

**UNITED
NATIONS**



**United Nations
Environment
Programme**



UNEP(DEC)/EAS KB1 WS.2

2 April 2007

Original: ENGLISH

The First East Asian Seas Knowledgebase
Workshop

Singapore
5 – 6 April 2007

**REPORT OF
THE FIRST EAST ASIAN SEAS KNOWLEDGEBASE WORKSHOP**

TABLE OF CONTENT

OPENING AND INTRODUCTION OF THE WORKSHOP	2
INTRODUCTION OF THE EAST ASIAN SEAS KNOWLEDGEBASE	2
UNEP EAST ASIAN SEAS REGIONAL COORDINATING UNIT (EAS/RCU).....	2
TROPICAL MARINE SCIENCE INSTITUTE OF THE NATIONAL UNIVERSITY OF SINGAPORE (TMSI/NUS)	2
CENTER FOR ENVIRONMENTAL MONITORING DATA AND INFORMATION (CEMDI), VIETNAM	
ENVIRONMENT PROTECTION AGENCY (VEPA).....	3
PRESENTATION OF OTHER RELEVANT INFORMATION MANAGEMENT INITIATIVES	3
DATA AND INFORMATION NETWORK REGIONAL ACTIVITY CENTRE (DINRAC).....	3
UNEP COORDINATION OFFICE OF THE GLOBAL PROGRAMME OF ACTION FOR THE PROTECTION OF	
THE MARINE ENVIRONMENT FROM LAND-BASED ACTIVITIES (GPA).....	4
SOUTHEAST ASIA START REGIONAL CENTER (SEA START RC)	4
WORLD FISH CENTER	4
BREAK-OUT SESSIONS	4
PRESENTATION OF the OUTCOMES FROM THE BREAK-OUT SESSIONS	5
GROUP 1: THE REGIONAL KNOWLEDGEBASE.....	5
GROUP 2: THE NATIONAL DATABASE FRAMEWORK.....	5
GROUP 3: ESTABLISHMENT OF A REGIONAL AND NATIONAL PARTNER NETWORK	5
WRAP-UP	5
CLOSURE OF WORKSHOP	6
ANNEX 1: PROVISIONAL LIST OF PARTICIPANTS	7
ANNEX 2: PROGRAMME OF WORK	12
ANNEX 9: GUIDANCE FOR BREAK-OUT DISCUSSIONS	15
ANNEX 10: SUMMARY OF DISCUSSION GROUP 1: THE REGIONAL KNOWLEDGEBASE	18
ANNEX 11: SUMMARY OF DISCUSSION GROUP 2: THE NATIONAL DATABASE FRAMEWORK	
.....	24
ANNEX 12: SUMMARY OF DISCUSSION GROUP 3: ESTABLISHMENT OF a REGIONAL AND	
NATIONAL PARTNER NETWORK	28

OPENING AND INTRODUCTION OF THE WORKSHOP

1. Ms. Srisuda Jarayabhand, Coordinator, United Nations Environment Programme (UNEP) East Asian Seas Regional Coordinating Unit (EAS/RCU) introduced Professor Chan Eng Soon, Director, Tropical Marine Science Institute (TMSI) of the National University Singapore (NUS) to deliver the opening remarks of the First East Asian Seas Knowledgebase Workshop.
2. In his opening remarks, Mr. Chan Eng Soon mentioned the difficulties in getting a comprehensive overview of the coastal and marine environment in the region and the activities undertaken in order to minimize the negative impacts from development activities. He noted that data is scattered between different agencies and organizations and welcomed the opportunity of this workshop to further discuss the initiative of the Coordinating Body on the Seas of East Asian (COBSEA) to develop an East Asian Seas Knowledgebase. Professor Chan Eng Soon also proposed continued collaboration between COBSEA and the National University of Singapore during the further development of the East Asian Seas Knowledgebase.
3. The representatives from COBSEA member countries, regional organizations and from the organizers were invited to introduce themselves. The provisional list of participants is attached as [ANNEX 1](#) to this report.
4. Ms. Srisuda Jarayabhand, Coordinator, UNEP EAS/RCU, introduced the main objectives of the workshop. The Programme of Work is attached as [ANNEX 2](#) to this report.

INTRODUCTION OF THE EAST ASIAN SEAS KNOWLEDGEBASE

UNEP East Asian Seas Regional Coordinating Unit (EAS/RCU)

5. Ms. Jarayabhand introduced the concept and background of the East Asian Seas Knowledgebase. She informed the workshop of previous information management activities undertaken by COBSEA including the pilot development of a regional knowledgebase in collaboration with TMSI and the development of a pilot national database in collaboration with the Center of Environmental Monitoring, Data and Information (CEMDI) of the Vietnam Environment Protection Agency (VEPA). The presentation from UNEP EAS/RCU is attached as [ANNEX 3](#) to this report.
6. Ms. Jarayabhand also reported on the outcomes from the Seminar on Integrated Coastal and Marine Information Management that recommended the further development of a regional knowledgebase. The Seminar on Integrated Coastal and Marine Information Management had been co-organized by UNEP EAS/RCU and the Southeast Asia Regional Learning Center (SEA-RLC) at the East Asian Seas Congress in December 2006 and had been attended by country representatives and representatives from a number of regional partner organizations.

Tropical Marine Science Institute of the National University of Singapore (TMSI/NUS)

7. Mr. Durairaju Raju, Research Fellow, TMSI/NUS, presented the main structure and technical specifications of the regional knowledgebase. Mr. Raju also demonstrated the content of the regional knowledgebase online, showing its main features and search functions. The presentation from TMSI/NUS, is attached as **ANNEX 4** to this report.
8. Mr. Anond Snidvongs, Director, South East Asia START Regional Center (SEA START RC) complimented on an extensive initial database, but requested some clarification regarding how national and regional partners would be able to submit their data and information to the East Asian Seas Knowledgebase.
9. Mr. Raju explained that the data and information had so far been collected from public sources, and that national and regional partners are not yet able to submit data and information to the East Asian Seas Knowledgebase online, but that such features will be added during the continued development of the knowledgebase.
10. Mr. Raman Letchumanan, Head of the Environment Unit, Bureau of Resources Development,

ASEAN Secretariat, emphasized the importance of collecting environmental data to compliment the gathered knowledge-documents, as well as the importance of providing some analysis of the information gathered in the knowledgebase to maximize its usefulness.

11. Ms. Jarayabhand explained that the national database framework and the pilot national database in Vietnam had been developed in order to enable national provision of environmental data and information on the state of the marine environment. She further mentioned some of the future possibilities of involving expert groups and partner organizations in activities to synthesise and analyse the information gathered in the East Asian Seas Knowledgebase for the development of regional state of marine environment reports, thematic reports on best practices etc.

Center for Environmental Monitoring Data and Information (CEMDI), Vietnam Environment Protection Agency (VEPA)

12. Mr. Hoang Duong Tung, Director, Center for Environmental Monitoring, Data and Information (CEMDI) of the Vietnam Environment Protection Agency (VEPA), presented the outcomes of the collaboration between CEMDI and COBSEA in developing a pilot national database in Vietnam, or the Vietnam Marine Environment Portal. Mr. Tung also demonstrated the main content of the portal, collected based on a template provided by the Secretariat. Mr. Tung also mentioned some of the main challenges when developing the Vietnam Marine Environment Portal including the gaps, inconsistencies and sometimes overlaps of available marine environment data, the many different institutions that are involved in data collection and the lack of mechanism for sharing marine environment data in Vietnam. Mr. Tung further mentioned the need for standards and guidelines and a strategy for the collection and management of marine environment data to be formulated for the further development of the East Asian Seas Knowledgebase. The presentation from CEMDI is attached as **ANNEX 5** to this report.

13. Mr. Snidvongs sought clarifications on what type of resources that had been required for developing such an extensive portal in Vietnam, and what type of resources that would be required to maintain it.

14. Mr. Tung clarified that two staff members had been involved in developing the Vietnam Marine Environment Portal during a period of three months and explained that continued collaboration with national partners was very important in the updating and expansion of the current content of the portal. Furthermore, some funding for maintaining the portal has been made available through the implementation of Vietnam's 'Master Plan of Basic Survey and Monitoring on Coastal and Marine Resources'.

15. Mr. Letchumanan expressed his interest in the Vietnam Marine Environment Portal and stated that this type of database would be very useful in order to facilitate the identification of relevant data during the development of the ASEAN State of Environment report.

16. Ms. Victoria V. Abrera from the Philippines mentioned that the Philippines share many of the challenges experienced by CEMDI in terms of collecting data that is hosted by different national institutions. She suggested that this workshop and the development of the East Asian Seas Knowledgebase could provide some further input into how COBSEA can assist its member countries in facilitating data sharing at national and regional levels.

17. Mr. Soun Mean from Cambodia raised the issue of conflicting data from different sources of information. Mr. Tung agreed it is a challenge to determine what data that is the most reliable or which sources that provide more reliable data than others.

PRESENTATION OF OTHER RELEVANT INFORMATION MANAGEMENT INITIATIVES

Data and Information Network Regional Activity Centre (DINRAC)

18. Mr. Wang Jianguo, Director, Data and Information Network Regional Activity Centre (DINRAC), Northwest Pacific Action Plan (NOWPAP), presented some of the main activities of DINRAC and explained its role in providing technical support to NOWPAP and to collect data and information from the NOWPAP member countries. He further described the activities related to the development of the 'NOWPAP Policy on Data and Information Sharing' and the 'Principles and Guidelines for NOWPAP

Meta-database Management System'. Mr. Wang also introduced some of the databases that have been or are being developed by DINRAC and explained that these databases are being updated annually by the DINRAC National Focal Points. The presentation from DINRAC is attached as **ANNEX 6** to this report.

UNEP Coordination Office of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)

19. Mr. Sami Dimassi, Information Technology Officer, UNEP Coordination Office of the GPA, demonstrated the Bali Strategic Plan database that had been developed by UNEP in order to respond to the demand from the countries of being able to track all UNEP activities at national level. Mr. Dimassi demonstrated a variety of interactive features of the database that decentralizes the maintenance and updating of the database through enabling users to remotely access the database in order to update/add information and to change the database structure. Mr. Dimassi suggested that similar features would be very useful also to the East Asian Seas Knowledgebase.

20. Ms. Cheryl Chia from Singapore wondered what type of resources that were required in order to create such a system. Mr. Dimassi clarified that one technical person had developed the Bali Strategic Plan database in less than two months and that the required maintenance was very limited.

21. Ms. Moi Khim Tan, Reefbase Team Leader, WorldFish Center, wondered how this system would deal with the limited internet access among some of the countries in the East Asian Seas region. Mr. Dimassi clarified that it is also possible to collect data and information in access or excel files and import these to the system separately. This would be more suitable in the cases where the internet is not available, not reliable or where computer skills are limited.

Southeast Asia START Regional Center (SEA START RC)

22. Mr. Snidvongs presented the need for enhanced internet geoinformation services in Southeast Asia and mentioned that such services could provide various tools for facilitating the planning for improved environmental management through the modelling and prediction of what-if scenarios. He further informed about some useful tools that have been developed by UNEP and IW:LEARN for content management, and that these could be applied also in the East Asian Seas Knowledgebase development. In his presentation, Mr. Snidvongs also highlighted some requirements in order to sustain and maintain a regional information center, including active national focal points, the need for technical support staff and continuous funding. The presentation from SEA START RC is attached as **ANNEX 7** to this report.

WorldFish Center

23. Ms. Tan presented the experiences in developing the Reefbase, an extensive global database on coral reefs. She highlighted some of the challenges commonly encountered during database development, including poor database designs, lack of standard formats, lack of available information and the lack of interest in sharing data and information. Ms. Tan emphasized the importance of ensuring appropriate resources and skills for information management among national counterparts. In addition, she suggested user registration as a way to track user profiles and to better understand the usage and uptake of the information provided in the East Asian Seas Knowledgebase. Ms. Tan also presented some of the services that Reefbase can provide to its partners including the provision of expertise for information management initiatives and continuous technical support. Potential areas of collaboration with COBSEA included the sharing of experiences in database and information management, the sharing of online publications, and the development of a COBSEA map in Reef GIS. The presentation from WorldFish Center is attached as **ANNEX 8** to this report.

BREAK-OUT SESSIONS

24. The workshop participants were divided into three groups in order to discuss the continued development of the East Asian Seas Knowledgebase in more detail. The guidance for the breakout session discussions is attached as [ANNEX 9](#) to this report.

PRESENTATION OF THE OUTCOMES FROM THE BREAK-OUT SESSIONS

Group 1: The Regional Knowledgebase

25. Group 1 had focused its discussions on the content of the regional knowledgebase and provided a number of useful suggestions on each of the components of the current knowledgebase. Some of these suggestions included to increase the use of GIS through linking to ReefGIS (developed by WorldFish Center), to provide increased possibilities for analyzing the information provided in the regional knowledgebase, to expand and refine on the categories provided in various places of the knowledgebase, to increase and to expand the scope of some of the components of the knowledgebase and to increase the participation of partners and national focal points in collecting information, potentially using the features developed by UNEP GPA for the Bali Strategic Plan database. The presentation of Group 1's discussion outcomes is attached as [ANNEX 10](#) to this report.

Group 2: The National Database Framework

26. Group 2 had discussed how COBSEA could increase the sharing of national state of marine environment data and information through the East Asian Seas Knowledgebase, considering the lessons learned from the pilot national database development in Vietnam. The group recommended that the national database template that had been developed by the Secretariat including the main indicators, formats, scopes for the pilot national database development in Vietnam, should be used for the collection of data and information in the remaining COBSEA member countries. It would however be beneficial to simplify the template to focus on some main indicators initially.

27. In order to ensure active involvement from the countries in data collection, it was recommended that national 'information coordinators' were identified in each of the COBSEA member countries. The group also recommended that remote access and maintenance of the database were important requirements in order to facilitate the provision of data and to enhance data sharing in the East Asian Seas region. The group further suggested a plan of action that outlined the main activities to be undertaken by the Secretariat during the coming year. The presentation of Group 2's discussion outcomes is attached as [ANNEX 11](#) to this report.

Group 3: Establishment of a Regional and National Partner Network

28. Group 3 had discussed how to increase the collaboration with regional and national partners in further expanding the East Asian Seas Knowledgebase. Group 3 also suggested that that national coordinators should be identified in each COBSEA member country and that the countries should start collecting data following the national database template. In terms of increasing collaboration with regional partner organizations, the group recommended that a demonstration case should be used in order to demonstrate the benefits of sharing information.

29. To ensure the sustainability of the East Asian Seas Knowledgebase, group 3 emphasized the importance of providing capacity building to national counterparts for the development and maintenance of national databases, and means to facilitate data sharing and coordination between national agencies. The group also mentioned that the planned publication of an East Asian Seas Environment Outlook every three years (starting 2008) is an important way to ensure concrete outcomes and analysis of the data collected through the East Asian Seas Knowledgebase. The presentation of Group 3's discussion outcomes is attached as [ANNEX 12](#) to this report.

WRAP-UP

30. Mr. Letchumanan stated that the national database framework was important to provide substantial input to the East Asian Seas Knowledgebase. He suggested that information from international sources should be considered as input also to the national state of marine environment data and information. He further stated that the ASEAN framework could be used to promote the East Asian Seas Knowledgebase among the ASEAN countries.

31. It was agreed that data and information provided by national counterparts were an important component of the East Asian Seas Knowledgebase development and that the Secretariat would request the COBSEA National Focal Points to nominate 'national coordinators' for the East Asian Seas

Knowledgebase development.

32. Mr. Tung explained that the data collection for the Vietnam Marine Environment Portal development had included:

- a. The development of a questionnaire to assess the available data/information in Vietnam. The data assessment had taken about two-three months in total.
- b. The development of fact sheets for each set of indicators to further explain the details of each indicator, specify units etc.

33. It was agreed that the Secretariat should refine the national database template and to prepare a checklist for a suitable process for national data collection based on the outcomes from this workshop and from CEMDI's experiences in developing the pilot national database development.

34. The country representatives were invited to inform on national data availability and the willingness to share data and information within the East Asian Seas Knowledgebase.

35. Mr. Ahmad Rizal Khalit from Malaysia extended Malaysia's full support for this COBSEA initiative, and mentioned that there are many ongoing initiatives on the coastal and marine environment in Malaysia that would be willing to share data/information in the East Asian Seas Knowledgebase.

36. Mr. Yang Joon-yong from the Republic of Korea informed that the collection of coastal and marine data and information has been initiated under the Ministry of Marine Affairs and Fisheries, but that the willingness to provide data and information varies between different institutions. The Republic of Korea would be able to share the data and information that is freely provided with the East Asian Seas Knowledgebase.

37. Mr. Soun Mean from Cambodia mentioned that the data available through the main centres in Cambodia dealing with coastal and marine environment data would provide a suitable starting point for the East Asian Seas Knowledgebase.

38. Mr. Agus Rusly from Indonesia mentioned that the Ministry of Environment has developed a national database on the environment in general, and would be able to share the collected coastal and marine related data and information with the East Asian Seas Knowledgebase.

39. Mr. Mickmin Charuchinda from Thailand mentioned that Thailand would probably be able to provide extensive data and information to the East Asian Seas Knowledgebase, but that further clarification is required in terms of which parameters are to be shared within the East Asian Seas Knowledgebase.

40. Ms. Cheryl Chia from Singapore informed that the National Parks Board has some data available also related to the coastal and marine environment, but that a lot of information would also be available at universities. She further suggested that a data policy should be developed by COBSEA to ensure that the safe handling of the data provided.

CLOSURE OF WORKSHOP

41. Ms. Jarayabhand thanked the workshop participants for their useful inputs to the discussions, expressed her anticipations of a fruitful future collaboration on data and information sharing among the COBSEA member countries and announced the workshop closed.

ANNEX 1: PROVISIONAL LIST OF PARTICIPANTS

Country representatives

Cambodia

Mr. Soun Mean
GIS Specialist
Ministry of Environment
48 Samdech Preah Sihanouk
Tonle Bassac, Chamkamon
Phnom Penh, Cambodia

Tel: (855 11) 873 993
Fax: (855 23) 987233, 215925
E-mail: suonmean@hotmail.com

Indonesia

Mr. Agus Rusly
Assistant Deputy
Marine and Coastal Degradation Control
Ministry of Environment of Indonesia
KLH 5th fl., JL D.I. Panjaitan Kav 24
Kebon Nanas
Jakarta 13410
Indonesia

Tel: (6221) 851 8138; 858 0111
Fax: (6221) 858 0111
E-mail: agusrusly@yahoo.com

Republic of Korea

Mr. Yang Joon-yong
Ocean Research Team
National Fisheries Research & Development
Institute (NFRDI)
Ministry of Maritime Affairs & Fisheries
408-1 Sirang-Ri
Gijang-Eup, Gijang-Kun
Busan, Korea

Tel: (8251) 720 2235, 720 2224
Fax: (8251) 720 2225
E-mail: yangjy@momaf.go.kr

Singapore

Mr. Geoffrey Davison
National Park Board
National Park Board HQ
1 Cluny Road

People's Republic of China

Mr. Wu Xianfeng
Deputy Director
Department of Pollution Control
State Environmental Protection Administration
(SEPA) 115 Xizhimennei Nanxiaojie, Beijing
100035, People's Republic of China

Tel: (86 10) 6655 6275
Fax: (86 10) 6655 6272
E-mail: wu.xianfeng@sepa.gov.cn

Malaysia

Mr. Ahmad Rizal Khalit
Principal Assistant Secretary
Conservation and Environmental
Management Division
Ministry of Natural Resources and Environment
Level 6, Lot 4G3, Presinct 4
Federal Government Administrative Centre
62574 Putrajaya, MALAYSIA

Tel: (603) 8886 1139
Fax: (603) 8888 4473
E-mail: arizal@nre.gov.my

Philippines

Ms. Victoria V. Abrera
Chief, Planning and Environmental Policy
Environmental Management Bureau
Department of Environment and
Natural Resources (DENR)
DENR Compound
Visayas Avenue, Diliman
Quezon City 1100, Philippines

Tel: (632) 920 2243, 928 8893
Fax: (632) 927 1518, 920 2243
E-mail: mavic_abrera@yahoo.com

Singapore

Mr. Jeffrey Low
Senior Biodiversity Officer
Biodiversity Centre
National Park Board

Singapore 259569

Tel.: (65) 6472 2048
Fax: (65) 6467 1912
E-mail: Geoffrey_Davison@nparks.gov.sg

Singapore

Ms. Cheryl Chia
National Park Board
National Park Board HQ
1 Cluny Road
Singapore 259569

Tel.: (65) 6471 9945
Fax: (65) 6467 1912
E-mail: Cheryl_CHIA@nparks.gov.sg

Viet Nam

Ms. Tran Thi Le Anh
Official,
Integrated Coastal Zone
Marine and River Basin Management Division
Ministry of Natural Resources and Environment
(MONRE)
Vietnam Environment Protection Agency (VEPA)
67 Nguyen Du Street
Hoan Kiem Dist
Hanoi, Vietnam

Tel: (844) 822 4419
Fax: (844) 822 3189
E-mail: tanh@nea.gov.vn,
anhnea@yahoo.com

1 Cluny Road, Singapore 259569

Tel.: (65) 6472 6070
Fax: (65) 6467 1912
E-mail: Jeffrey_Low@nparks.gov.sg

Thailand

Mr. Mickmin Charuchinda
Director, Eastern Marine and Coastal Resources
Research Center
237 Moo 6, T. Klum, Kllaeng District
Rayong 21190, Thailand

Tel: (663) 865 7466, 865 7383, 865 7699
Fax (663) 865 7466
E-mail: mannai@loxinfo.co.th,
mickmin_charuchinda@yahoo.com

Representatives of the United Nations and other Organizations

**UNITED NATIONS ENVIRONMENT
PROGRAMME
East Asian Seas Regional Coordinating Unit
(EAS/RCU)**

Ms. Srisuda Jarayabhand
Co-ordinator
United Nations Environment Programme
United Nations Building, 2nd Floor, Block B
Rajdamnern Avenue, Bangkok 10200, Thailand

Tel: (66 2) 288 1905
Fax: (66 2) 281 2428
E-mail: jarayabhand@un.org

Ms. Birgitta Liss
Junior Professional Officer
United Nations Environment Programme
United Nations Building, 2nd Floor, Block B
Rajdamnern Avenue, Bangkok 10200, Thailand

Tel: (66 2) 288 2214
Fax: (66 2) 281 2428
E-mail: liss@un.org

Ms. Charuvan Kalyangkura
Administrative Assistant
United Nations Environment Programme
United Nations Building, 2nd Floor, Block B
Rajdamnern Avenue, Bangkok 10200, Thailand

Tel: (66 2) 288 1894
Fax: (66 2) 281 2428
E-mail: kalyangkura@un.org

**UNITED NATIONS ENVIRONMENT
PROGRAMME
Coordination Office of the Global Programme
of Action for the Protection of the Marine
Environment from Land-Based Activities
(GPA)**

Mr. Sami Dimassi
Information Technology Officer
GPA Coordination Office
United Nations Environment Programme
P.O Box 16227,
2500BE The Hague,
The Netherlands

Tel: (3170) 311 4460
Fax: (3170) 345 6648
E-mail: s.dimassi@unep.nl

**THE ASSOCIATION OF SOUTHEAST ASIAN
NATIONS (ASEAN)**

Mr. Raman Letchumanan
Head of the Environment and Disaster
Management Unit
Bureau of Resources Development
Association of Southeast Asian Nations and
Secretariat
The ASEAN Secretariat
70 A Jl. Sisingamangaraja
Jakarta 121100

Tel: (6221) 724-3372, 726-2991 Ext 339
Fax: (6221) 739-8234, 723-0985, 724-3504
E-mail: raman@aseansec.org

THE NATIONAL UNIVERSITY OF SINGAPORE

Professor Chan Eng Soon
Director, Tropical Marine Science Institute
14, Kent Ridge Road,
National University of Singapore
Singapore – 119 223

Professor Liang Shie Yui
Outreach Head,
Tropical Marine Science Institute,
National University of Singapore
14, Kent Ridge Road,
Singapore – 119 223

Tel: (65) 6516 3018
Fax: (65) 6774 9654
E-mail: tmslsy@nus.edu.sg

Ms Karenne Tun
Department of Biological Science
National University of Singapore
14 Science Drive 4
Singapore 117543

Tel: (65) 9769 0630
Fax: (65) 6872 4965
E-mail: karenne@nus.edu.sg

**NORTHWEST PACIFIC ACTION PLAN
(NOWPAP)**

**Data and Information Network Regional
Activity Centre (DINRAC)**

**SOUTHEAST ASIA START REGIONAL
CENTER (SEA START RC)**

Professor Chou Loke Ming
Department of Biological Sciences
The National University of Singapore
Faculty of Science
Blk S2, 14 Science Drive 4
Singapore 117543

Tel: (65) 6516 2696
Fax: (65) 6779 2486
E-mail: dbscim@nus.edu.sg

Mr. Durairaju Raju
Research fellow
Tropical Marine Science Institute
National University of Singapore
14, Kent Ridge Road,
Singapore – 119 223

Tel: (65) 6516 8971
Fax: (65) 6872 4067
E-mail: dranju@nus.edu.sg

Mr. Wang Jianguo
Director
DINRAC
Room 909, Building A
No.1 Yuhuananlu, Chaoyang District
Beijing 100029, P.R. China

Tel: (86 10) 8484 0869
Fax: (86 10) 8463 0849
E-mail: JGWANG@sepa.gov.cn

Mr. Anond Snidvongs
Director
Southeast Asia START Regional Centre
(SEA START RC)
SWO Pathumwan 5 Building, 5th Floor
Henri Dunant Road
Bangkok 10330, Thailand

Tel: (66 2) 218 9464/7
Fax: (66 2) 251 9416
E-mail: anond@start.or.th

Mr. Wirote Laongmanee
Southeast Asia Regional Learning Center (SEA-
RLC), SEA START RC,
5th Fl., OLD SWU Pathumwan 5 Building
Henri Dunant Road,
Bangkok 10330
Thailand

Tel: (662) 218 9463/7
Fax: (662) 251 9416
E-mail: wirote@start.or.th

**VIETNAM ENVIRONMENT PROTECTION
AGENCY (VEPA)**

**Center of Environmental Monitoring, Data and
Information (CEMDI)**

Mr Hoang Duong Tung
Director
Centre for Environmental Monitoring
Data and Information
67 Nguyen Du, Hanoi, Vietnam

Tel: (844) 577 1816
Fax: (844) 577 1850
E-mail: htung@nea.gov.vn

WORLD FISH CENTER

Ms. Moi Khim Tan
ReefBase Team Leader/Database Administrator
WorldFish Center
Jalan Batu Maung, Batu Maung,
11960 Bayan Lepas,
Penang, Malaysia.

Tel: (604) 626 1606 ext: 183
Fax: (604) 626 1606
Email: m.tan@cgiar.org

ANNEX 2: PROGRAMME OF WORK

5 April 2007	
8.30-9.00	Registration
9.00-9.15	Opening remarks: Professor Chan Eng Soon, Director, Tropical Marine Science Institute, National University of Singapore
9.15-9.20	Introduction of workshop participants
9.20-9.40	'Developing an East Asian Seas Knowledgebase for Coastal and Marine Information and Resources' Ms. Srisuda Jarayabhand, Coordinator, East Asian Seas Regional Coordinating Unit (EAS/RCU)
9.40-10.10	'Demonstration of the East Asian Seas Knowledgebase for Regional Coastal and Marine Information and Resources' Mr. Durairaju Raju, Research Fellow, Tropical Marine Science Institute (TMSI), National University of Singapore
10.10-10.30	'Vietnam Marine Environment Portal - developing a pilot national database' Mr. Hoang Duong Tung, Director, Centre for Environmental Monitoring Data and Information, Vietnam Environment Protection Agency (VEPA)
10.30-11.00	Coffee Break
11.00-11.20	"The Introduction of NOWPAP DINRAC - Data and Information Management on Coastal and Marine Environment in the NOWPAP Region" Mr. Wang Jianguo, Director, Data and Information Network Regional Activity Centre (DINRAC)
11.20-11.50	'GPA Clearinghouse / BSP Database' Mr. Sami Dimassi, Information Technology Officer, UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) Coordination Office
11.50-12.10	'Internet Geo Information Service for Southeast Asian Seas' Mr. Anond Snidvongs, Director, Southeast Asia START Regional Center (SEA START RC)
12.10-12.30	'ReefBase: Information Services through Cooperation and Collaboration' Ms. Moi Kim Tan, Reefbase Team Leader, WorldFish Center
12.30-13.30	Lunch
13.30-15.00	Breakout Sessions
	<p>Group 1: The Regional Knowledgebase Facilitator: Ms. Karenne Tun, National University of Singapore</p> <p>Group 2: The National Database Framework Facilitator: Mr. Hoang Duong Tung, Centre for Environmental Monitoring Data and Information, Vietnam Environment Protection Agency (VEPA)</p> <p>Group 3: Establishment of a Regional and National Partner Network Facilitator: Professor Chou Loke Ming, National University of Singapore</p>
15.00-15.30	Coffee break
15.30-17.00	Breakout Sessions (continued)

6 April 2007	
9.00-10.30	Breakout Sessions: Preparation of the group presentations
10.30-11.00	Coffee Break
10.30-11.30	Presentations of the outcomes from the Breakout Sessions
11.30-12.00	Discussion
12.00-13.00	Lunch
13.00-14.00	Wrap-up and Closure of Workshop

ANNEX 9: GUIDANCE FOR BREAK-OUT DISCUSSIONS

Group 1: The Regional Knowledgebase

Facilitator:

Ms. Karenne Tun, NUS

Group participants:

Mr. Yang Joon-yong, NFRDI, R.O. Korea

Mr. Geoffrey Davison, National Park Board, Singapore

Ms. Victoria V. Abrera, DENR, Philippines

Ms. Tran Thi Le Anh, MONRE, Vietnam

Mr. Liong Shie Yui, NUS

Mr. Durairaju Raju, NUS

Mr. Wang Jianguo, NOWPAP DINRAC

Guidance for discussion:

The objective of this group discussion is to identify recommendations for further development of the East Asian Seas Knowledgebase in terms of the regional knowledgebase. Some of the main issues for discussion are listed below:

1. Does the content of the knowledgebase correspond to the current user needs in the East Asian Seas region? If not, what would be useful additions when expanding the knowledgebase?
2. Identify potential features and services that could be useful additions for the knowledgebase (ex. improved search functions, interactive features, etc.);
3. Identify additional sources of information for expansion of the content in the regional knowledgebase;
 - a. Consider the use of the Draft nomination sheet: Roster of Experts (see workshop folder);
 - b. Consider the use of the Draft questionnaire: Regional Activities to collect further information on regional activities (see workshop folder); and
 - c. Consider other sources of information.
4. Discuss ways to ensure the sustainability of the regional knowledgebase in terms of maintenance, updating and verification of the information?
5. Discuss the relationship between national counterparts and regional partners in the EAS Knowledgebase.

Summary and presentation of discussion:

Please present the outcomes of the group discussions in a power point presentation (max 20 minutes) focusing on recommendations for EAS/RCU during future improvements and expansions of the regional knowledgebase.

Group 2: The National Database Framework

Facilitator:

Mr. Hoang Duong Tung, CEMDI, VEPA

Group participants:

Mr. Soun Mean, MoE, Cambodia

Mr. Wu Xianfeng, SEPA, P.R. China

Mr. Jeffrey Low, National Park Board, Singapore

Mr. Mickmin Charuchinda, Eastern Marine and Coastal Research Center, Thailand

Mr. Wirote Laongmanee, SEA-RLC / SEA START RC

Ms. Birgitta Liss, UNEP EAS/RCU

Mr. Sami Dimassi, UNEP GPA

Guidance for discussion:

The objective of this group discussion is to identify recommendations for further development of the East Asian Seas Knowledgebase in terms of the proposed national database framework. Some of the main issues for discussion are listed below:

1. How can the national database framework be further developed to best complement the regional knowledgebase?
 - a. How would the national database framework best compliment the regional knowledgebase in terms of content? Does the current pilot national database provide a good example or does it need modification? If so, what modifications?
 - b. Are the 'Main indicators, formats and scopes of the Vietnam Marine Environment Portal' (see workshop folder) applicable for continued national database development in other COBSEA member countries or should it be modified.
2. Identify potential features and services that could be useful additions for the national database framework (ex. improved search functions, interactive features, etc.);
3. Discuss what type of information that can be open to the public and what type of information that would need to be restricted? How can sensitive data and information be dealt with within the national database framework?
4. How can the sustainability of the national database framework be ensured?
5. Discuss the relationship between national counterparts and regional partners in the EAS Knowledgebase.

Summary and presentation of discussion:

Please present the outcomes of the group discussions in a power point presentation (max 20 minutes) focusing on recommendations for EAS/RCU during future improvements and expansions of the EAS Knowledgebase in general and the national database framework in particular.

Group 3: Establishment of a Regional and National Partner Network

Facilitator:

Professor Chou Loke Ming, NUS

Group participants:

Mr. Agus Rusley, MOE, Indonesia

Mr. Ahmad Rizal Khalit, MONRE, Malaysia

Ms. Cheryl Chia, National Park Board, Singapore

Mr. Raman Letchumanan, ASEAN Secretariat

Professor Chan Eng Soon, NUS

Mr. Anond Snidvongs, SEA START RC

Ms. Srisuda Jarayabhand, UNEP EAS/RCU

Ms. Tan Moi Khim, WorldFish Center

Guidance for discussion:

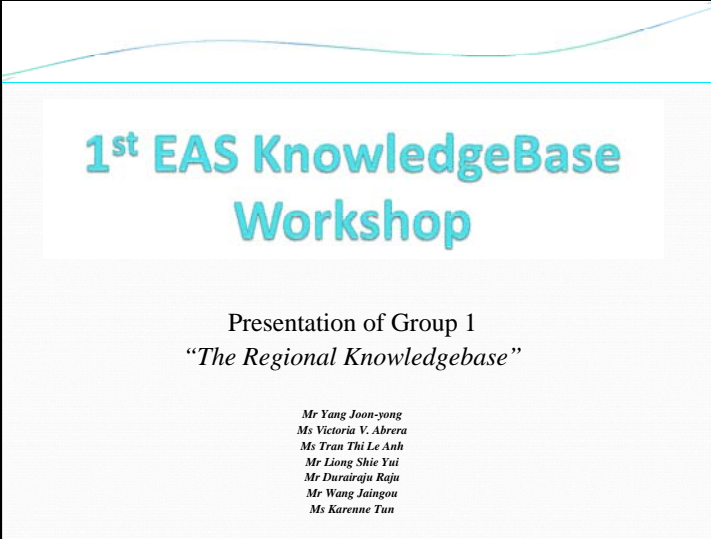
The objective for this group discussion is to identify how COBSEA can work closer with its partner organizations in the East Asian Seas region in order to strengthen and expand on the East Asian Seas Knowledgebase. Some of the main issues for discussion are listed below.

1. Discuss how the EAS Knowledgebase can be of best benefit to other partners in the EAS region.
 - a. What features/services/information could be added to the EAS Knowledgebase in order to best serve the interest of regional and national partner organizations?
 - b. How can the EAS Knowledgebase be expanded to provide up-to-date information on project activities undertaken by regional and national partners in the EAS region? Discuss some of the challenges in collecting such information and how these challenges could be addressed?
2. Discuss the potential roles and responsibilities of regional and national partner organizations in an EAS Knowledgebase partner network.
3. Discuss how collaboration with regional and national partners can be maximised in order to ensure the sustainability of the EAS Knowledgebase (updating and verifying data and information)? Consider ways to collaborate closely with regional and national partners in order to expand, update and verify the EAS Knowledgebase.
4. Discuss the relationship between national counterparts and regional partners in the EAS Knowledgebase.

Summary and presentation of discussion:

Please present the outcomes of the group discussions in a power point presentation (max 20 minutes) focusing on recommendations for EAS/RCU on how to work with partner organizations during future improvements and expansions of the EAS Knowledgebase.

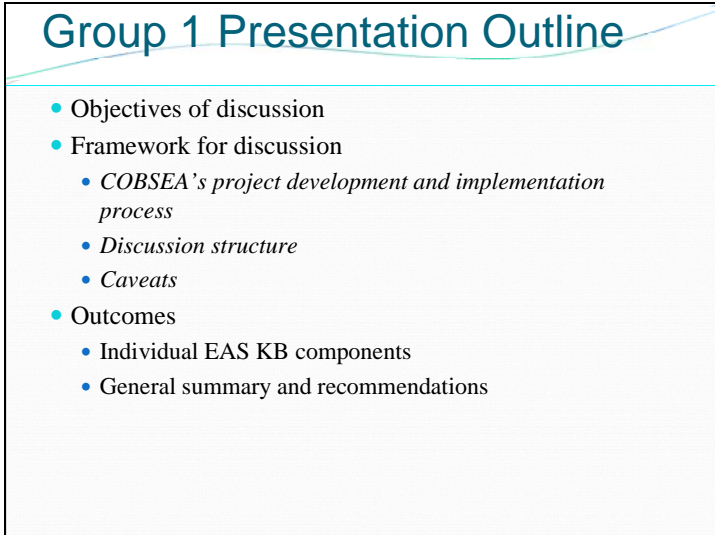
ANNEX 10:
SUMMARY OF DISCUSSION
GROUP 1: THE REGIONAL KNOWLEDGEBASE



**1st EAS KnowledgeBase
Workshop**

Presentation of Group 1
“The Regional Knowledgebase”

*Mr Yang Joon-yong
Ms Victoria V. Abrera
Ms Tran Thi Le Anh
Mr Liong Shie Yui
Mr Durairaju Raju
Mr Wang Jaingou
Ms Karenne Tan*



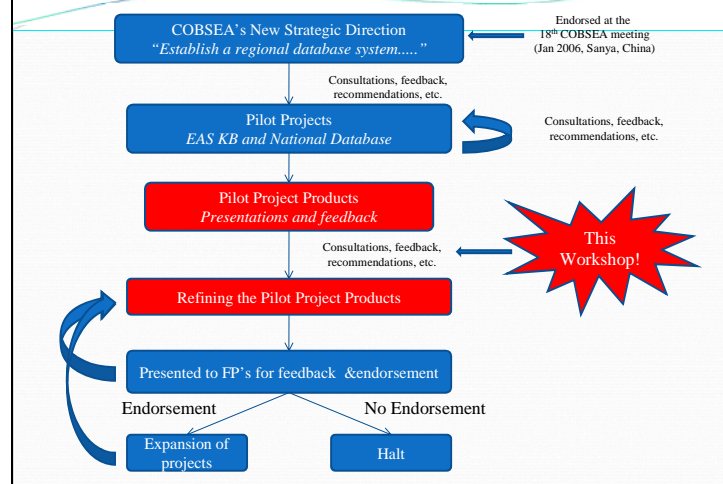
Group 1 Presentation Outline

- Objectives of discussion
- Framework for discussion
 - *COBSEA’s project development and implementation process*
 - *Discussion structure*
 - *Caveats*
- Outcomes
 - Individual EAS KB components
 - General summary and recommendations

Objective of Discussion

- Does the content of the EAS KB correspond to the current user needs in the East Asian Seas region?
- Identify potential features/useful additions for the EAS KB
- Identify additional sources of information for expanding the content of the EAS KB:
 - *Roster of Experts*
 - *Draft Questionnaire on Regional Activities*
 - *Other sources of information*
- Discuss ways to ensure sustainability of the EAS KB – maintenance, updating and verification of information
- Discuss the relationship between national counterparts and regional partners in the EAS KB

Framework for Discussion



Framework for Discussion

- EAS KB was discussed using the following structure:
 - *Identify EAS KB component*
 - *Define current scope and boundaries for each component (ie, what does the EAS KB want to provide and how - current and future goals)*
 - *Discussion, comments, feedback*
 - *Identify potential features/useful additions; recommendations*
- Caveats
 - *Group member's familiarity (lack of) with COBSEA*
 - *Cannot represent NFP's; nominees of NFP's (decision makers?)*
 - *Comments are personal opinions – not intended to be comprehensive or well represented*

Outcomes – Individual Components

- **Information Resources – Country Profiles**
 - Current scope & boundaries:
 - *Provision of generic country summaries & statistics (yearly updates)*
 - *Wide information sources*
 - *No provision for analysis of information*

Outcomes – Individual Components

Information Resources – Best Practices

- Current scope & boundaries:
 - *Provision of existing information – one-stop-shop resources on sustainable management of coastal and marine resources*
 - *Currently limited in themes – to be expanded (guidelines needed)*
- Discussion, comments, feedback:
- Potential features/useful additions/recommendations:
 - *Refine table fields and layout – internal consultation and feedback*
 - *Expand/refine categories, search options and themes - internal consultation and feedback from users/NFPs (Online, survey)*
 - *Include “Guides” in category (“Best Practices & Guides”?)*

Outcomes – Individual Components

Information Resources – Outreach

- Current scope & boundaries:
 - *Covers existing COBSEA programs*
 - *Limited in scope – to be expanded to include links to partner outreach programs*
- Discussion, comments, feedback:
 - *No discussion*
- Potential features/useful additions/recommendations:
 - *Nil*

Outcomes – Individual Components

Information Resources – Databases

- Current scope & boundaries:
 - *Listing of existing databases based on database types*
 - *Not exhaustive – to be expanded*
- Discussion, comments, feedback:
 - *Relevance of database listing – is it necessary?*
- Potential features/useful additions/recommendations:
 - *Nil*

Outcomes – Individual

Components

• Information Resources – Roster of Experts

- Current scope & boundaries:
 - *Provision of list of nominated (NFPs, partners, self) experts – by country and expertise*
- Discussion, comments, feedback:

Outcomes – Individual
Components

- **Regional Activities – Demonstration Sites**
- Current scope & boundaries:
 - *Listing of COBSEA, PEMSEA & SCS project sites –map format*
- Discussion, comments, feedback:
 - *Information currently too limited – not very useful*
- Potential features/useful additions/recommendations:

ANNEX 11:
SUMMARY OF DISCUSSION
GROUP 2: THE NATIONAL DATABASE FRAMEWORK

Group 2

The National Database Framework

To discuss

- How can the national database framework best compliment the regional knowledgebase?
- What potential features and services that would be useful in the national database framework?
- How can we best address sustainability of the national database framework?
- How can the issue of 'sensitive' data/information be resolved?
- How to address the relationship between regional and national partners in terms of data provision?

Useful because:

Regional information sharing:

- Facilitate monitoring/information sharing on transboundary

Content

- We need a template or a standard for what type of information that is to be shared within the EAS Knowledgebase
- Agree with the content in the 'Main indicators, formats and scopes of the Vietnam Marine Environment Portal' in principle (as a

COBSEA's role

- Guide and facilitate finalization of (content) template
- Make UNEP resources available to countries and partners for sharing experiences in similar projects (common platform for

ANNEX 12:
SUMMARY OF DISCUSSION
GROUP 3: ESTABLISHMENT OF A REGIONAL AND NATIONAL PARTNER NETWORK

**Group 3: Establishment of a Regional
and National Partner Network**

National

1. Countries can start compiling data following Vietnam pilot Database parameters (*start small, then expand as capacity increases, may need to agree on a set of common, significant parameters relevant to SOE reporting*)
2. Preferably COBSEA to deal with one focal point per country (*database may lie with different agencies - to be coordinated by focal point; some countries maintain national database that includes more than marine environment – information has to be extracted rather than to set up a separate database*)

Regional

1. EAS Knowledgebase to facilitate link up between

