for the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RSTC.1/3 Pattaya, Thailand, 14 - 16 March 2002.
UNEP/GEF/SCS/RWG-LbP.1/3	First Meeting of the Regional Working Group for the Land-based Pollution Component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-LbP.1/3 Bangkok, Thailand, 3 - 5 April 2002.
UNEP/GEF/SCS/RWG-W.1/3	First Meeting of the Regional Working Group for the Wetland Sub-component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-W.1/3 Phuket, Thailand, 24 - 26 April 2002.
UNEP/GEF/SCS/RWG-M.1/3	First Meeting of the Regional Working Group for the Mangrove Component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-M.1/3 Phuket, Thailand, 29 April - 1 May 2002.
UNEP/GEF/SCS/RWG-SG.1/3	First Meeting of the Regional Working Group for the Seagrass Sub-component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-SG.1/3 Bangkok, Thailand, 6 - 8 May 2002.
UNEP/GEF/SCS/RWG-CR.1/3	First Meeting of the Regional Working Group for the Coral Reef Sub-component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-CR.1/3 Bangkok, Thailand, 9 - 11 May 2002.
UNEP/GEF/SCS/RWG-F.1/3	First Meeting of the Regional Working Group for the Fisheries Component of the UNEP/GEF Project “ <i>Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand</i> ”. <i>Report of the meeting</i> . UNEP/GEF/SCS/RWG-F.1/3 Bangkok, Thailand, 20 -22 May 2002.

ANNEX 3

Agenda

- 1. OPENING OF THE MEETING**
 - 1.1 Welcome address**
 - 1.2 Introduction of members**
- 2. ORGANISATION OF THE MEETING**
 - 2.1 Designation of officers**
 - 2.2 Documents available to the meeting**
 - 2.3 Organisation of work**
- 3. ADOPTION OF THE MEETING AGENDA**
- 4. REPORT OF THE SECRETARIAT CONCERNING THE MID-YEAR REVIEWS AND REPORTS FROM PARTICIPATING COUNTRIES**
- 5. CONSIDERATION OF THE LISTS OF SHARED AND TRANSBOUNDARY FISH STOCKS, AND DRAFT LISTS OF GLOBALLY THREATENED AND ENDANGERED SPECIES FOR THE SOUTH CHINA SEA, BY COUNTRY**
- 6. PRESENTATION ON THE DEVELOPMENT AND TRIALS OF A BLAST FISHING DETECTION DEVICE**
- 7. REPORTS FROM THE FOCAL POINTS ON INTER-SESSIONAL ACTIVITIES AT THE NATIONAL LEVEL**
 - 7.1 Presentations by countries of their draft reports, following the outline agreed at the first meeting of the Regional Working Group on Fisheries**
 - 7.2 Discussion on progress to date on the draft reports**
 - 7.3 Membership of the National Committees**
- 8. PRESENTATION ON TRAWL BASE PROJECT OF THE WORLD FISH CENTRE, AND ITS POSSIBLE APPLICATION TO THE FISHERIES COMPONENT**
- 9. PRESENTATION AND REVIEW OF THE OUTCOMES OF THE GIS WORKSHOP JOINTLY CONVENED BY THE PROJECT CO-ORDINATING UNIT AND SOUTHEAST ASIA START² REGIONAL CENTRE IN AUGUST 2002**
 - 9.1 Outcomes of the workshop**
 - 9.2 Questionnaires developed by the SEA START RC and workshop participants**
 - 9.3 Review of progress in the creation of national meta-databases**
- 10. REVISION OF THE WORKPLAN AND ACTIVITIES FOR THE REGIONAL WORKING GROUP ON FISHERIES**
- 11. DATE AND PLACE OF THE THIRD AND FOURTH MEETING OF THE REGIONAL WORKING GROUP ON FISHERIES**
- 12. ANY OTHER BUSINESS**
- 13. ADOPTION OF THE REPORT OF THE MEETING**
- 14. CLOSURE OF THE MEETING**

² START = the Global Change **S**ys**I**tem for **A**nalysis, **R**esearch and **I**training

ANNEX 4

Pelagic and Demersal Fish Species, Cephalopods, and Crustaceans of Transboundary Significance

Table 1 Occurrence and Ranking of the Transboundary Significance of pelagic fish species in the South China and Gulf of Thailand

Table 1a Species to be considered during the initial review

Common name	Species	Occurrence					Ranking of transboundary significance						
		Thailand	Vietnam	Cambodia	Indonesia	Philippines	Cambodia	Indonesia	Philippines	Thailand	Vietnam	Expert	Average
Narrow-barred Spanish mackerel	<i>Scomberomorus commerson</i>	X	X	X	X	X	5	5	5	5	3	4.5	4.58
Indian mackerel	<i>Rastrelliger kannagurta</i>	X	X	X	X	X	4	5	5	5	2	4.5	4.25
Frigate tuna	<i>Auxis thazard</i>	X	X	X	X	X	3	4	5	5	4	4.5	4.25
Indo-Pacific king mackerel	<i>Scomberomorus guttatus</i>	X	X	X	X	X	5	4	5	4	3	4	4.17
Short mackerel	<i>Rastrelliger brachysoma</i>	X	X	X	X	X	3	5	5	4	3	4.5	4.08
Sardinellas	<i>Sardinella spp</i>	X	X	X	X	X	4	3	4	5	3	4	3.83
Kawakawa	<i>Euthynnus affinis</i>	X	X	?	X	X		5	5	5	3	4.5	3.75
Japanese scad	<i>Decapterus maruadsi</i>	X	X	X		X	2	0	5	5	4	4.5	3.42
Longtail tuna	<i>Thunnus tonggol</i>	X	X	?	X	X		3	5	5	2	5	3.33
Anchovies	<i>Stolephorus, Encrasicholina</i>	X	X	X	X	X	4	3	4	3	3	3	3.33
Shortfin scad	<i>Decapterus macrosoma</i>	X	X	?	X	X		3	5	5	2	4	3.17
Bigeye scad	<i>Selar crumenophthalmus</i>	X	X	X	X	X	2	4	4	4	1	4	3.17
Bullet tuna	<i>Auxis rochei</i>	X	X	X		X	3	2	5	3	2	3	3.00

Table 1b The following species were not considered of to merit consideration during the initial phase

		Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Common name	Species												
Torpedo scad	<i>Megalaspis cordyla</i>	X	X	X	X	X	2	3	5	3	1	3.5	2.92
Yellow-stripe scad	<i>Selaroides leptolepis</i>	X	X	X	X	X	2	3	4	3	3	2.5	2.92
Yellowtail scad	<i>Atule mate</i>	X	X	X	X	X	2	3	4	4	1	3	2.83
Talang queenfish	<i>Scomberoides commersonnianus</i>	X	X	X	X	X	4	3	4	2	1	3	2.83
Redbelly yellowtail fusilier	<i>Caesio cuning</i>	X		X	X	X	5	4	4	1		3	2.83
Indo-Pacific sailfish	<i>Istiophorus platypterus</i>	X	X		X	X		4	5	1	3	3.5	2.75
Double-spotted queenfish	<i>Scomberoides lysan</i>	X	X	X	X	X	4	2	4	2	1	3	2.67
Dorab wolf herring	<i>Chirocentrus dorab</i>	X	X	X	X	X	2	4	3	2	2	3	2.67
Whale shark	<i>Rhincodon typus</i>	X	X	X	X	X	3	2	4	1	2	3.5	2.58
Blacktip shark	<i>Carcharhinus limbatus</i>	X		X	X	X	3	3	4	2		3	2.50
Bamboo shark	<i>Chiloscyllium spp</i>	X	X	X	X	X	4	1	4	1	2	3	2.50
Scalloped hammerhead shark	<i>Sphyrna lewini</i>	X	X	X	X	X	3	3	4		2	3	2.50
Indian scad	<i>Decapterus russelli</i>	X		?	X			4	4	3		3.5	2.42
Common dolphin fish	<i>Coryphaena hippurus</i>	X	X		X	X		3	5	1	3	2.5	2.42
Swordfish	<i>Xiphias gladius</i>	X	X	X		X	2	0	5	1	3	3.5	2.42
Skipjack tuna	<i>Katsuwonus pelamis</i>		X	?	X	X		5	5		4		2.33
Trevallies	<i>Caranx spp</i>	X	X	X	X	X	2	4		3	2	3	2.33
Spottail shark	<i>Carcharhinus sorrah</i>	X	X	X	X	X	3	2	2	1	3	3	2.33
Shrimp scad	<i>Alepes djedaba</i>	X	X	X	X	X	2	2	4	2	1	2.5	2.25
Indo-Pacific blue marlin	<i>Makaira mazara</i>	X	X			X		0	5	1	3	3.5	2.08
Black marlin	<i>Makaira indica</i>	X	X			X		0	5	1	3	3.5	2.08
Blacktip reef shark	<i>Carcharhinus melanopterus</i>	X			X	X		3	4	2		3	2.00
Chacunda gizzaard shad	<i>Anodontostoma chacunda</i>	X		X	X	X	3	2	3	1		2	1.83
Yellowfin tuna	<i>Thunnus albacares</i>		X		X	X		0	5		5		1.67
Atlantic blue marlin	<i>Makaira nigricans</i>	X				X		0	5	1		3.5	1.58
Spotted sardinella	<i>Amblygaster sirm</i>	X		?	X	?		4		2		2.5	1.42
Oceanic whitetip shark	<i>Carcharhinus longimanus</i>				X	X		4	4				1.33
Thintail thresher shark	<i>Alopias vulpinus</i>		X		X	X		2	4		2		1.33
Whitecheek shark	<i>Carcharhinus dussumieri</i>	X	X					2		1	1	3	1.17
Pelagic thresher shark	<i>Alopias pelagicus</i>		X		X	?		2	4		1		1.17

Note: Though it was decided that these species would not be considered in the initial review of species of transboundary significance, some of them, including the whale shark, are included in the list of threatened and near threatened species in Annex 5

Table 1c Species of uncertain occurrence, importance and/or difficulty of identification which are included within aggregates in Tables 1a and 1b

		Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Shorthead anchovy	<i>Encrasicholina heteroloba</i>	X		X			4	2		3		4	2.17
Commerson's anchovy	<i>Stolephorus commersoni</i>	X	X	X	X	X	3	4	4	1	4	2	3.00
Devi's anchovy	<i>Encrasicholina devisi</i>	X			X	?		1		3		3.5	1.25
Indian anchovy	<i>Stolephorus indicus</i>	X	X	X	X	X	4	3	4	3	3	3	3.33
Island mackerel	<i>Rastrelliger faughni</i>	X						1		2		2.5	0.92
Streaked seerfish	<i>Scomberomorus lineolatus</i>	X						1		4		3	1.33
Barred queenfish	<i>Scomberoides tala</i>	X						1		2		2.5	0.92
Buccaneer anchovy	<i>Encrasicholina punctifer</i>	X						1		3		4	1.33
Smooth hammerhead shark	<i>Sphyrna zygaena</i>				X			3					0.50
Whitefin wolf herring	<i>Chirocentrus nudus</i>	X						2		1		2.5	0.92
Flying fish	<i>Cypselurus spp</i>	X						1	4	1	2	2.5	1.75
Goldstripe sardinella	<i>Sardinella gibbosa</i>	X	X	X	X	X	4	3	4	5	3	4	3.83
Deepbody sardinella	<i>Sardinella brachysoma</i>			X	X	X	4	3	4				1.83
Fringescale sardinella	<i>Sardinella fimbriata</i>	X	X	X	X	X	4	3	4	3	1	2.5	2.92
White sardinella	<i>Sardinella albella</i>	X				X		2	3	2		2.5	1.58

Table 2 Occurrence and Ranking of the Transboundary Significance of demersal fish species in the South China and Gulf of Thailand

Table 2a Species to be considered during the initial review

		Occurrence					Ranking of transboundary significance						
Common names	Species	Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Greasy grouper	<i>Epinephelus tauvina</i>	X	X	X	X	X	5	4	4	2	5	3	3.83
Mangrove red snapper	<i>Lutjanus argentimaculatus</i>	X	X	X	X		5	3	4	2	4	3.5	3.58
Malabar blood snapper	<i>Lutjanus malabaricus</i>	X	X	X	X		5	5	4	2	2	3.5	3.58
Malabar grouper	<i>Epinephelus malabaricus</i>	X	X	X	X	X	5	4	4	2	3	3.5	3.58
Threadfin breams	<i>Nemipterus spp</i>			X	X	?	4	4	2	4	3	3.5	3.42
Leopard coral grouper	<i>Plectropomus leopardus</i>	X	X	X	X	X	4	4	4	2	2	3	3.17
Lizardfish	<i>Saurida spp</i>	X	X	X	X	X	4	3	2	3	3	3.5	3.08
Brownstripe red snapper	<i>Lutjanus vitta</i>	X	X	X	X		5	3	4	2	1	3	3.00
Sixbar grouper	<i>Epinephelus sexfasciatus</i>	X	X	X	X	X	5	2	4	2	2	3	3.00

Table 2b The following species were not considered of sufficiently high transboundary importance to merit consideration during the initial phase.

Common names	Species	Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Purple-spotted bigeye	<i>Priacanthus tayenus</i>	X	X	X	X	X	3	3	3	3	2	3.5	2.92
Red bigeye	<i>Priacanthus macracanthus</i>	X	X	X	X	X	3	3	3	2	3	3.5	2.92
Duskytail grouper	<i>Epinephelus bleekeri</i>	X	X	X	?	?	4	1	4	2	3	2.5	2.75
Humphead snapper	<i>Lutjanus sanguineus</i>	X	X	X	X		5	4		1	3	3	2.67
Emperor red snapper	<i>Lutjanus sebae</i>		X	X	X	X	5	4	4		2		2.50
Sharptooth jobfish	<i>Pristipomoides typus</i>		X	X	X	X	5	3	4		3		2.50
Croakers	<i>Johnius, Pennahia & Otolithes spp</i>	X	X	X	X	X	2	3	2	2	2	3	2.33
Largehead hairtail	<i>Trichiurus lepturus</i>	X	X	X	X	X	2	3	2	2	2	3	2.33
Bigeye snapper	<i>Lutjanus lutjanus</i>	X		X			5	3		3		3	2.33
Crimson jobfish	<i>Pristipomoides filamentosus</i>		X	X	X	X	5	3	4		2		2.33
Spotted coralgrouper	<i>Plectropomus maculatus</i>	X		X	X	X	3	3	4	1		3	2.33
Spotted eagle ray	<i>Aetobatus narinari</i>	X		X	X	X	2	4	4	1		2.5	2.25
Brown-marbled grouper	<i>Epinephelus fuscoguttatus</i>		X	X	X	X	4	2	4		3		2.17
Giant manta ray	<i>Manta birostris</i>		X	X		X	2	3	5		1		1.83
Blue-spotted stingray	<i>Dasyatis kuhlii</i>	X	X		X	X		2	4	1	1	2.5	1.75
Skate	<i>Raja spp</i>	X	X	?	X	X		2	4	1	1	2.5	1.75
Squaretail coralgrouper	<i>Plectropomus aereolatus</i>	X				X		2	4	1		3	1.67
Snapper species	<i>Lutjanus species for live fish trade</i>	X							5	2			1.17
Hong Kong grouper	<i>Epinepelus akaara</i>		X					0			4		0.67
Blue-spotted ribbontail ray	<i>Taeniura lymma</i>	X						0		1		2	0.50

Table 3 Occurrence and Ranking of the Transboundary Significance of cephalopod species in the South China and Gulf of Thailand

Table 3a Species to be considered during the initial review

Common name	Species	Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Needle cuttlefish	<i>Sepia aculeata</i>	X	X	X	X	X	4	3	3	3	5	3.5	3.58
Indian squid	<i>Uroteuthis (photololigo) duvauceli</i>	X	X	X		X	4	0	3	3	3	3.5	2.75
Swordtip squid	<i>Uroteuthis (photololigo) edulis</i>		X	X	X	X	4	4	3		5		2.67
Bigfin reef squid	<i>Sepioteuthis lessoniana</i>	X	X		X	X		2	3	3	3	4	2.50
Mitre squid	<i>Uroteuthis (photololigo) chinensis</i>	X	X			X		0	3	4	4	3.5	2.42
Pharaoh cuttlefish	<i>Sepia pharaonis</i>	X	X			X			3	2	4	3.5	2.08
Curvespine cuttlefish	<i>Sepia recurvirostra</i>	X	X			X			3	2	3	3	1.83
Octopus	<i>Octopus spp.</i>		X	X	X		4	3			4		1.83
Kisslip cuttlefish	<i>Sepia lycidas</i>	X	X			X			3	1	4	2.5	1.75
squid	<i>Loligo sumatrensis ?</i>	X			X	X		1	3	3		3	1.67

Table 3b The following species were not considered of sufficiently high transboundary importance to merit consideration during the initial phase.

Common name	Species	Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Spineless cuttlefish	<i>Sepiella inermis</i>	X				X			3	2		2.5	1.25
Octopus	<i>Octopus membranaceus</i>	X	X							2	3	2.5	1.25
Shortclub cuttlefish	<i>Sepia brevimana</i>	X				X			3	1		2.5	1.08
Octopus	<i>Octopus aegina</i>			X			4						0.67
Octopus	<i>Octopus macropus</i>			X			4						0.67

Table 4 Occurrence and Ranking of the Transboundary Significance of crustacean species in the South China and Gulf of Thailand

Table 4a Species to be considered during the initial review

Common name	Species	Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Scalloped spiny lobster	<i>Panulirus homarus</i>	X	X	X	X	X	5	4	5	1	4	2.5	3.58
Banana prawn	<i>Penaeus merguensis</i>	X	X	X	X	X	3	5	3	3	3	4	3.50
Giant tiger prawn	<i>Penaeus monodon</i>	X	X	X	X	X	3	4	3	2	5	4	3.50
Rock lobster	<i>Panulirus ornatus</i>	X	X	X	X	X	5	2	5	1	5	2.5	3.42
Longlegged spiny lobster	<i>Panulirus longipes</i>	X	X	X	X	X	5	3	5	1	3	2.5	3.25
Painted rock lobster	<i>Panulirus versicolor</i>	X	X	X	X	X	5	2	5	1	2	2.5	2.92
Green tiger prawn	<i>Penaeus semisulcatus</i>	X	X	X	X	X	3	3	3	3	2	3	2.83
Pronghorn spiny lobster	<i>Panulirus penicillatus</i>	X	X	X	X	X	5	1	5	1	2	2.5	2.75
Slipper lobster	<i>Thenus orientalis</i>	X	X	X	X	X	5	4		1	3	3.5	2.75
Jinga shrimp	<i>Metapenaeus affinis</i>	X	X	X	X	X	3	2	3	2	3	3	2.67
Greasyback shrimp	<i>Metapenaeus ensis</i>	X	X		X	X		2	3	2	4	3	2.33

Table 4b The following species were not considered of sufficiently high transboundary importance to merit consideration during the initial phase.

Common name	Species	Occurrence					Ranking of transboundary significance						
		Thai	Viet	Cam	Indo	Phil	Cam	Ind	Phil	Thai	Viet	Exp	Average
Western king prawn	<i>Penaeus latisulcatus</i>	X	X		X	?		3	3		2	3.5	1.92
Kuruma shrimp	<i>Penaeus japonicus</i>		X	X		X	3	0	3		3		1.50
Indian white shrimp	<i>Penaeus indicus</i>		X		X	X		2	3		2		1.17
Shrimp	<i>Metapenaeus conjunctus</i>	X				?		0	3	1		2.5	1.08
Bird shrimp	<i>Metapenaeus lysianassa</i>	X				?		0	3	1		2.5	1.08
Witch prawn	<i>Penaeus canaliculatus</i>			X		?	3	0	3				1.00
Pink prawn	<i>Metapenaeus intermedius</i>	X						0		1		2.5	0.58

ANNEX 5

Preliminary List of Threatened and Near Threatened Species for the South China Sea

Scientific name	Common name	IUCN cat. (v3.1)*
<i>Aetobatus narinari</i>	Spotted eagle ray	DD
<i>Alopias vulpinus</i>	Thin tail thresher shark	DD
<i>Anoxypristis cuspidata</i>	Knifetooth sawfish	En
<i>Atherinomorus lineatus</i>	Line silverside	Vu
<i>Butis butis</i>	Duckbill sleeper	NT
<i>Carcharhinus amblyrhynchoides</i>	Graceful shark	NT
<i>Carcharhinus amblyrhynchos</i>	Grey reef shark	NT
<i>Carcharhinus borneensis</i>	Borneo shark	En
<i>Carcharhinus brevipinna</i>	Spinner shark	NT
<i>Carcharhinus hemiodon</i>	Pondicherry shark	Vu
<i>Carcharhinus leucas</i>	Bull shark	NT
<i>Carcharhinus limbatus</i>	Blacktip shark	NT
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	NT
<i>Carcharhinus melanopterus</i>	Blacktip reef shark	NT
<i>Carcharhinus obscurus</i>	Dusky shark	NT
<i>Carcharhinus plumbeus</i>	Sandbar shark	NT
<i>Carcharias taurus</i>	Sand tiger shark	Vu
<i>Carcharodon carcharias</i>	Great white shark	Vu
<i>Cephalopholis boenak</i>	Chocolate hind	DD
<i>Cheilinus undulatus</i>	Humphead wrasse	Vu
<i>Cromileptes altivelis</i>	Humpback grouper	DD
<i>Dalatias licha</i>	Kitefin shark	DD
<i>Doryrhamphus dactyliophorus</i>	Ringed pipefish	DD
<i>Eleotris melanosoma</i>	Broadhead sleeper	NT
<i>Epinephelus lanceolatus</i>	Giant grouper	Vu
<i>Eurypegasus draconis</i>	Short dragonfish	DD
<i>Galeocerdo cuvier</i>	Tiger shark	NT
<i>Glossogobius biocellatus</i>	Sleepy goby	NT
<i>Glyphis gangeticus</i>	Ganges shark	Cr
<i>Glyphis glyphis</i>	Speartooth shark	En
<i>Hexanchus griseus</i>	Blunt-nose six-gill shark	NT
<i>Hippocampus barbouri</i>	Barbour's seahorse	Vu
<i>Hippocampus comes</i>	Tiger tail seahorse	Vu
<i>Hippocampus fuscus</i>	Sea pony	Vu
<i>Hippocampus histrix</i>	Thorny seahorse	Vu
<i>Hippocampus kuda</i>	Spotted seahorse	Vu
<i>Hippocampus mohnikei</i>	Japanese seahorse	Vu
<i>Hippocampus spinosissimus</i>	Hedgehog seahorse	Vu
<i>Hippocampus trimaculatus</i>	Longnose seahorse	Vu
<i>Isurus oxyrinchus</i>	Shortfin Mako shark	NT
<i>Lagocephalus gloveri</i>	Kuro sabafugu (Jap)	DD

Scientific name	Common name	IUCN cat. (v3.1)*
<i>Liza melinoptera</i>	Otomebora mullet	En
<i>Notorynchus cepedianus</i>	Broadnose seven-gill shark	DD
<i>Papillogobius reichei</i>	Indo-Pacific tropical sand goby	NT
<i>Pegasus laternarius</i>	Sticklebacks and seamoths	Vu
<i>Pegasus volitans</i>	Longtail seamoth	DD
<i>Prionace glauca</i>	Blue shark	NT
<i>Pristis microdon</i>	Large-tooth sawfish	En
<i>Pristis pectinata</i>	Small-tooth sawfish	En
<i>Pristis zijsron</i>	Longcomb sawfish	En
<i>Rhincodon typus</i>	Whale shark	Vu
<i>Scoliodon laticaudus</i>	Spadenose shark	NT
<i>Solegnathus hardwickii</i>	Hardwicke's pipefish	Vu
<i>Solegnathus lettiensis</i>	Gunther's pipe horse	Vu
<i>Sphoeroides pachygaster</i>	Blunthead puffer	Vu
<i>Sphyrna lewini</i>	Scalloped hammerhead	NT
<i>Sphyrna mokarran</i>	Great hammerhead	DD
<i>Sphyrna zygaena</i>	Smooth hammerhead	NT
<i>Syngnathoides biaculeatus</i>	Alligator pipefish	DD
<i>Taeniura lymma</i>	Bluespotted ribbontail ray	NT
<i>Takifugu niphobles</i>	Puffers and filefishes	DD
<i>Takifugu poecilonotus</i>	Puffers and filefishes	DD
<i>Takifugu xanthopterus</i>	Puffers and filefishes	DD
<i>Teramulus kieneri</i>	Kiener's silverside	DD
<i>Thunnus alalunga</i>	Albacore tuna	DD
<i>Thunnus obesus</i>	Big eye tuna	Vu
<i>Triaenodon obesus</i>	Whitetip reef shark	NT
<i>Urogymnus asperrimus</i>	Porcupine ray	Vu
<i>Xiphias gladius</i>	Swordfish	DD
Marine mammals		
<i>Balaenoptera borealis</i>	Coalfish whale	En
<i>Balaenoptera musculus</i>	Blue whale	En
<i>Balaenoptera physalus</i>	Finback whale	En
<i>Megaptera novaeangliae</i>	Humpback whale	Vu
<i>Orcaella brevirostris</i>	Irawaddy dolphin	DD
<i>Dugong dugon</i>	Dugong	Vu
Marine Turtles		
<i>Caretta caretta</i>	Loggerhead turtle	En
<i>Chelonia mydas</i>	Green turtle	En
<i>Dermochelys coriacea</i>	Leatherback turtle	Cr
<i>Eretmochelys imbricata</i>	Hawksbill turtle	Cr
<i>Lepidochelys olivacea</i>	Olive ridley turtle	En

*IUCN categories criteria version 3.1, 2001. Cr = critically endangered; En = endangered; Vu = vulnerable; NT = near threatened; DD = data deficient. The term "threatened" includes categories Cr, En and Vu.

Sources. For fishes, Fishbase 2000, ICLARM- The World Fish Centre

For Marine mammals and reptiles; IUCN 2002. 2002 IUCN Red List of Threatened Species.

ANNEX 6**Characteristics of Blast Detection Devices at Different Levels of Sophistication**

Feature	Event logging hydrophone	Recording hydrophone	Triple hydrophone Array	Network of triple hydrophones
Geographical information	None	Estimated range	Direction and estimated range	Accurate position fix
Sensitivity	Low (<2 km)	Medium (4-8 km)	High (50 km?)	Highest (100 km?)
Reliability	Some false positives	Post analysis can reject some false positives.	Good discrimination	Excellent discrimination
Deployment constraints	Small, easily hidden, good battery life	Small, easily hidden, reduced battery life	Large, greater power requirements.	Large, greater power requirements.
Estimated Cost (US\$)	1000	2-3000	5000	>15 000
Uses	Remote regions, estimate blast rate	Remote regions, measure blast rate	Patrol boats, tourist resorts to improve enforcement	Monitoring large areas, enable immediate response

ANNEX 7

Amended Workplan and Timetable

Workplan and Timetable for completion of agreed activities in the fisheries component: 2002 - 2003 (Revised on 11/10/02 at Second RWG-F)

Year Quarter	2002				2003			
	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
NATIONAL ACTIVITIES								
National Committee meetings (i)								
NTWG Meetings (ii)	X			X		X		X
RWG-F meetings (iii)		1		2		3		4
Provide data to RWG-F and RSTC (vi)								
Preparation of National Reports ³ (vii, xii)				D 1		FD		
Identification of spawning, nursery, feeding, and fishing grounds for transboundary stocks								
Habitat (chapter 4) of national reports (by 21 Feb 2003, for presentation at third series of habitat meetings)								
Develop criteria for ranking of protected areas (xi)								
Review threats at site level (xii)								
Review national criteria for zoning fisheries use (x)								
Review national level management regimes and legislation (ix)								
Create and maintain of National metadatabase (viii)								
Development of NAPs to Implement the SAP (xiii)								
Provide guidance to IMC on the SAP(xiv)								
Develop awareness materials for stakeholders with RWG-F.								
Prepare proposals for fishery pilot activities (xvi)								
REGIONAL COORDINATION								
Regional Criteria development for significant sites (ii)								
Assemble regional metadatabase (iv)								
Develop awareness raising materials with NFCs (v)								
Compile syntheses of national reports (vi)								
Recommend to RSTC sites for <i>refugia</i> and examples of effective management. (vii, viii)								
Promote the SEAFDEC code of conduct for fisheries(ix)								
Provide input to the RSTC for SAP (x)								

The national activities in this workplan are based on the tasks designated for the SEAs and contained in the MOU, where more detailed information is available. Roman numerals in parentheses indicate the number of the task in the MOU. Regional coordination is based on the terms of reference (TOR) for the RWG-F. Roman numerals refer to the TOR number.

³ The outline of the proposed contents of the National Reports is appended as Annex 6 to the report of the first meeting, UNEP/GEF/SCS/RWG-F.1/3.

Provisional Schedule of meetings for 2003

	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M		
January			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
			N.Y.																																			
February						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28					
						Chinese N. Y.																								RWG-LbP-3								
March						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
								RWG-M-3																							RWG-S-3							
								RWG-W-3																							RWG-C-3							
April		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30							
		RWG-F-3											Thai N.Y.							Easter																		
May				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
								RSTC-3																														
June							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
July		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
August					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
																														RWG-LbP-4								
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30								
								RWG-F-4																RWG-S-4					RWG-C-4									
October			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
			Cont.					RWG-W-4								RWG-M-4														Ramadan								
November						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
						Ramadan																																
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31							
				Regional Sci. Mtg.				RSTC-4								PSC-3										Xmas												