



United Nations  
Environment Programme



UNEP/GEF South China Sea  
Project



Global Environment  
Facility

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

**REPORT**

**Third Meeting of the Regional Working Group for  
the Coral Reef Sub-component**

***Kota Kinabalu, Malaysia, 24<sup>th</sup> – 27<sup>th</sup> March 2003***

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## **Report of the Meeting**

### **1. OPENING OF THE MEETING**

#### **1.1 Welcome address**

1.1.1 The Project Director opened the meeting on behalf of the Dr. Klaus Töpfer, Executive Director of the United Nations Environment Programme (UNEP), and Dr. Ahmed Djoghlaif, Director, Division of Global Environment Facility Co-ordination (UNEP/DGEF). He welcomed members to the meeting, and highlighted some of the achievements over the past year, including: the significant co-financing received from the Government of China. He noted that the Project Steering Committee had during its second meeting in December 2002 made a number of significant decisions including: the decision to adopt a portfolio of 24 demonstration sites by the end of the year; the decision to include the Focal Ministry and Specialised Executing Agency Logos on the Project website; and their agreement to adopt the approach and guidelines for selection of demonstration sites proposed by the Regional Scientific and Technical Committee.

1.1.2 He noted that other key decisions for the longer term included the agreement to develop a strategy for long-term sustainable financing; the approval of the processes for engaging a wider range of institutions and stakeholders in project activities and the agreement to establish two regional task forces, one composed of legal experts and one composed of environmental economists to advise the Regional Working Groups and provide a regional overview of these matters.

1.1.3 Dr. Pernetta advised the group of the importance of the work before the present meeting which sets the foundation for successful completion of the planned adoption of a regional portfolio of demonstration sites by the Project Steering Committee in December. He noted that following agreement by the Project Steering Committee of the process it was the responsibility of the Regional Working Group to finalise the detail of the selection procedures during the course of this week and thus provide guidance to the Focal Points from participating countries on priorities for the development of demonstration site proposals.

#### **1.2 Introduction of members**

1.2.1 Members were invited to introduce themselves to the meeting, and the list of participants is attached as Annex 1 to this report.

### **2. ORGANISATION OF THE MEETING**

#### **2.1 Election of Officers**

2.1.1 The Project Director noted that the Rules of Procedure state that, the Regional Working Group shall elect, from amongst the members, a Chairperson, Vice-Chairperson and Rapporteur to serve for one year. The rules state further that, officers shall be eligible for re-election no more than once. Dr. Pernetta noted that Mr. Kim Sour, Dr. Suharsono, and Dr. Porfirio Alino who have served, as Chairperson, Vice-Chairperson and Rapporteur during 2002 were therefore all eligible for re-election.

2.1.2 Members were invited to nominate members as Chairperson, Vice-Chairperson and Rapporteur for 2003. Dr. Suharsono nominated the Focal Point from Malaysia, Mr. Abdul Khalil bin Abdul Karim, as Chairperson, Mr. Khalil nominated Dr. Vo Si Tuan as Vice Chair, and Dr. Suharsono nominated Dr. Thamasak Yeemin as Rapporteur. Mr. Khalil, Dr. Tuan and Dr. Yeemin were elected by acclamation.

#### **2.2 Documents available to the meeting**

2.2.1 Mr. Khalil expressed his appreciation at being elected Chairperson, and invited the Project Director to introduce the documentation available to the meeting. Dr. Pernetta introduced the documents, available in both hard copy and on CD-ROM. He noted that the published reports of the second round of regional meetings were also made available and that all the documentation for the

meeting had been circulated by e-mail and posted on the website, in advance of the meeting. Additional documents tabled by Focal Points at the commencement of the meeting were noted and added to the list of documents (UNEP/GEF/SCS/RWG-CR.3/INF.2). The revised list of documents is attached as Annex 2 to this report.

## **2.3 Organisation of work**

2.3.1 Dr. Pernetta briefed participants on the administrative arrangements for the conduct of the meeting, and the proposed organisation of work (UNEP/GEF/SCS/RWG-CR.3/INF.3). Formal sessions of the meeting would be conducted in plenary although it was envisaged that, sessional working groups would need to be formed to complete the various reviews and analyses required under agenda item 7. A joint session will also be held together with the Regional Working Group on Seagrass to consider jointly, matters relating to the selection of demonstration sites. The meeting was to be conducted in English.

2.3.2 Dr. Ridzwan Abdul Rahman advised the group of the options available for a field trip, and also extended an invitation to the group on behalf of the Borneo Marine Research Institute to lunch or dinner at the campus at a time and date of convenience to the group. Dr. Ridzwan's kind offer was accepted with appreciation.

## **3. ADOPTION OF THE MEETING AGENDA**

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

## **4. OPENING REMARKS FROM THE FOCAL POINTS FOR CORAL REEFS FROM EACH PARTICIPATING COUNTRY**

4.1 The Chairperson invited the focal points from the Specialised Executing Agencies (SEAs) to provide a short overview of their progress subsequent to the second meeting of the RWG-CR and to highlight any additional documentation tabled at the meeting.

4.2 Dr. Yeemin briefed the group on the activities of the Thailand Coral Reef Committee since the last meeting of the Regional Working Group and informed the meeting of the progress in finalising the various outputs including the reports on: Past and Ongoing Activities; Economic Valuation; the site characterisations; Review of National Legislation; the development of the meta-database, and the report on national criteria and prioritisation of coral reef sites.

4.3 Dr. Porfirio M. Alino informed the meeting that he had convened a National Coral Reef Committee meeting in December 2002, to organise the tasks of members in relation to outputs to be completed. These included resource valuation, meta-database development, demonstration site characterisations, and the legislation review. Another meeting had been held in February 2003, where members had reviewed their progress. He referred the meeting to the report of the 4<sup>th</sup> meeting of the National Steering Committee on Coral Reefs, tabled at the meeting in which the progress was documented.

4.4 Dr. Alino also informed the group that the Philippines coral reef atlas had been recently launched, and that monitoring information on coral reefs was also available. Philippines Coral Reefs Through Time will be launched, at the ITMEMS-2 meeting in Manila. He also noted that the activities under the SCS project had been incorporated into the Philippines Integrated Marine Policy.

4.5 In reply to a question from Mr. Yihang Jiang, Dr. Alino advised that the economic valuation review was still draft, but there was some progress that will be presented at this meeting. Mr. Jiang stated that a summary of economic valuation work that has been completed for the Philippines would be very useful to the Task Force on Economic Valuation that was to be formed to review the economic valuation outputs of the SCS project.

4.6 Dr. Suharsono asked whether economic valuation work, conducted by Herman Caesar for parts of Indonesia not associated with the South China Sea, should be included in a review of the economic valuation. In response, Mr. Jiang stated that the methodology used would be very useful, and therefore should be included. Dr. Pernetta added that as economic valuation data is sparse, any available information considered useful should be included, especially where national data for the South China Sea is lacking.

4.7 Dr. Alino suggested that data from other areas outside the South China Sea can also be useful as relative benchmarks for scaling and comparison with any valuation conducted under the project. Mr. Jiang noted that economic valuation would be needed for the proposals to be prepared for sites to be selected as demonstration sites under the project. This topic would be further discussed under agenda item 8.

4.8 Mr. Kim Sour gave a brief presentation on the achievements and outputs of the Cambodian Coral reef sub-component. The Review of Past and Ongoing Activities, Natural Resources Management, Review of Social Economics of Coral Reef and Seagrass, Review of Legislation and Institutional Framework, characterisations of seven sites and the meta-database had all been completed. In response to a question from Mr. Jiang, Mr. Sour said that the Koh Kong sites surveyed in cooperation with the Singapore International Foundation were included in the seven sites for which site characterisations were provided.

4.9 During discussion Dr. Pernetta noted that to assist the PCU with filing and compiling the inventory of electronic files, it would be useful to indicate in the covering e-mail when an attached report represented a revision of a previous submission or submission of a new item. He also noted the need to ensure that the files were appropriately and consistently named.

4.10 Dr. Vo Si Tuan advised the meeting of the progress of the Viet Nam Coral Reef Committee since the last meeting. They had completed the reviews of: National Legislation; Past and Ongoing Activities; site characterisations of 9 sites, with supporting text for 5 of those sites. Other reports have also been completed on coral reef monitoring, produced under other projects. The activities on economic valuation had not yet been included in the review of past and on-going projects.

4.11 Dr. Suharsono informed the group on progress for Indonesia since the last meeting. The committee has completed characterisation for 3 sites, and the reviews of Past and Ongoing Activities, of National Legislation, a policy and strategic plan for coral reefs, and the meta-database, which has been converted from an existing meta-database prepared under the COREMAP project. They have also completed a Review of Natural and Anthropogenic Threats to Indonesia's Coral Reefs. He noted that the economic valuation has not yet been completed, as there are no data specifically relevant to the South China Sea areas of Indonesia. He noted further that the National Technical Working Group had convened a meeting of local government officials, in order to develop support for any demonstration site proposals.

4.12 Mr. Khalil advised the meeting that as Malaysia has only recently signed the MoU, they have no reports ready at this stage though they have made progress.

## **5. REPORTS FROM THE PROJECT CO-ORDINATING UNIT (PCU) REGARDING OVERALL PROGRESS TO DATE**

### **5.1 Status of end-year progress reports, expenditure reports, and budgets**

5.1.1 Mr. Jiang presented document UNEP/GEF/SCS/RWG-CR.3/4, containing a summary of the current status of budgets and reports from the Specialised Executing Agencies in the participating countries. He highlighted the difficulties of the PCU and problems consequent upon the failure of the Focal Points to meet agreed deadlines and submission dates.

5.1.2 Mr. Jiang, referred to table 1 of the document, and in particular to the number of days by which delivery of reports was overdue. He explained that the timing of the meetings is scheduled to allow sufficient time to deal with these reports in the inter-sessional period but that where delivery was delayed it conflicted with the organisation and preparation of the regional working group meetings making it difficult for the PCU to allocate the required time to correct and approve these reports and process cash advances promptly.

5.1.3 He then referred to tables 2 and 3, and explained that the blank columns regarding actual co-financing in 2002 would be completed after the six-month reports had all been received, and calculations of the time spent on committee meetings would then be used to determine the in-kind contribution of each country. In referring to table 4, which provided an estimation of the costs of outputs based on their volume, he noted that this was an audit procedure that could be used to assess the overall "value for money" but that this took no account of the amount of work involved nor of the quality which would be evaluated through the independent review process.

## **5.2 Status of planned substantive outputs from the national level activities**

5.2.1 In introducing this agenda item the Project Director noted that Annex 8 of the first meeting report (UNEP/GEF/SCS/RWG-CR.1/3) and Annex 11 of the second meeting report (UNEP/GEF/SCS/RWG-CR.2/3) detailed the outputs that were to have been prepared by the Focal Points in advance of the second and third meetings, as follows:

- |    |  |   |
|----|--|---|
| 1. | Review of past & ongoing activities:         | 1 <sup>st</sup> draft June; final draft November 2002 |
| 2. | Review of national data and information:     | Final draft December 2002                             |
| 3. | Identification & characterisation of "sites" | 1 <sup>st</sup> draft October, Final December         |
| 4. | Review National legislation                  | 1 <sup>st</sup> draft October, Final December         |

5.2.2 Dr. Pernetta noted that documentation received by the Secretariat from the Focal Points up to the end of January has been circulated by e-mail and members were requested to print and bring their own copies to the meeting. The list of reports so dispatched is contained in the appendix to document UNEP/GEF/SCS/RWG-CR.3/INF.2 and electronic copies were provided on the CD-ROM. Hard copies of the site characterisations had been provided for reference of each member during discussions under agenda item 7.

5.2.3 Dr. Pernetta then proceeded to brief members on the decisions of the Project Steering Committee regarding the implementation of the independent peer review of the country reports. He further noted that the Project Steering Committee had agreed to establish two Regional Task Forces, one for legal matters and one covering issues relating to the economic evaluation of coastal resources.

5.2.4 Dr. Suharsono stated that he was waiting for the audit report, due at the end of March, before sending in the reports for the second half of 2002. Dr. Pernetta noted that the audit report was not due until the end of March and that focal points should not delay their reports for the period July to December 2002, but submit them as soon as they were completed. He noted that if the audit report were not received prior to July 2003 then this would impact on the disbursement of the final tranche of funds for 2003. He urged focal points to submit outstanding reports as soon as possible, and if they had electronic copies with them, they could be finalised during this meeting.

5.2.5 Mr. Sour requested clarification regarding a statement in paragraph 5 of the document, for which Mr. Jiang apologised, stating that this had been included in error and referred to another sub-component.

5.2.6 In reply to a question from Dr. Alino on the implications of the cost per page estimate in the table 4, Dr. Pernetta replied that this was just a very crude indicator of "value for money", but that this was the kind of indicator an internal UN auditor might use in trying to determine whether or not the costs were reasonable.

5.2.7 Referring to paragraph 7.4.8 of the PSC 2 report, Dr. Pernetta explained the rationale for and procedures to be followed in conducting the peer review of the national reports on data and information, and past and ongoing projects, produced under the project. He also explained how the review of economic valuation, and the review of legislation, would be to be undertaken by the two regional task forces.

5.2.8 Extensive discussion followed on the review process, in particular with respect to any independent reviewer's knowledge of the context in which the reports are produced. Dr. Pernetta stated that any independent reviewers contracted would be selected on the basis of possessing sufficient expert knowledge to understand the context in which each country produced the outputs. Mr. Jiang added that the reports will be reviewed in relation to the agreed format, and to ensure that the information was reasonably comprehensive. The review will be sent back to the Focal Points for consideration and necessary actions. The review was not meant to validate the information provided but to provide the GEF and UNEP with an independent assurance of the quality of the products.

5.2.9 Dr. Ridzwan commented that the reviewers should be asked not merely to review the quality but also all aspects of the report including both quality and quantity and that the process will provide a better indication of the value for money of the outputs, than the simplistic calculation of cost per page contained in the table 4 of the document UNEP/GEF/SCS/RWG-CR.3/INF.2.

## **6. REVIEW AND EVALUATION OF COUNTRY REPORTS**

### **6.1 Past and on-going activities including economic valuation**

#### **6.2 Review of national data and information, creation of national meta-database and national inputs to the regional GIS database**

6.2.1 At the request of the Chairperson the focal points reported on both sub-agenda item 6.1 and 6.2 in a single report. He invited the focal points from the SEAs to provide a short overview of their reports following which there would be an opportunity for discussion and comments from the floor.

6.2.2 Dr. Suharsono stated that the Indonesian review of past and ongoing activities was complete, but that a report on economic valuation was not included. He noted further that as reported under a previous agenda item the national meta-database, GIS format for the site characterisations had been completed and that at a national level they had prioritised 3 sites from a national perspective as proposed demonstration sites.

6.2.3 Dr. Tuan stated that Viet Nam has 30 projects listed in their past and ongoing activities. Nine sites have been characterised and the data entered into the GIS format. In addition, further information for 2 sites, was being compiled though not enough information was available to characterise these sites. Production of the national meta-database is underway, but not complete, with about 30 metadata entries prepared to date.

6.2.4 Dr. Ridzwan noted that in the case of economic data information, on such aspects as catch per unit effort (CPUE) change for particular areas could perhaps be assessed. He noted if information on such measures could be obtained from fishermen, then it would be valuable to include this within the economic valuation in the site characterisation. Dr. Tuan said there is no information available from Viet Nam for reef fish catches from specific sites, though provincial data were available.

6.2.5 Following a general discussion on the available information on CPUE for particular sites, where it was acknowledged that some areas do have some reasonable data, Mr. Jiang commented that the data to be used for ranking should be available from all countries for reasons of comparison. Dr. Alino responded that it may not be easy because figures of a particular site are not readily available.

6.2.6 Mr. Kim Sour stated that Cambodia has prepared the Review of Past and Ongoing activities, in which they have combined all coastal zone management and coastal resource management projects. They have 2 major projects at present, the Coastal Zone Management project, and the Singapore International Foundation assisted research on biological and socio-economic surveys in Koh Kong. For the economic valuation, a review was conducted of coastal people through analysis of survey results. The national meta-database consists of 162 files, which have been submitted to the PCU this month. For the national data and information on coral reef, they are trying to relate this to each site.

6.2.7 Dr. Alino said that GIS format site characterisations for the Philippines have been submitted and are linked to a web based engine. The report on past and ongoing activities will include the review of economic valuation. Monitoring information will be also available from the web, and there will be text files that contain socio economic information, and text background to the meta-database.

6.2.8 Dr. Yeemin noted that Thailand has up-dated the list of past and ongoing activities and that in the case of economic valuation one study in a Chumporn area had been conducted. The Thai committee has 14 sites characterised in GIS format, which have been submitted to SEA-START RCU, along with about 15 meta-database forms.

6.2.9 Mr. Khalil stated that in Malaysia the collection of National Data and Information has been initiated and that a remote sensing database is available in Malaysia, but it has yet to be determined whether this is suitable for SEA-START RC.

### **6.3 Review of national legislation, institutional and administrative arrangements**

6.3.1 The Chairperson invited the Focal Points from the SEAs to provide a short overview of their reports on national legislation. Members noted the decision of the Project Steering Committee to create a Regional Task Force on legal matters and members were invited to discuss the manner in which this group might assist in finalising these reports.

6.3.2 Malaysia noted that there is an existing report on the review of national legislation, and the project provided the opportunity to update it.

6.3.3 Dr. Yeemin informed the meeting that the national legislation review for coral reefs and the institutional framework in Thailand had been submitted.

6.3.4 Dr. Alino informed the meeting that his institution has been tasked with reviewing the national marine policy and legislation, much of which is not specific enough and that the outputs of this review would constitute the basis of their report submitted under this project.

6.3.5 Kim Sour stated that all involved agencies have been included in the report of legislation from Cambodia, and that this also included international conventions.

6.3.6 Dr. Tuan stated that the previous legal review submitted by Viet Nam had been revised, and includes environmental protection, fisheries, transportation, and tourism and that the review contains information from the provincial level.

6.3.7 Dr. Suharsono noted that the review of national legislation has been submitted and that now some autonomy existed at the local level. The Indonesian committee for coral reefs was trying to determine if local sub-regulations were available. He noted that there are no specific laws on coral reef in Indonesia.

6.3.8 Dr. Pernetta said that there appeared to be some confusion about the purpose of particular tasks. The national meta-database was a part of the MoU and its compilation at the regional level would provide a basis for an overall regional review to make information available to policy and decision makers. These would then make up the regional meta-database. The regional GIS database was meant to put a lot of information into a format where it was more easily available and understood, and to make it more accessible

6.3.9 From the discussion that followed, it was clear that there was considerable confusion concerning the purpose of the various reports which were essentially all linked steps leading to the completion of demonstration site proposals. Dr. Pernetta noted that the regional GIS database was an essential decision making tool and that inputs to this from the national level were urgently required.

## **7. CHARACTERISATION OF NATIONAL CORAL REEF SITES AND THEIR REGIONAL PRIORITISATION**

7.1 The Project Director made two presentations, introducing to the meeting the principles and procedures agreed and approved by the Regional Scientific and Technical Committee and the Project Steering Committee concerning the nature of proposed demonstration sites, their description and ranking for determination of regional priorities. For the first presentation he referred to document UNEP/GEF/SCS/RSTC.2/10/Amend.1.

7.2 Dr. Pernetta explained that the development of full proposals for demonstration sites will involve considerable effort and it is unlikely that proposals can be properly developed for more than three to five sites in each country. He said that it was necessary therefore, to complete a preliminary ranking of sites during this meeting, in order to provide guidance to the national committees on those sites for which concrete proposals should be prepared by the beginning of October 2003.

7.3 Following the first presentation, a number of general questions on GEF funding and government co-financing were received from the meeting. Dr. Suharsono asked about the percentage of co-financing of demonstration sites that would be required, for example if the Indonesian Government were to co-finance a demonstration site. Dr. Pernetta informed the meeting that it was usual for co-financing to be provided on a 1 to 1 basis. However, in the case of an already existing site being selected as a demonstration site, the co-financing ratio might be considerably higher.

7.4 Dr. Ridzwan informed the meeting of an ongoing activity in developing a marine protected area in North Borneo, which, based on the information reported above would qualify as a site with co-financing. Since it had been recently gazetted as a Marine Park and plans for initial activities were being developed.

7.5 Dr. Tuan asked how one might deal with a large existing project that was broader than the present project to determine the percentage of financing that might be considered co-financing. Dr. Pernetta responded by saying that in such a case the proportion of funds allocated towards the goal of the present project could be taken as the co-financing.

7.6 In response to a query regarding what would happen when a single site was selected nationally as high priority demonstration site meeting the requirements of two sub-components. Dr. Pernetta noted that when a demonstration site is proposed for 2 different sub-components, it would be ranked independently in each sub-component at the regional level but the group might wish to include assignment of an additional score thus giving the site potentially higher ranking overall.

7.7 Dr. Pernetta then made the second presentation, introducing the meeting to the concept of cluster analysis and regional ranking. This presentation was based on document UNEP/GEF/SCS/RSTC.2/8, which was originally presented at the second meeting of the Regional Scientific and Technical Committee and the content of which had been agreed by the Project Steering Committee.

7.8 In order to demonstrate what was required of the current meeting Dr. Pernetta presented the raw data compiled at the third meeting of the mangrove group held in Bali in early March. This presentation was based on the annexes 4, 5, 6, and 7 of the meeting report, document UNEP/GEF/SCS/RWG-M.3/3, which was included in the meeting documents. He explained the rationale for removing some columns of data based on an absence of data, and also explained that columns for some of the data that were not included in the initial analysis were to be filled for the final analysis on April 7th.

7.9 Following an extensive discussion of the merits of the proposed cluster procedure Mr. Jiang presented a draft table containing the data and information from the coral reef GIS questionnaire for the participants to complete overnight. It was agreed that each of the participants would enter their site characterisation data, for consideration and analysis during the first session of the next day.

7.10 Based on the data and information assembled by the Focal Points of the Specialised Executing Agencies from the participating countries, a table containing all data and information was produced overnight, as input to the regional cluster analysis. Due to the fact that: the Focal Point for coral reefs from Indonesia did not bring the site characterisation data with him to the meeting; the general lack of site data and information in Cambodia; and the delay of implementation of the coral reef component in Malaysia, the meeting agreed to carry out the cluster analysis on 26 sites proposed by the Philippines, Thailand and Viet Nam.

7.11 The compilation of national site data resulted in a spreadsheet containing data for 10 parameters and a total of 26 sites. Gaps in the data were filled using estimates based on expert knowledge, and on the understanding that these will be corrected by the focal points when they return to their own countries. The data table assembled for the cluster analysis is attached as Annex 4 to this report.

7.12 The data table was imported into SPSS, and three cluster analyses were performed during the meeting:

- (i) Case one, no transformation;
- (ii) Case two, transformations were done for the number of hard coral species and number of coral fish species; and
- (iii) Case three, transformations were done for the number of hard coral species number of algae species and number of coral fish species;

7.13 The resultant dendrograms were printed and distributed to the participants for detailed consideration. Participants were asked to examine the dendrograms and based on their knowledge and experience, determine whether the results reflect reality and were acceptable, or whether additional analyses should be conducted using additional characters or transformations. The resultant dendrograms are included in Annex 5 of this report.

7.14 The members of the Regional Working Group felt that the analyses reflected, in general, the reality of the coral reef situation in the region, and that case three should be used in the final analysis. The group noted that the results from cases 1 and 3 were quite similar. Dr. Tuan indicated that the reason for sites 5 and 6 being less similar than the others is that these two sites are located in upwelling areas with more algae species.

7.15 Dr. Alino explained that site 15 is very diverse in terms of coral reef fish species. Therefore it was clear from the result of cluster analysis that site 15 was different from the other sites.

7.16 The meeting agreed that the approach provided a useful tool for the prioritisation and ranking process, and agreed that the same analysis should be carried out by PCU when all data and information for site characterisation were received. The meeting further agreed to a deadline, of 20 April 2003, for submission of all final data sets to the PCU. The PCU will carry out cluster analysis and perform the site ranking according to the criteria agreed by the Regional Working Group. The PCU will transmit the outcome of these analyses to the Focal Points for coral reefs in the participating countries and advise on which sites should be further developed into demonstration site proposals.

7.17 The meeting proceeded to consider the ranking of sites within the same cluster. Mr. Jiang prepared a draft table format of ranking criteria during the lunch and presented this to the meeting at the opening of the afternoon session. The meeting carefully discussed the parameters included in the ranking table, the ranges for each parameter, and the weighting scheme to be used in the ranking. The ranking criteria agreed by the Regional Working Group, are presented in Table 1 of Annex 6.

7.18 A similar procedure was adopted during the discussion and agreement of the "subjective" indicators, and their weights, which were not included in the cluster analysis. The ranking parameters and weights agreed by the Regional Working Group, are presented in Table 2 of Annex 6.

7.19 It was agreed that participants would enter their data into the tables, and these completed tables would be reviewed during the next session.

7.20 Following completion of the scoring of individual sites according to the agreed parameters and weights a preliminary ranking table was assembled in order to evaluate the criteria prepared by the Regional Working Group during their previous session in order to evaluate the outcome.

7.21 The meeting agreed that scores for the parameter of national priority should be given to only one site as the first priority in each country, one site as the second, and one as the third. The remainder of the sites should not receive any score for national priority in the ranking process.

7.22 The meeting agreed that the criteria prepared during the meeting were acceptable for ranking the demonstration sites, and should be used in the ranking and prioritisation of potential coral reef demonstration sites to be adopted by the Project. The comparative rank score for all sites included at this stage of the analysis is presented in Annex 7 of this report.

## **8. PREPARATION OF SITE SPECIFIC PROPOSALS FOR DEMONSTRATION SITES INCLUDING THE REVIEW OF THREATS AT SITE LEVEL AND IDENTIFICATION OF THE PROXIMATE AND ULTIMATE CAUSES OF DEGRADATION**

8.1 The Chairperson invited Mr. Jiang to introduce this agenda item. Mr. Jiang informed the meeting that the document prepared for this agenda item (document UNEP/GEF/SCS/RWG-CR.3/6) was in two parts: the format and guidelines for the preparation of demonstration site proposals and guidelines for the conduct of the causal chain analysis. He noted that the second part of the document had been submitted to, and approved by the RSTC and PSC during their December meetings.

8.2 The guidelines for the preparation of demonstration sites were discussed section by section. Following some questions and clarification, the Regional Working Group agreed to adopt the format and proposed guidelines in preparation of the site proposals.

### **Special Joint Session of the Regional Working Groups on Coral Reefs and Seagrass**

8.3 On the morning of 26<sup>th</sup> March a joint session between the Regional Working Groups for Coral Reefs and Seagrass was convened. The Project Director opened the special joint session, and stated that during the second round of regional working group meetings various members had expressed the desire to have such a joint session for collaboration and discussion of issues of mutual interest. He noted that the programme for the session was flexible and that the purpose was to share experiences between the two groups and to perhaps discuss the overlap in coverage of site characterisations at the national level and implications for the choice of demonstration sites. In particular, the group might wish to discuss how to handle sites that contain multiple habitats, and how these should be developed with regard to the agreed site selection process.

8.4 Following this, Dr. Pernetta invited, Dr. Miquel Fortes and Mr. Abdul Khalil, the Chairs of the Regional Working Groups for seagrass and coral reefs respectively to co-chair the session.

8.5 Dr. Fortes and Mr. Khalil assumed the joint chair and following a brief round of introductions Dr. Fortes invited participants to identify issues for discussion and opened the floor for any suggestions or proposals that members felt required joint discussion. He noted that, it would be useful for the group to hear an overview of the experiences of the coral reefs working group with the application of the cluster analysis and perhaps hear from the secretariat regarding the outcome of the joint mangrove wetlands discussions. It was agreed that any additional issues would be dealt with, if and when, they arose. During discussion it was noted that the RWG-Cr had given primary importance to indicators of biological diversity, rather than to connectivity of habitats although allowance was made in the ranking scheme for including scores reflecting the diversity of habitats at a particular site.

8.6 Dr. Alino suggested that transboundary sites, as well as sites that covered more than one habitat should be discussed and Dr. Fortes asked what criteria the coral reef group had identified as indicators of regional priority. In the ensuing discussion, the SSME area, Philippines/Sabah area, and an area around Batam adjoining Singapore, Malaysia, and Indonesia were mentioned as examples of transboundary areas that may be considered for development of demonstration proposals. It was also noted that seagrass and coral reefs often occupy adjacent areas, and that there would be advantages in

having sites covering both habitats. Dr. Huang mentioned that the 2 habitat types are very different in terms of appropriate management regimes, and that it was too early to discuss the connectivity between these two habitat types in the case of China.

8.7 The Batam area connecting Malaysia, Indonesia, and Singapore was noted as having important stocks of globally threatened species including dugong, and turtles and that these animals were dependent on the seagrass beds in the area.

8.8 Dr. Tuan suggested not to separate biodiversity, connectivity, management, and other parameters in order to meet the objectives of the project. Dr. Hutomo noted that as this was a GEF project, biodiversity needed to be given prominence amongst the criteria for site selection. A number of countries indicated that they were looking at sites common to two or more habitats.

8.9 Dr. Pernetta noted that it was the role of the National Technical Focal Point and National Technical Working Group to ensure coordination between national activities in each component and sub-component of the project, so that confusion and conflicts do not arise. Dr. Pernetta reminded the participants as to how the choice of habitats had been decided, noting that the Transboundary Diagnostic Analysis had concluded that mangroves were the most threatened habitat bordering the South China Sea whilst the biological and socio-economic importance of seagrass habitats were least understood.

8.10 He noted that although the site characterisation process was focussed on individual habitats, once a decision had been taken to develop a demonstration site proposal this should be based on a functional management unit that would reflect administrative boundaries since it should involve directly both the local communities and local government in developing the proposal and managing the site. Consequently it would be necessary to develop an overall management framework that took account of all habitats within the area to be managed.

8.11 Dr. Fortes enquired about the transboundary area between the Philippines and Sabah that had been mentioned earlier. This prompted Dr. Ridzwan to present an overview of the North Borneo Islands Marine Managed Area (NBIMMA) that had been recently gazetted as a marine park by the Sabah government. Dr. Pernetta sought clarification regarding the status of the boundary between the two EEZ's and for clarification regarding management initiatives on the Philippines side of the boundary. It was the consensus of participants that this particular boundary was accepted by both parties, and was not a matter for dispute. The Philippines participants noted that although they had originally intended to include this area amongst their sites it had not been included to date due to the security concern.

8.12 Mr. Kamarrudin then showed some slides of satellite tracking studies of turtle migration from Redang Island in West Malaysia to the area around the NBIMMA, 2000km in 36 days from Thailand to Sulu Sea. Professor Ridzwan concluded that potentially this would be a valuable site, which if adopted in the framework of the project could focus initially on management activities in the Malaysian areas that might serve as a platform for development of Philippines activities and then joint management.

8.13 Dr. Tuan asked if anybody in the group had any experience in transboundary management of sites. Mr. Khalil noted that the Turtle Islands Heritage Protected Area represented such a joint programme designed to manage turtles and had demonstrated the transboundary importance of national management of some resources and habitats.

8.14 Dr. Pernetta stated that he was not aware of any transboundary ecosystem that was managed through a single management mechanism but that the normal mode was for each country to manage the area under their own jurisdiction and then to include some bilateral mechanism for joint discussion and agreement of individual actions and priorities.

8.15 Dr. Fortes, informed the meeting of several transboundary management examples of which he was aware, including the Antarctic treaty; a bilateral agreement on joint management of disputed islands between Russia and Japan; and the joint management programme between the Philippines and Indonesia for yellowfin tuna stocks. Dr. Ridzwan informed the meeting of joint arrangements that

permitted the sale of a limited number of turtle eggs in Malaysia harvested on the Philippines side of this area under a joint agreement that included arrangements for setting quotas.

8.16 Dr. Tuan mentioned an area nearby Cambodia that Viet Nam was proposing, which would have obvious transboundary significance, whilst Mr. Sour mentioned the Koh Kong sites, where Cambodia is considering a joint site including both habitats, which would have transboundary significance with Thailand. They had also considered Kampot and Kep sites close to Viet Nam that might be selected and the following discussion suggested that a joint proposal could be developed including both Viet Nam and Cambodia. In response to a query from Dr. Tuan, Dr. Pernetta advised that a proposal for a transboundary demonstration site from two countries would be looked upon very favourably.

8.17 Dr. Pernetta noted the urgent need for simple national maps indicating the site locations, in order to determine if sites are in or outside of the SCS and the possibilities for aggregating proposals.

8.18 Professor Huang indicated that there was a seagrass area in China close to Viet Nam that is very important for turtles and dugongs.

8.19 Prof. Chou pointed out that consideration could be given to a site that did not transcend national boundaries but play an important role in connectivity to the region or harbours biological diversity of regional or global significance (possible example is the Natunas).

8.20 Dr. Fortes sought clarification as to how funds would be disbursed where a site encompassed two habitats or was a transboundary site. Dr. Pernetta noted that there were no hard and fast rules or any decisions regarding the magnitude of funds, which should be dispersed to individual sites. He noted that expensive sites would be disadvantaged given the limited budget but that this should not result in proponents cutting the budgets to unrealistically low levels. In the case of transboundary sites he suggested that it would be simpler to disburse money to a single entity in each country rather than attempting to establish joint funds.

8.21 In response to a question on how funds would be disbursed if a site were across 2 habitats managed by different Government Departments, Dr. Pernetta said that UNEP would prefer to disburse funds to a single entity, which would then be responsible for sub-contracting appropriate stakeholders according to the activities envisaged and the contributions of each set of stakeholders.

8.22 A question was raised regarding the required co-financing ratio, and how to approach government to ask for co financing. In response Dr. Pernetta stated that the minimum level of cash co-financing would be one to one but that the overall co-financing ratio should be higher since there was the additional in-Kind contribution reflected in the proportion of the governments regular budgets that were applied to the envisaged activities.

8.23 There being no further issues raised by the participants, Dr. Fortes and Mr. Khalil thanked the participants for their useful contributions to the discussions and the session was concluded at 1145 on 26<sup>th</sup> March.

## **9. REVISION OF THE WORKPLAN AND ACTIVITIES FOR THE REGIONAL WORKING GROUP ON CORAL REEFS**

9.1 The meeting reviewed the workplan agreed by the Regional Working Group during the previous two meetings, and discussed and agreed on a revised workplan for the Regional Working Group, which is presented in the following table.

Table 1 Details of Tasks and activities and their associated deadlines

Tasks	Deadline	
		Malaysia
<b>Review of past &amp; ongoing project including Economic valuation</b>	7-April	15-May
<i>independent review</i>	25-May	
<i>finalisation</i>	30-July	
Review of national data & info.	15-April	15-May
<i>input to GIS database</i>	15-May	
Creation of National meta-database	30-May	
Identification and characterisation of sites	20-Apr	
National criteria & Priorities	30-Apr	
	30-Apr	
Review National legislation	30-April	15-May
<i>review by the Regional Task Forces</i>	mid 2003	
Site data		
<i>submit data</i>	20-Apr	a.s.a.p.
<i>Cluster analysis</i>	5-May	a.s.a.p.
<i>feedback to SEAs</i>	5-May	a.s.a.p.
Demonstration site proposal		
<i>first draft</i>	1-Sep	
<i>final draft</i>	1-Oct	

9.2 It was suggested by Dr. Suharsono, and agreed by the meeting that the review of economic valuation should be part of the review of past and on-going projects. The meeting further agreed the deadline for submission of the final version to the PSC as being 7<sup>th</sup> April and agreed that there would be a clear indication in the file name of the date the document was prepared to avoid confusion with earlier versions.

9.3 The meeting recognised that in order to finalise the regional ranking and prioritisation process, it would be essential that the focal point for Coral Reefs from Malaysia catch up with the other countries in the process. Respective deadlines were discussed and agreed by the Regional Working Group.

## 10. DATE AND PLACE OF THE FOURTH MEETING OF THE REGIONAL WORKING GROUP ON CORAL REEFS

10.1 The meeting recalled its decision during the second meeting of the Regional Working Group, which decided that the Fourth Meeting would be organised in the Philippines. Taking into consideration the proposed dates for the meeting and the fact that the next meeting should be organised in one of the proposed demonstration sites in the Philippines, the meeting agreed to hold the Fourth Meeting on the dates proposed, namely, 29 September – 2 October 2003. The venue will be decided by the Focal Point for the Coral Reef sub-component in the Philippines, in consultation with PCU. The revised schedule of meetings for 2003 is attached as Annex 8 to this report.

10.2 The meeting considered the conflict of dates between the Regional Science Conference and Fourth Meeting of the Regional Scientific and Technical Committee of the project, and the East Asian Seas Congress, being organised by PEMSEA. It was noted that most members have not received information regarding the Congress, and that there is no commitment by members at this moment to attend the Congress. The meeting requested the Project Director to take the necessary action to avoid the conflict if at all possible.

## **11. ANY OTHER BUSINESS**

11.1 Dr. Tuan commented that in order to prepare the necessary inputs for the Regional Science Conference from the coral reef sub-component, it would be appropriate that earlier action be taken by, the Regional Working Group.

11.2 The meeting agreed to the suggestion made by Dr. Tuan, and agreed to discuss this matter through an e-discussion group. The meeting further agreed that Dr. Tuan will take the lead in this e-discussion, with assistance from the PCU member of the Regional Working Group.

## **12. ADOPTION OF THE REPORT OF THE MEETING**

12.1 The report was presented to the meeting by the Rapporteur, and considered, amended and approved by the Regional Working Group as it appears in this document.

## **13. CLOSURE OF THE MEETING**

13.1 The members of the Regional Working Group expressed their gratitude to Dr. Ridzwan and Mr. Khalil for their generous hosting of the meeting and organisation of the field trip for the Regional Working Group during the meeting.

13.2 The members also thanked the Chairperson of the Regional Working Group for his excellent leadership that had ensured the success of the meeting.

13.3 The chairperson thanked all members for their hard work during the meeting, and expressed the hope that all member will visit this dty again. The meeting was closed by, the Chairperson at 13:30, 27 March 2003.

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## ANNEX 2

### List of Documents

#### Discussion documents

UNEP/GEF/SCS/RWG-CR.3/1	Provisional agenda
UNEP/GEF/SCS/RWG-CR.3/2	Provisional annotated agenda
UNEP/GEF/SCS/RWG-CR.3/3	Draft report of the meeting (to be prepared during the meeting)
UNEP/GEF/SCS/RWG-CR.3/4	Current status of budgets and reports from the Specialised Executing Agencies in the participating countries.
UNEP/GEF/SCS/RWG-CR.3/5	Preliminary Coral Reef site characterisations for consideration during the 3 <sup>rd</sup> meeting of the Regional Working Group for Coral Reefs.
UNEP/GEF/SCS/RWG-CR.3/6	Guidelines for the preparation of demonstration site proposals and format for use in their presentation.
UNEP/GEF/SCS/RWG-CR.3/7	Schedule of meetings and current workplan for the Regional Working Group on Coral Reefs.
CD-ROM	National reports and site characterisations for Coral Reefs and Seagrass (see the Appendix 1 for the list of Coral Reef related reports).
UNEP/GEF/SCS/RSTC.2/8	Draft proposal for regional criteria and procedures to be used in ranking and selecting demonstration sites in the framework of the UNEP/GEF Project entitled: <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand."</i>
UNEP/GEF/SCS/RSTC.2/10/Amend.1	Guidance to the PSC on the nature and types of potential demonstration sites to be established within the Framework of the UNEP/GEF Project

#### Information documents

UNEP/GEF/SCS/RWG-M.3/INF.1	Provisional list of participants
UNEP/GEF/SCS/RWG-M.3/INF.2	Provisional list of documents (this document)
UNEP/GEF/SCS/RWG-M.3/INF.3	Draft programme

#### ***The following documents are supplied on CD-ROM and in hard copies.***

UNEP/GEF/SCS/RWG-M.2/3	Second Meeting of the Regional Working Group on the Mangrove Sub-component for the UNEP/GEF Project <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> . Report of the meeting. UNEP/GEF/SCS/RWG-M.2/3 Ho Chi Minh City, Viet Nam, 10 - 13 September 2002.
UNEP/GEF/SCS/RWG-W.2/3	Second Meeting of the Regional Working Group on the Wetland Sub-component for the UNEP/GEF Project <i>"Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand"</i> . Report of the meeting. UNEP/GEF/SCS/RWG-W.2/3 Shenzhen, China, 4 - 7 September 2002.

UNEP/GEF/SCS/RWG-LbP.2/3	Second Meeting of the Regional Working Group on the Land-based Pollution Component for the UNEP/GEF Project <i>“Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”</i> . Report of the meeting. UNEP/GEF/SCS/RWG-LbP.2/3 Batam, Indonesia, 18 - 21 September 2002.
UNEP/GEF/SCS/RWG-F.2/3	Second Meeting of the Regional Working Group on the Fisheries Component for the UNEP/GEF Project <i>“Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”</i> . Report of the meeting. UNEP/GEF/SCS/RWG-F.2/3 Phuket, Thailand, 7 - 11 October 2002.
UNEP/GEF/SCS/RWG-CR.2/3	Second Meeting of the Regional Working Group on the Coral Reef Sub-component for the UNEP/GEF Project <i>“Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”</i> . Report of the meeting. UNEP/GEF/SCS/RWG-CR.2/3 Sihanoukville, Cambodia, 23 - 26 October 2002.
UNEP/GEF/SCS/RWG-SG.2/3	Second Meeting of the Regional Working Group on the Seagrass Sub-component for the UNEP/GEF Project <i>“Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”</i> . Report of the meeting. UNEP/GEF/SCS/RWG-SG.2/3 Hue, Viet Nam, 28 - 31 October 2002.
UNEP/GEF/SCS/RSTC.2/3	Second 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> . Report of the meeting. UNEP/GEF/SCS/RSTC.2/3 Nha Trang, Viet Nam, 11 - 13 December 2002.
UNEP/GEF/SCS/PSC.2/3	Second 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> . Report of the meeting. UNEP/GEF/SCS/PSC.2/3 Hanoi, Viet Nam, 16 - 18 December 2002.

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**Appendix 1**

**List of Substantive Reports Relating to the Coral Reef Sub-Component,  
Received by the Project Co-ordinating Unit as of March 12, 2003.  
Supplied to the Third Meeting of the Regional Working Group on Coral Reefs,  
as pdf files on CD-ROM**

**Cambodia****Reports**

1. Overview of On-Going Projects related to coral reef and seagrass in Cambodia (First Draft Report), 7pp.
2. Draft Report on Past and On-going Activities on Coral Reefs in Cambodia, 2pp.
3. Review of environmental legislation (draft), 4pp.
4. Table of Legal framework related to sea grass and coral reef management in Cambodia, 9pp.
5. Natural Resource Management in the Cambodia Coastal lines: Socio-economic of coral reef and seagrass, 24pp.

**Site Characterisations**

- Koh Sdach group, 9pp.
- Koh Rong, 9pp.
- Koh Takiev Group, 9pp.
- Koh Tang Group, 9pp.
- Koh Tunsay Group, 9pp.

**Reports tabled during the meeting**

1. Ministry of Agriculture, Forestry and Fisheries, Department of Fisheries: Natural Resource Management in Cambodia: Legal and Institutional Framework Coral Reef and Seagrass Component, January 2003, 39pp.
2. Natural Resource Management in the Cambodia Coastline: Socio-economic of Coral Reef and Seagrass, 18pp.
3. Review of the Past and On-going Activities of Coral Reef and Seagrass in Cambodia, 15pp.
4. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: SHVCR2 (Kok Takiev Group), 11pp.
5. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: SHVCR3 (Koh Tang Group), 9pp.
6. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: SHVCR1 (Group of Islands), 11pp.
7. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: KAMCRI1 (Kampot province), 9pp.
8. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: KEPCR (Kok tunsay Groups), 11pp.
9. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: KKCR2 (Kok Sdach Group), 10pp.
10. The Revised Questionnaire for the Survey of Data and Information of Coral Sites: KKCRI1 (Kok Kong), 9pp.

**Indonesia****Reports**

1. The Past and On Going Projects, 14pp.
2. Review National Legislation, 27pp.

**Site Characterisation**

- Identification And Characterisation Of Site (There Is No Site Data According To The Format Agreed), 36pp.

#### **Reports tabled during the meeting**

1. Review of Past On Going Project, 14pp.
2. Natural and Anthropogenic Threats to Western Indonesia's Coral Reefs, 17pp.
3. Identification and Characterization of Site, 35pp.
4. Review National Legislation, 26pp.
5. Policy and Strategies Management Plans of Coral Reefs in Indonesia, 37pp.
6. Metadata for the South China Sea Project, 141pp.

#### **Malaysia**

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#### **Philippines**

##### **Reports**

1. Coral Reef Points Facing The South China Sea Culled From Reefbase, 4pp.
2. Review of National Legislation in the Philippines, 22pp.
3. Site description - Bolinao, 4pp.
4. Site description - Batong Ungot, 3pp.
5. Site description - Batangas-Maricaban, 7pp.
6. Site description - Puerto Galera, 4pp.
7. Site description - Telbang, 4pp.

##### **Site Characterisations**

- Status of available data and information for Palawan Province (El Nido and other areas), Philippines, 23pp.
- Status of available data and information for Lingayen Gulf, Philippines, 12pp.
- Status of available data and information for Puerto Galera, Philippines, 16pp.
- Status of available data and information for Zambales, Philippines, 20pp.

#### **Reports tabled during the meeting**

Report of National Steering Committee on Coral Reefs 4th Meeting and Workshop

#### **Thailand**

##### **Reports**

1. Review of National Data and Information: Coral Reef: Thailand, 23pp.
2. Review of Past and Ongoing Projects: *Coral Reefs Thailand*, 29pp.
3. Review of National Legislation *Coral Reefs*: Thailand, 33pp.
4. Review of National Criteria and Priorities: Coral Reefs: Thailand, 23pp.
5. Review of National Level Management Regimes *Coral Reefs* Thailand, 25pp.
6. Meta database - Sexual Reproduction of a Scleractinian Coral, *Acropora hyacinthus*, in the Gulf of Thailand, 3pp.
7. Meta database - Department of Marine and Coastal Resources, 3pp.
8. Meta database - Department of Marine and Coastal Resources, 3pp.
9. Meta database - Natural Recovery of Coral Communities in Tourism Areas of Koh Tao Group, Surat Thani Province, 3pp.
10. Meta database - Map of Coral Reefs in Thai Waters, 3pp.
11. Meta database - Natural Recovery of Coral Communities in Tourism Areas of Koh Tao Group, Surat Thani Province, 3pp.
12. Meta database - Community Structure and Biological Diversity of Scleractinian Coral at Koh Ram Ra, Prachuab Khiri Khan Province, 3pp.
13. Meta database - Recruitment of Scleractinian Corals in the Gulf of Thailand, 3pp.
14. Meta database - Monitoring, 3pp.
15. Meta database - Reproduction of a Sponge, *Petrosia* sp., 3pp.
16. Meta database - Reproduction of Soft Coral, 3pp.
17. Meta database - (Suraphol), 3pp.
18. Meta database - MANTHA, 3pp.
19. Meta database - Dive Sites in Thailand, 3pp.

**Site Characterisations**

- Srichang Group (Chonburi Province), 13pp.
- Sattaheep and Samaeasrn Group (Chonburi Province), 13pp.
- Lan and Phai Group (Chonburi Province), 13pp.
- Samet Group (Rayong Province), 13pp.
- Chao Lao (Chanthaburi Province), 13pp.
- Koh Chang, Kud and Mark (Trad Province), 13pp.
- Prachaub Khiri Khan Group (Prachaub Khiri Khan Province), 13pp.
- Chumporn Group (Chumporn Province), 3pp.
- Ang Thong Group (Surat Thani Province), 3pp.
- Samui and Phangan Group (Surat Thani Province), 3pp.
- Tao Group (Surat Thani Province), 3pp.
- Koh Nhu and Maew (Song Khla Province), 3pp.
- Koh Kra (Nakorn Srithamarat Province), 3pp.
- Koh Losin (Narathiwat Province), 13pp.

**Reports tabled during the meeting**

1. Review of National Criteria and Priorities: *Coral Reefs: Thailand*, 20pp.
2. *Metadata: Coral Reefs, Thailand*, 37pp.
3. Review of National Level Management Regimes *Coral Reefs*, Thailand, 20pp.
4. Review of National Legislation *Coral Reefs: Thailand*, 32pp.
5. Review of Past and Ongoing Projects: *Coral Reefs: Thailand*, 26pp.
6. Review of National Economic Valuation *Coral Reefs: Thailand*, 7pp.
7. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites, 21pp.

**Viet Nam****Reports**

1. Review on Legal and Institutional Concerning to Coral Reef Protection in Vietnam, 6pp.
2. Draft Report of identification and Characterization of Coral Reefs in Con Dao Islands, 13pp.
3. Draft Report of identification and Characterization of Coral Reefs in Nha Trang Bay, 15pp.

**Site Characterisations**

- Con Dao Islands, 18pp.
- Hon Mun Marine Protected Area, 18pp.

**Reports tabled during the meeting**

1. Review of National Information, 7pp.
2. Past and Ongoing Projects concerning with Coral Reef in Vietnam, 5pp.
3. Review on Legislation and Institutional Framework concerning to Coral Reef Management in Vietnam, 10pp.
4. Description and Characterization of Coral Reefs of Cu Lao Cham Islands, Quang Nam Province, 12pp.
5. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Cu Lao Cham Islands, Quang Nam Province, 11pp.
6. Description and Characterization of Coral reefs of Nha Trang Bay, Khanh Hoa Province, 17pp.
7. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Nha Trang Bay, Khanh Hoa Province, 12pp.
8. Identification and Characterization of Coral Reefs of Con Dao Islands, Ba Ria – Vung Tau Province, 14pp.
9. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Con Dao Islands, Ba Ria – Vung Tau Province, 13pp.
10. Description and Characterization of Coral Reefs of Phu Quoc Islands, Kien Giang Province, 14pp.

11. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Phu Quoc Islands, Kien Giang Province, 12pp.
12. Description and Characterization of Coral Reefs of Ninh Hai District, Ninh Thuan Province, 13pp.
13. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Vihn Hai – Nhon Hai Communes, Ninh Thuan Province, 12pp.
14. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Ca Na Bay, Binh Thuan Province, 11pp.
15. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Halong – Catba, Quang Ninh Province and Hai Phong City, 13pp.
16. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Haivan – Soncha, Thua Thien Hue Province, 13pp.
17. The Revised Questionnaire for the Survey of Data and Information of Coral Reef Sites: Bach Long Vi, Hai Phong City, 12pp.

## **ANNEX 3**

### **Agenda**

- 1. OPENING OF THE MEETING**
  - 1.1 Welcome address**
  - 1.2 Introduction of members**
- 2. ORGANISATION OF THE MEETING**
  - 2.1 Election of Officers**
  - 2.2 Documents available to the meeting**
  - 2.3 Organisation of work**
- 3. ADOPTION OF THE MEETING AGENDA**
- 4. OPENING REMARKS FROM THE FOCAL POINTS FOR CORAL REEFS FROM EACH PARTICIPATING COUNTRY**
- 5. REPORTS FROM THE PROJECT CO-ORDINATING UNIT (PCU) REGARDING OVERALL PROGRESS TO DATE**
  - 5.1 Status of end-year progress reports, expenditure reports, and budgets**
  - 5.2 Status of planned substantive outputs from the national level activities**
- 6. REVIEW AND EVALUATION OF COUNTRY REPORTS**
  - 6.1 Past and on-going activities including economic valuation**
  - 6.2 Review of national data and information, creation of national meta-database and national inputs to the regional GIS database**
  - 6.3 Review of national legislation, institutional and administrative arrangements**
- 7. CHARACTERISATION OF NATIONAL CORAL REEF SITES AND THEIR REGIONAL PRIORITISATION**
- 8. PREPARATION OF SITE SPECIFIC PROPOSALS FOR DEMONSTRATION SITES INCLUDING THE REVIEW OF THREATS AT SITE LEVEL AND IDENTIFICATION OF THE PROXIMATE AND ULTIMATE CAUSES OF DEGRADATION**
- 9. REVISION OF THE WORKPLAN AND ACTIVITIES FOR THE REGIONAL WORKING GROUP ON CORAL REEFS**
- 10. DATE AND PLACE OF THE FOURTH MEETING OF THE REGIONAL WORKING GROUP ON CORAL REEFS**
- 11. ANY OTHER BUSINESS**
- 12. ADOPTION OF THE REPORT OF THE MEETING**
- 13. CLOSURE OF THE MEETING**

## **ANNEX 4**

### **Tabulation of Raw Data Relating to Identified Coral Reef Sites Bordering the South China Sea**

#### **Background**

Focal Points in the Specialised Executing Agencies were requested to assemble data and information relating to coral reef sites bordering the South China Sea in GIS format and/or using the agreed lists of data and information requirements developed during the first two Regional Working Group meetings. These were brought to the third meeting of the Regional Working Group for use in the preliminary cluster analysis and these data are presented in Table 1.

#### **Review of the data**

It was recognised that :

- (i) there were very limited data available from Cambodia; and
- (ii) the data from Indonesia and Malaysia were not available to the meeting.

The meeting agreed to use the coral reef data from the Philippines, Thailand and Vietnam for the preliminary cluster analysis.

In reviewing the data it became apparent that certain parameters which had originally been identified as being critical to site characterisation were in fact not readily available. For instance there were very limited data on the number of polychaete genera and species available. These parameters were not used in the subsequent analyses and are shaded in grey in Table 1.

#### **Transformations and estimations of data**

In the case of columns in Table 1, where less than 50% of the cells contained real data it was decided to eliminate these parameters from further consideration at this stage. Therefore the parameters relating to numbers of soft coral genera and species, number of crustacean genera, number of crustacean species number of echinoderm genera and species, echinoderm density, coral reef fish density, and number of mammal species, were eliminated from further consideration. The data used for the preliminary cluster analysis are shown in Table 2. The shaded cells contain estimated values based on the expert opinion of the group.

Table 1 Raw data compiled from site characterisations and GIS questionnaires for coral reef sites bordering the South China Sea

Site Name	Hard coral Genera	Hard coral Spp.	Soft Coral Genera	Soft Coral Spp.	live coral cover (%)	change in live coral cover	no.of algae genera	no of algae spp.	Number of crustacean genera	Number of crustacean Spp.	Number of echinoderm genera	Number of echinoderm species	Echinoderm density	Number of polychaete genera	Number of polychaete species	Number of coral reef fish genera	Number of coral reef fish species	Coral reef fish density	Number of mammal species	Number of endangered and threatened species
<b>Viet Nam</b>																				
Cu Lao Cham	39	131	1	2	33.9	-1.9	122	61	52	84	1	4	0			76	178	485		4
Nha Trang bay	64	351	5	24	26.4	-21.2	35	55	34	69	20	27	91.3	164	339	102	222	576	3	7
Con Dao	50	147	1	4	23.3	-31.3	44	84	69	110	37	44	20.6	84	125	80	202	502	2	8
Phu Quoc	37	89	1	19	42.2	-3.3	51	98	4	9	23	32	396			60	135	1,495	2	8
Ninh Hai	49	197			36.9		86	190	19	24	8	13	7.3	19	22	81	147	740		6
Ca Na bay	48	134	6	28	40.5		57	163	23	46	24	26		25	44	87	211	346		3
Ha Long - Cat Ba	48	170	21	33	43	-7.1	51	94	20	25	4	7		34	45	27	34	330/ha	2	4
Hai Van - Son Tra	49	129	5	5	50.5	1	41	103	50	60	12	12	0.3/m2	24	33	62	132			4
Bach Long Vi	31	99			21.7	-35	28	46	14	16	6	8		6	6	31	46			2
<b>Philippines</b>																				
Batanes, Basco	tbd				37.00		tbd	47								50	86	5,930-17,240	1	
Bolinao/Lingayen Gulf		250			15-40	-20.00	tbd	tbd			tbd					126	328	420-9,000		
Masinloc, Zambales	tbd				29-33	0.00	tbd	tbd								97	249	1,560-13,680	2	
Batangas bay/Maricaban	tbd	~ 300			32-48	0.10	tbd	tbd								85	155	2,680-68,450	3	
Puerto Galera, Mindoro	tbd	~ 300			14-33	0.00	tbd	tbd								122	333	2,981-65,906		
El Nido, Palawan	tbd	~ 250			16-40	-20.00	tbd	tbd								169	480	480-171,012	4	

Table 1 continued.

[illegible]

Table 2 Untransformed data set, for coral reef sites, selected for cluster analysis, including estimates for missing data, shaded cells.

	Site Name	Hard coral Genera	Hard coral species	live coral cover (%)	change in live coral cover	no.of algae genera	no of algae spe.	Number of coral reef fish genera	Number of coral reef fish species	Number of mammal species	Number of endangered and threatened species
1	Cu Lao Cham	39	131	33.9	-1.9	61	122	76	178	1	4
2	Nha Trang bay	64	351	26.4	-21.2	35	55	102	222	3	7
3	Con Dao	50	147	23.3	-31.3	44	84	80	202	2	8
4	Phu Quoc	37	89	42.2	-3.3	51	98	60	135	2	8
5	Ninh Hai	49	197	36.9	0	86	190	81	147	2	6
6	Ca Na bay	48	134	40.5	-10	57	163	87	211	1	3
7	Ha Long - Cat Ba	48	170	43	-7.1	51	94	27	34	2	4
8	Hai Van - Son Tra	49	129	50.5	1	41	103	62	132	0	4
9	Bach Long Vi	31	99	21.7	-35	28	46	31	46	2	2
10	Batanes, Basco	40	200	37.00	0.00	20	47	50	86	1	1
11	Bolinao/Lingayen Gulf	45	250	40.00	-20.00	30	70	126	328	1	2
12	Masinloc, Zambales	40	225	33.00	0.00	30	60	97	249	2	2
13	Batangas bay/Maricaban	50	300	48.00	10.00	35	70	85	155	3	3
14	Puerto Galera, Mindoro	50	300	33.00	0.00	35	80	122	333	3	3
15	El Nido, Palawan	45	250	40.00	-20.00	40	80	169	480	4	4
16	Mu Koh Chumporn	31	93	55	0	10	20	53	81	5	4
17	Mu Koh Chang	39	63	40	2	36	43	60	113	5	8
18	Mu Koh Ang Thong	38	70	50	-5	7	7	62	106	6	4
19	Mu Koh Samui	37	70	40	-5	7	7	62	106	6	9
20	Mu Koh Samet	20	41	35	-10	33	38	51	74	6	10
21	Sichang Group	38	90	40	0	33	40	41	86	3	4
22	Sattaheep Group	38	90	33	0	33	40	44	75	3	4
23	Lan and Phai Group	20	72	18	-5	33	40	44	75	3	4
24	Chao Lao	25	60	30	0	28	33	40	70	3	4
25	Prachuab	35	74	50	-5	15	18	78	162	5	7
26	Koh Tao Group	38	79	45	-10	7	7	62	106	7	6

## **ANNEX 5**

### **Dendrograms Resulting from the Preliminary Cluster Analyses Conducted During the Third Meeting of the Regional Working Group on Coral Reefs**

#### **Introduction**

The purpose of the cluster analysis is to group sites on the basis of their similarities, thus enabling selection of demonstration sites from different groups and hence encompassing as wide a range of conditions as possible within the final selection of demonstration sites, subject to limitations of available opportunities and financial resources.

#### **Results**

Table 2 of Annex 4 presents the data selected for inclusion in the preliminary analyses. The cluster programme from the SPSS package was utilised and Figure 1 presents the outcome using average between groups linkage, for the data contained in this table.

It can be seen that sites cluster into several groups, which partially reflect the situation of coral reefs in the region. In order to reduce the influence of certain parameters whose range are numerically greater than others, data transformations and associated analyses were carried out during the meeting.

The transformed data are presented in Tables 2 and 3, and the resultant dendrograms are contained in Figures 2 and 3. It can be seen from Figure 2 that two sites, number 5 & 6, formed an outlying group reflecting the greater number of algal species at these sites, since they are located in areas of upwelling. Figure 3, in which the number of algal species has been log transformed, suggests that site number 15 was the least similar to the other sites, perhaps reflecting the very high diversity of Fish genera at this site.

#### **Conclusions**

It was apparent that the data needed to be carefully verified prior to the conduct of the final cluster analysis. It was also agreed that the Figures 1 and 3 display similar clusters and reflect the situation of the coral reefs in the region.

Figure 1 Dendrogram using average linkage between groups based on the untransformed data presented in Table 2 of Annex 4

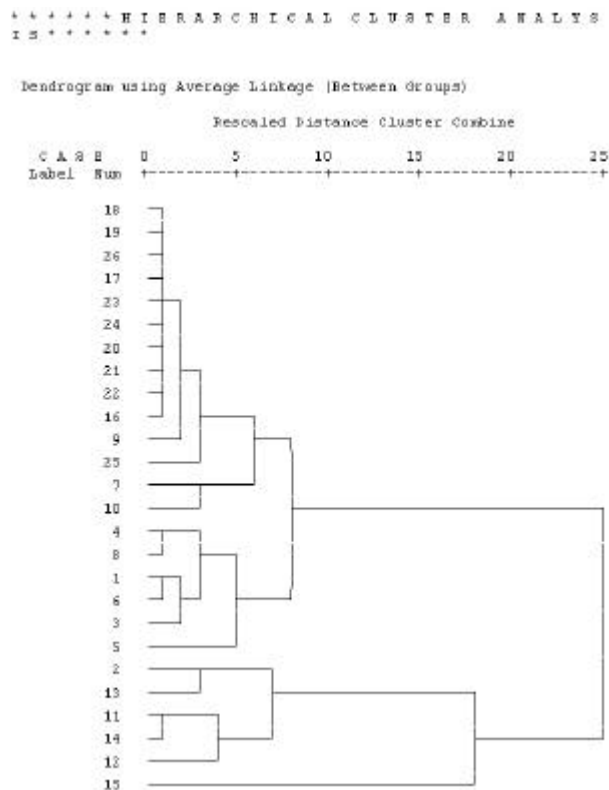


Figure 2 Dendrogram using average linkage between groups based on the logarithmic transformation of the number of hard coral species and number of coral reef fish species

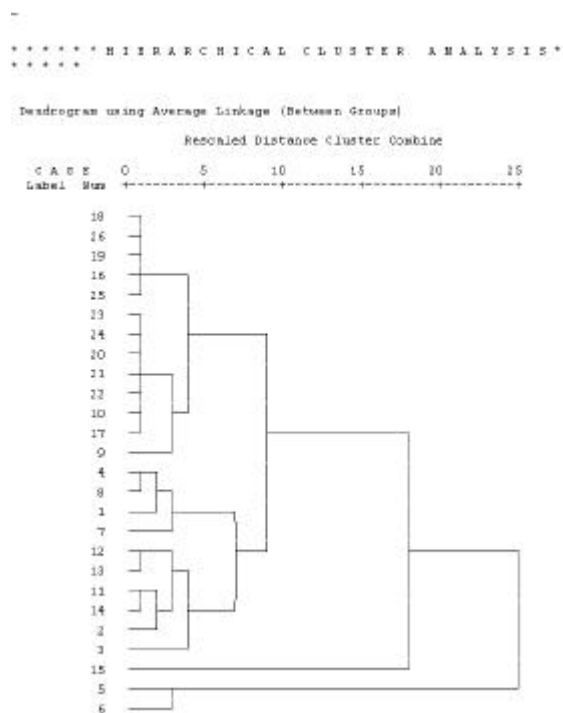


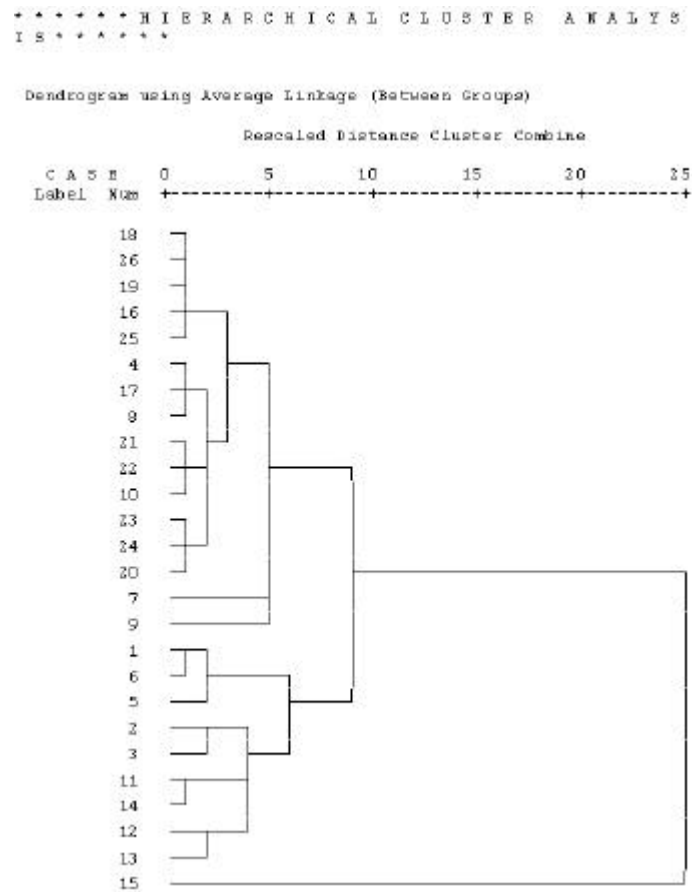
Table 2 Data table with logarithmic transformation of number of hard coral species and number of coral reef fish species

	Site Name	Hard coral Genera	Hard coral species	live coral cover (%)	change in live coral cover	no.of algae genera	no of algae spe.	Number of coral reef fish genera	Number of coral reef fish species	Number of mammal species	Number of endangered and threatened species
1	Cu Lao Cham	39	2.12	33.9	-1.9	61	122	76	2.25	1	4
2	Nha Trang bay	64	2.55	26.4	-21.2	35	55	102	2.35	3	7
3	Con Dao	50	2.17	23.3	-31.3	44	84	80	2.31	2	8
4	Phu Quoc	37	1.95	42.2	-3.3	51	98	60	2.13	2	8
5	Ninh Hai	49	2.29	36.9	0	86	190	81	2.17	2	6
6	Ca Na bay	48	2.13	40.5	-10	57	163	87	2.32	1	3
7	Ha Long - Cat Ba	48	2.23	43	-7.1	51	94	27	1.53	2	4
8	Hai Van - Son Tra	49	2.11	50.5	1	41	103	62	2.12	0	4
9	Bach Long Vi	31	2	21.7	-35	28	46	31	1.66	2	2
10	Batanes, Basco	40	2.3	37.00	0.00	20	47	50	1.93	1	1
11	Bolinao/Lingayen Gulf	45	2.4	40.00	-20.00	30	70	126	2.52	1	2
12	Masinloc, Zambales	40	2.35	33.00	0.00	30	60	97	2.4	2	2
13	Batangas bay/Maricaban	50	2.48	48.00	10.00	35	70	85	2.19	3	3
14	Puerto Galera, Mindoro	50	2.48	33.00	0.00	35	80	122	2.52	3	3
15	El Nido, Palawan	45	2.4	40.00	-20.00	40	80	169	2.68	4	4
16	Mu Koh Chumporn	31	1.97	55	0	10	20	53	1.91	5	4
17	Mu Koh Chang	39	1.8	40	2	36	43	60	2.05	5	8
18	Mu Koh Ang Thong	38	1.85	50	-5	7	7	62	2.03	6	4
19	Mu Koh Samui	37	1.85	40	-5	7	7	62	2.03	6	9
20	Mu Koh Samet	20	1.61	35	-10	33	38	51	1.87	6	10
21	Sichang Group	38	1.95	40	0	33	40	41	1.93	3	4
22	Sattaheep Group	38	1.95	33	0	33	40	44	1.88	3	4
23	Lan and Phai Group	20	1.86	18	-5	33	40	44	1.88	3	4
24	Chao Lao	25	1.78	30	0	28	33	40	1.85	3	4
25	Prachuab	35	1.87	50	-5	15	18	78	2.21	5	7
26	Koh Tao Group	38	1.9	45	-10	7	7	62	2.03	7	6

Table 3 Data table with logarithmic transformation of number of hard coral species, number of algal species and number of coral reef fish species

	Site Name	Hard coral Genera	Hard coral species	live coral cover (%)	change in live coral cover	no.of algae genera	no of algae spe.	Number of coral reef fish genera	Number of coral reef fish species	Number of mammal species	Number of endangered and threatened species
1	Cu Lao Cham	39	2.12	33.9	-1.9	2.09	2.09	76	2.25	1	4
2	Nha Trang bay	64	2.55	26.4	-21.2	1.74	1.74	102	2.35	3	7
3	Con Dao	50	2.17	23.3	-31.3	1.92	1.92	80	2.31	2	8
4	Phu Quoc	37	1.95	42.2	-3.3	1.99	1.99	60	2.13	2	8
5	Ninh Hai	49	2.29	36.9	0	2.28	2.28	81	2.17	2	6
6	Ca Na bay	48	2.13	40.5	-10	2.21	2.21	87	2.32	1	3
7	Ha Long - Cat Ba	48	2.23	43	-7.1	1.97	1.97	27	1.53	2	4
8	Hai Van - Son Tra	49	2.11	50.5	1	2.01	2.01	62	2.12	0	4
9	Bach Long Vi	31	2	21.7	-35	1.66	1.66	31	1.66	2	2
10	Batanes, Basco	40	2.3	37.00	0.00	1.67	1.67	50	1.93	1	1
11	Bolinao/Lingayen Gulf	45	2.4	40.00	-20.00	1.85	1.85	126	2.52	1	2
12	Masinloc, Zambales	40	2.35	33.00	0.00	1.78	1.78	97	2.4	2	2
13	Batangas bay/Maricaban	50	2.48	48.00	10.00	1.85	1.85	85	2.19	3	3
14	Puerto Galera, Mindoro	50	2.48	33.00	0.00	1.9	1.9	122	2.52	3	3
15	El Nido, Palawan	45	2.4	40.00	-20.00	1.9	1.9	169	2.68	4	4
16	Mu Koh Chumporn	31	1.97	55	0	1.3	1.3	53	1.91	5	4
17	Mu Koh Chang	39	1.8	40	2	1.63	1.63	60	2.05	5	8
18	Mu Koh Ang Thong	38	1.85	50	-5	0.85	0.85	62	2.03	6	4
19	Mu Koh Samui	37	1.85	40	-5	0.85	0.85	62	2.03	6	9
20	Mu Koh Samet	20	1.61	35	-10	1.58	1.58	51	1.87	6	10
21	Sichang Group	38	1.95	40	0	1.6	1.6	41	1.93	3	4
22	Sattaheep Group	38	1.95	33	0	1.6	1.6	44	1.88	3	4
23	Lan and Phai Group	20	1.86	18	-5	1.6	1.6	44	1.88	3	4
24	Chao Lao	25	1.78	30	0	1.52	1.52	40	1.85	3	4
25	Prachuab	35	1.87	50	-5	1.26	1.26	78	2.21	5	7
26	Koh Tao Group	38	1.9	45	-10	0.85	0.85	62	2.03	7	6

Figure 3 Dendrogram using average linkage between groups based on the logarithmic transformation of data for hard coral species, number of algae species and number of coral reef fish species



## **ANNEX 6**

### **Ranking Indicators and Weights for Determination of Priority within Clusters of Potential Demonstration Sites**

#### **Background**

The Focal Points in each Specialised Executing Agency assembled, in advance of the third Regional Working Group meeting data and information required to characterise coral reef sites bordering the South China Sea. These data and information were based on the needs identified during the first regional Working Group meeting.

Examination of Table 1 in Annex 4 clearly indicates that the range of data and information, envisaged to be assembled, in characterising coral reef sites, was both comprehensive and overlapping in terms of various aspects of each major class of parameter. In considering the indicators to be used in ranking the priority of sites within each cluster, two major considerations were applied; the first, the over-riding need for transparency in the process of site selection; and secondly the need to ensure that, data were comparable for all sites considered by the focal points in each country. The indicators used in ranking sites must be simple, and non-overlapping in terms of the inherent characteristics covered by each indicator type. Hence the use of multiple indicators such as genera and species of the same larger taxon should be avoided, as should the use of any indicator, however important it might theoretically be, if such data cannot be supplied for the majority of sites.

#### **Choice of Indicators**

Table 1 lists the environmental indicators selected by the Regional Working Group as being indicative of biological diversity, transboundary, regional and global significance.

The weighting to be assigned to the classes of indicator reflects the consensus view of members concerning the relative importance of each class. Hence the indicators of biological diversity were considered to merit greater weight than either transboundary, regional or global significance. It should be recognised that in reality the indicators of transboundary, regional and global significance are in fact indicators of biological diversity, hence the environmental class of indicators is strongly weighted towards the biological characteristics of the sites concerned.

Within each class of indicator a series of one or more specific indicators were identified on the basis of the outcome of the initial site characterisations, hence indicators were not included when it was apparent that the information and/or data were difficult to assemble as evidenced by the frequency of missing data in the preliminary set.

Following a careful analysis of the range of values demonstrated by the site data available to the meeting, the Regional Working Group then considered the number of divisions and weighting that would be appropriate to assign to any individual site value.

Table 1 Indicators and weight for environmental characteristics including, biological diversity, transboundary, regional and global significance

Indicators	Scale of Indicators				
	1	2	3	4	5
<b>biological diversity, 60 points</b>					
Number of hard coral genera	< 30	31-40	41-50	51-60	> 60
Maximum score, 8	1	3	4	6	8
Number of hard coral species	< 100	101-150	151-200	201-300	> 300
Maximum score, 10	2	4	6	8	10
Percentage live coral cover	0-10	11-25	26-50	51-75	> 75
Maximum score, 6	1	2	3	4	6
Percentage algal cover	< 10	11-40	> 40		
Maximum score, 3	3	2	1		
Number of coral reef fish genera	< 20	21-30	31-50	51-60	> 60
Maximum score, 8	1	3	4	6	8
Number of coral reef fish species	< 100	101-250	251-400	401-600	> 600
Maximum score, 10	2	4	6	8	10
Number of mammal species, 5	< 5	5-10	> 10		
Maximum score, 5	1	3	5		
Number of other ecosystems, 10	< 1	1-2	> 3		
Maximum score, 10	0	6	10		
<b>Transboundary Significant. 20 points</b>					
Number of Migratory Species	< 5	5-10	> 10		
Maximum score, 8	3	6	10		
Tourism (yes or no)	no	yes			
Maximum score, 5	0	5			
Cross-boundary Fishing (yes or no)	no	yes			
Maximum score, 5	0	5			
<b>Regional/Global Significant. 10 points</b>					
Number of endangered and threatened species	< 5	5-10	> 10		
Maximum score, 10	3	6	10		
<b>Area 10, points</b>					
Area of coral reefs (ha)	< 100	101- 500	> 500		
Maximum score, 10	3	6	10		

Table 2 lists the indicators selected by the Regional Working Group as being indicative of socio-economic conditions, including indicators of national priority, stakeholder involvement and threats. As in the case of the environmental indicators the Regional Working Group discussed and agreed the comparative weight that should be assigned to each class of indicator, then to individual indicators within each class, finally deciding on the divisions and weights that should be assigned to the observed values at any one site.

Table 2 Indicators for socio-economic considerations including indicators of national priority, stakeholder involvement and threats to be used in the ranking of coral reef sites bordering the South China Sea

Indicators	Scale of Indicators			
	1	2	3	
<b>Threats, 15 points</b>				
Fishing impact	Low	Medium	High	
Maximum score, 3	1	2	3	
Development impact	Low	Medium	High	
Maximum score, 3	1	2	3	
Coral mining, 3	Low	Medium	High	
Maximum score, 3	1	2	3	
Land-based pollution	Low	Medium	High	
Maximum score, 3	1	2	3	
Natural impact (typhoon, bleaching and COT star fish)	Low	Medium	High	
Maximum score, 3	1	2	3	
<b>National significance, 25 points</b>				
Identified as a national priority	Rest	3	2	1
Maximum score, 10	0	3	6	10
Level of direct stakeholder involvement in management, 5	Low	Medium	High	
Maximum score, 5	1	3	5	
Socio-economic value, 10	Low	Medium	High	
Maximum score, 10	3	6	10	
<b>Finance consideration - cofinancing, 20 points</b>				
Potential cofinancing	< 1:1	1:1	> 1:1	
Maximum score, 20	10	15	20	
<b>Local stakeholder/ community involvement, 20 points</b>				
Local stakeholder/community involvement,	Low	Medium	High	
Maximum score, 20	10	15	20	
<b>Transboundary management, 20 points</b>				
Potential transboundary management	no	yes		
Maximum score, 20	0	20		

## Conclusion

Having agreed on the weighting and indicators the Regional Working Group agreed on the use of this selection in a two tier process with the indicators in Table 1 being used as the primary means of ranking regional importance of sites within the clusters and the indicators in Table 2 being applied at a later stage when final decisions are being made.

## **ANNEX 7**

### **Results of Preliminary Ranking of Coral Reef Sites Bordering the South China Sea**

#### **Background**

The second meetings of the Regional Scientific and Technical Committee and the Project Steering Committee agreed to a three-step process of selecting demonstration sites based on, an initial clustering of similar sites followed by, ranking and determination of priority of sites within clusters.

Having agreed upon the nature of the indicators and the weight to be assigned to them the site characterisations available to the third meeting of the Regional Working Group on Coral Reefs were scored according to the agreed indicators and weights, presented and discussed in Annex 6 of this report.

#### **Results**

Table 1 presents the outcome of this exercise for all twenty-six, site characterisations and the 7 areas in Cambodia with respect to the environmental indicators of biological diversity, transboundary, regional and global significance. Due to the incomplete nature of the data sets, resulting in the inclusion of individual focal point opinions regarding rank scores for missing data, together with differences in the definitions of the indicators used by each focal point, it is not possible to combine the outcome of this preliminary ranking at a regional scale.

Table 2 presents the rank scores for the socio-economic classes of indicator and it is apparent that the scores assigned within each national grouping display little, cross-group comparability. It was also noted by the Regional Working Group that as these indicators are "subjective" ones, since there were different ways to assign the scores, for a number of the parameters.

#### **Conclusions**

The assignment of rank according to the agreed classes of indicators and their respective weighting can be finalised promptly provided that the focal points submit the missing data to the PCU by the due date.

Table 1 Comparative rank score for coral reef sites bordering the South China Sea based on site characterisations available to the third Regional Working Group meeting, March 2003. Indicators of biological diversity, transboundary, regional, and global significance are included together with their total

Site Name	Hard coral Genera	Hard coral species	live coral cover (%)	Present algae cover	No. of coral reef fish genera	No. of coral reef fish Spp.	No. of mammal Spp.	No. of other ecosystems	No. of Migratory Spp.	Tourism	Cross boundary fishing	No. endangered and threatened Spp.	Area	Total
<b>Cambodia <sup>1</sup></b>														
KKCR1	3	4	4	3	3	6	3	10	6	5	5	6	10	<b>68</b>
KKCR2	1	2	3	3	3	2	1	6	6	5	5	6	10	<b>53</b>
SHVCR1	3	2	3	2	3	6	3	10	6	5	0	6	10	<b>59</b>
SHVCR2	1	4	4	2	1	2	3	6	6	5	0	6	10	<b>50</b>
SHVCR3	3	2	3	3	4	2	3	6	6	0	5	6	6	<b>49</b>
KAMPCR	3	4	4	3	3	4	3	10	6	5	5	6	6	<b>62</b>
KEPCR	1	2	3	3	3	4	3	6	6	5	5	6	6	<b>53</b>
<b>Viet Nam</b>														
Cu Lao Cham	3	4	3	3	8	4	1	6	3	5	5	3	6	<b>54</b>
Nha Trang bay	8	10	3	3	8	4	1	6	3	5	5	6	6	<b>68</b>
Con Dao	4	4	2	3	8	4	1	6	3	5	5	6	10	<b>61</b>
Phu Quoc	3	2	3	3	6	4	1	6	3	5	5	6	10	<b>57</b>
Ninh Hai	4	6	3	3	8	4	1	6	3	5	5	6	10	<b>64</b>
Ca Na bay	4	4	3	3	8	4	1	6	3	5	5	3	10	<b>59</b>
Ha Long - Cat Ba	4	6	3	3	3	2	1	6	3	5	5	3	6	<b>50</b>
Hai Van - Son Tra	4	4	3	3	8	4	1	6	3	0	0	6	3	<b>45</b>
Bach Long Vi	3	2	2	3	4	2	1	0	3	0	5	3	6	<b>34</b>
<b>Philippines</b>														
Batanes, Basco	3	4	3	3	3	2	1	6	6	5	5	3	3	<b>47</b>
Bolinao/Lingayen Gulf	6	8	3	3	8	6	1	6	3	5	0	3	10	<b>62</b>
Masinloc, Zambales	4	8	3	3	8	4	1	6	6	5	5	6	10	<b>69</b>
Batangas bay Maricaban	6	8	3	3	8	6	1	6	6	5	0	3	10	<b>65</b>
Puerto Galera, Mindoro	6	10	3	3	8	6	1	6	6	5	0	3	6	<b>63</b>
El Nido, Palawan	8	8	3	3	8	8	1	6	6	5	5	6	10	<b>77</b>
<b>Thailand</b>														
Mu Koh Chumporn	3	4	4	3	6	4	3	10	10	5	0	6	10	<b>68</b>
Mu Koh Chang	4	4	3	3	8	4	3	10	10	5	5	6	10	<b>75</b>
Mu Koh Ang Thong	3	4	4	3	8	4	3	10	10	5	0	6	10	<b>70</b>
Mu Koh Samui	4	4	3	3	8	4	3	10	10	5	0	10	10	<b>74</b>
Mu Koh Samet	1	2	3	3	6	2	3	10	6	5	0	10	6	<b>57</b>
Sichang Group	3	2	2	3	4	2	1	10	6	5	0	3	3	<b>44</b>
Sattaheep Group	3	2	3	3	4	2	1	10	10	5	0	3	6	<b>52</b>
Lan and Phai Group	1	2	2	3	4	2	1	6	6	5	0	6	6	<b>44</b>
Chao Lao	4	2	3	3	4	4	1	0	6	5	0	3	3	<b>38</b>
Prachuab	3	2	3	3	8	4	3	6	10	5	0	6	6	<b>59</b>
Koh Tao Group	3	2	3	3	8	4	3	6	10	5	0	6	6	<b>59</b>
Song Khla														<b>0</b>
Koh Kra														<b>0</b>
Losin														<b>0</b>

<sup>1</sup> Due to lack of coral reef data from Cambodia, the ranking for Cambodia was just a exercise, based on values estimated by the focal point.

Table 2 Comparative rank score for coral reef sites bordering the South China Sea, based on site characterisations available to the third Regional Working Group meeting, March 2003. Indicators of national priority, stakeholder involvement and threats are included together with their total and the grand total of both environmental and socio-economic indicators

[illegible]

## ANNEX 8

### Schedule of Meetings, for 2003

Table 1 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					
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.																																
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-CR-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.										RWG-LbP-3																
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-CR-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													