# Report on the Expert Meeting on Marine Biodiversity and Eutrophication in the Northwest Pacific Region

- In the 2012-2013 biennium, NOWPAP CEARAC has been implementing its activities on marine biodiversity and eutrophication, which were approved at the 16th NOWPAP Intergovernmental Meeting held on 20-22 December 2012, Beijing, China.
- Approaching towards the end of the current biennium, CEARAC held an expert meeting on 5-6 August 2013 in Toyama, Japan in order to review the progress of its on-going activities with experts in the relevant fields from the NOWPAP member states and to collect their suggestions for preparing draft workplan for the next biennium (2014-2015).
- 3. The draft workplan, reflecting the outcomes of the Expert Meeting, will be presented at the 11<sup>th</sup> NOWPAP CEARAC Focal Points Meeting (FPM) to be held on 11-12 September 2013, Toyama, Japan, for approval of its submission to the 18<sup>th</sup> NOWPAP Intergovernmental Meeting to be held in December 2013.
- 4. The meeting started at 9:00 on 5 August 2013 at Tower 111 in Toyama, Japan. After the opening remark by Mr. Hiroshi ONO, Director of CEARAC, all of the meeting participants introduced themselves.

#### Agenda Item 1: Background and objective of the meeting

- 5. The Secretariat introduced the background and the objective of the meeting.
- 6. Upon recommendation from the Secretariat, it was agreed by consensus that Dr. Yasuwo FUKUYO, an expert from Japan, served as the chair of the meeting.

# Agenda Item 2-1: Case studies of the eutrophication assessment in the selected sea areas in the NOWPAP region with the refined NOWPAP Common Procedure

7. Dr. Zhiming YU, Dr. Changkyu LEE and Dr. Pavel TISHCHENKO, experts from the NOWPAP member states of China, Korea and Russia, and Mr. Genki TERAUCHI, researcher of CEARAC secretariat, presented the results of the eutrophication assessments in the selected sea areas (Jiaozhou Bay-China, Northwest Kyushu sea area and Toyama Bay-Japan, Jinhae Bay-Korea, and the Peter the Great Bay-Russia), using the refined NOWPAP Common Procedure.

# Agenda 2-2: Discussion on the refined NOWPAP Common Procedure and the outline of the regional overview on the eutrophication assessment

8. The Secretariat introduced the outline of the regional overview on the eutrophication assessment to be completed by the end of 2013 based on the results of the eutrophication assessments in the selected areas.

## Agenda 3: Discussion on the proposal of an activity on eutrophication for the 2014-2015 biennium

- 9. Based on the outcomes of the CEARAC activities for the 2012-2013 biennium, the Secretariat presented a proposal and draft workplan of an activity on eutrophication for the 2014-2015 biennium, "Trial application of the Screening Procedure of the NOWPAP Common Procedure for eutrophication assessment."
- 10. The meeting reviewed the workplan, in particular the proposed parameters for the detection of eutrophication symptoms, and suggested:
  - (i) to consider including a parameter representing nutrient inputs and their residence in an enclosed sea area;
  - (ii) to reconsider the applicability of "hypoxia occurrence frequency" due to possible lack of availability and reliability of such data in the NOWPAP region; and
  - (iii) to use the words of "red tides" instead of "red tides and harmful algal blooms (HABs)" since toxin plankton bloom is a part of HABs which may not be directly related to eutrophication.

# Agenda 4: Review of a draft regional report for conservation of marine biodiversity and sustainable use of marine ecosystem services in the NOWPAP region

- 11. The Secretariat introduced the draft regional report for conservation of marine biodiversity and sustainable use of marine ecosystem services in the NOWPAP region. The report was prepared based on the national reports by experts in each member state on selected marine protected areas (MPAs) in the NOWPAP region.
- 12. Since there was some information missing, the Secretariat requested necessary input in each chapter/sub-chapter from the national experts. The experts agreed to submit missing information by 12 August.
- 13. There were some suggestions to improve the quality of the report based on the IGM

decision including observing the deadlines and requirements in the Memorandum of Understandings (MoUs) that the national experts had signed with the Secretariat.

### Agenda 5: Discussion on the proposal of an activity on marine biodiversity for the 2014-2015 biennium

- 14. Based on the outcomes of the CEARAC activities for the 2012-2013 biennium, the Secretariat presented a proposal and draft workplan of an activity on marine biodiversity for the 2014-2015 biennium, "Development of procedures for comprehensive marine environmental assessment in the NOWPAP region."
- 15. After discussion, the meeting suggested the Secretariat:
  - (i) to further clarify the title, scope and tasks of the proposed activity and the workplan;
  - (ii) to focus more on the relevance to marine biodiversity conservation;
  - (iii) to consider the possibility of assessment of specific marine biodiversity topics based on the achievements of ongoing eutrophication and biodiversity projects so far, for instance, difference of settlement success of non-indigenous species due to eutrophication and other environmental conditions, and balance between eutrophication and sustainable use of marine resources; and
  - (iv) to consider the selection of feasibility study sites from current/past sites for eutrophication case studies and selected MPAs where necessary data are available.
- 16. The meeting requested the Secretariat to prepare a revised draft proposal outline within a few days and circulate it for comments from the participants in order to develop a concrete workplan to be presented to the 11<sup>th</sup> CEARAC FPM.

# Agenda item 6: Review of activities related to seagrass/seaweed mapping in the NOWPAP region

17. Dr. Yongchao ZHAO, Dr. Teruhisa KOMATSU, Dr. Jong-Kuk CHOI and Dr. Tatiana KRUPNOVA, experts from China, Japan, Korea and Russia introduced their activities on seagrass/seaweed mapping.

# Agenda item 7: Discussion on the proposal of an activity on seagrass/seaweed mapping for the 2014-2015 biennium

18. Based on on-going activities in the NOWPAP region and the current technologies of remote sensing, the Secretariat presented a proposal and draft workplan of an activity on seagrass/seaweed mapping for the 2014-2015 biennium, "Case studies on seagrass and seaweed mapping in selected sea areas in the NOWPAP region."

19. The meeting reviewed the proposal and workplan, and supported the activity with some suggestions to further clarify and elaborate the scope of the tasks which are achievable within the proposed budget.

#### Agenda item 8: Conclusion and adoption of the report of the meeting

20. The meeting was closed at 15:00 on 6 August 2013.

# List of Participants for the Expert Meeting on Marine Biodiversity and Eutrophication in the Northwest Pacific Region

#### **Expert of Marine Biodiversity**

#### Dr. Bei HUANG

Senior engineer

Zhejiang Provincial Zhoushan Marine Ecological

**Environmental Monitoring Station** 

20 Tiyu Rd, New city District, Zhoushan City,

Zhejiang Province, P.R. China 316021

Tel: +86-580-2064573, Fax: +86-580-2025873

E-mail: bighb@163.com

#### Dr. Yoshihisa SHIRAYAMA

**Executive Director of Research** 

Japan Agency for Marine-Earth Science and Technology

2-15 Natsushima-cho, Yokosuka City, Kanagawa 237-0061, Japan

Tel: +81-46-867-9000, Fax: +81-46-867-9005

E-mail: yshira@jamstec.go.jp

#### Dr. Yoon LEE

Senior Researcher

West Sea Fisheries Research Institute,

National Fisheries Research and Development Institute

Eulwang-dong 707, Jung-gu, Incheon, 400-420 Korea

Tel: +82-32-745-0650, Fax: +82-32-745-0678

E-mail: ecoaegis@gmail.com

#### Dr. Anatolii KACHUR

Director

Pollution Monitoring Regional Activity Centre (NOWPAP POMRAC)

7 Radio Str., Vladivostok City, 690041 Russian Federation

Tel: +7-4232-313071, Fax: +7-4232-312159

E-mail: kachur@tig.dvo.ru

#### Dr. Yasuwo FUKUYO

**Project Professor** 

Graduate School of Agricultural and Life Sciences

The University of Tokyo

1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-8657, JAPAN

Tel: +81-3-5841-2782, Fax: +81-3-5841-8040

E-mail: ufukuyo@mail.ecc.u-tokyo.ac.jp

#### **Expert of Eutrophication**

#### Dr. Zhiming YU

Professor

Institute of Oceanology

Chinese Academy of Sciences

7 Nanhai Road, Qingdao, 266071 China

Tel: +86-532-82898581, Fax: +86-532-82898566

E-mail: zyu@qdio.ac.cn

#### Dr. Zaixing WU

Postdoctoral fellows

Institute of Oceanology, Chinese Academy of Sciences

7, Nanhai Road, Qingdao, 266071, CHINA

Tel. +86-532-82898581, Fax: +86-532-82898587

#### Dr. Changkyu LEE

Senior Scientist

HAB Research Section, Southeast Sea Fisheries Research Institute,

National Fisheries Research and Development Institute

361, Yeongoonri, Sanyang-eup, Tongyeong city, Gyeongnam, Republic of Korea

Tel:+82-51-720-2522, Fax:+82-51-720-2266

E-mail: changkl@korea.kr

#### **Dr. Pavel TISHCHENKO**

Head

Hydrochemistry Laboratory,

Department of the Ocean Geochemistry and Ecology,

V.I. II 'ichev Pacific Oceanological Institute,

Far Eastern Branch of Russian Academy of Sciences

43 Baltiyskaya St., Vladivostok, 690041, Russian Federation

Tel:+7-4232-312-854, Fax:+7-4232-312-573

E-mail: tpavel@poi.dvo.ru

#### **Expert of seagrass/seaweed mapping**

#### Dr. Yongchao ZHAO

Associate professor

KeDianDaSha 815, Institute of Electronics,

Chinese Academy of Sciences

No.19, Bei SiHuan XiLu, Beijing, 100190, China

Tel: +86-13501162025

E-mail: ofcours\_sure@sina.com.cn

#### Dr. Teruhisa KOMATSU

Associate Professor

Atmosphere and Ocean Research Institute, The University of Tokyo

5-1-5, Kashiwanoha, Kashiwa-shi, Chiba 277-8564 Japan

Tel.: +81-3-5351-6515, Fax: +81-3-5351-6542

E-mail: komatsu@aori.u-tokyo.ac.jp

#### Dr. Jong-Kuk CHOI

Principal Research Scientist

Korea Ocean Satellite Center, Korea Institute of Ocean Science & Technology

787 Haean-no, Ansan, 426-744, Korea

Tel: +82-31-400-7608, Fax: +82-31-400-7715

E-mail: jkchoi@kiost.ac

#### Dr. Tatiana KRUPNOVA

Leading scientist

Pacific Scientific Research Fisheries Centre

4, Shevchenko alley, Vladivostok, 690091, RUSSIA

Tel: +7-423-2407146

E-mail: krupnova@tinro.ru

#### **PICES Representatives**

#### Mr. Chuanlin HUO

Planning and Management Department,
National Marine Environmental Monitoring Center, SOA
42 Linghe St., Shahekou District, Dalian,
Liaoning, 116023, P.R. China

Tel: +86-411- 8478-3218, Fax: +86-411- 8478-3277 E-mail: clhuo@nmemc.gov.cn; huocharlie@gmail.com

#### **NOWPAP Regional Coordinating Unit (RCU)**

#### Mr. Xiaodong ZHONG

**Deputy Coordinator** 

5-5 Ushijimashin-machi, Toyama City, Toyama 930-0856, Japan

Tel: +81-76-444-1611, Fax: +81-76-444-2780

E-mail: xiaodong.zhong@nowpap.org

#### Mr. Masakatsu OHYAMA

Administrative Officer

5-5 Ushijimashin-machi, Toyama City, Toyama 930-0856, Japan

Tel: +81-76-444-1611, Fax: +81-76-444-2780

E-mail: masakatsu.ohyama@nowpap.org

#### **Observer**

#### Ms. Izumi TSURITA

Researcher

Ocean Policy Research Foundation

Toranomon 35 Mori Bldg., 3-4-10, Toranomon, Minato-ku,

Tokyo, 105-0001 JAPAN

Tel: +81-3-5404-6809

E-mail: i-tsurita@sof.or.jp

#### **Secretariat**

#### Mr. Hiroshi ONO

Director

E-mail: ono@npec.or.jp

#### Dr. Takafumi YOSHIDA

Senior Researcher

E-mail: yoshida@npec.or.jp

#### Mr. Genki TERAUCHI

Senior Researcher

E-mail: terauchi@npec.or.jp

Northwest Pacific Region Environmental Cooperation Center (NPEC)

5-5 Ushijimashin-machi, Toyama City, Toyama 930-0856, Japan

Tel: +81-76-445-1571, Fax: +81-76-445-1581