

**3RD
YSLME
SCIENCE
CONFERENCE** | **15-19 JULY 2019
QINGDAO, PR CHINA**



Parallel Event 4

Nutrient Management in YSLME

13:30 - 18:00, July 18, 2019; and 09:00 - 12:00, July 19, 2019

Venue: Function Room 25, City Wing Level 2

Co-organizers:



Korea Marine Environment
Management Corporation
(KOEM), RO Korea



Korea Institute of Ocean
Science and Technology
(KIOST), RO Korea



National Marine
Environmental Monitoring
Center (NMEMC), PR China

Background

Coastal eutrophication is associated with large urban populations and agricultural production that has high fertilizer use or large numbers of livestock. Excessive nutrients transported by rivers into coastal waters can cause algal blooms that may be toxic and may deplete the oxygen in the water and make it turbid, affecting fish and other marine life. Atmospheric nitrogen deposition is also a contributor to coastal eutrophication. Policy responses that reduce nutrient inputs to watersheds will decrease risk to LMEs. Based on the data of 2000, coastal eutrophication in Yellow Sea is rated as high, according to IOC-UNESCO and UNEP (2016). The YSLME SAP adopted in 2009 by PR China and RO Korea specifically targets to reduce nutrient loadings in coastal areas from land-based, atmosphere and ocean-based sources. UNDP/GEF YSLME Phase II Project has been supporting the review of current status of coastal eutrophication and loading modelling in hotspots, demonstration of nutrient mitigation through natural solutions and sewage treatment to achieve reduction of nutrients in Yellow Sea.

Objectives

- To review the status of nutrient inputs from selected river basins, atmosphere-based and sea-based sources;
- To understand the progress being made in nutrient reduction through increase in fertilizer-use efficiency in crop production, improvements in management of manure, and upgrading sewage treatment, and use of artificial wetland as nutrient sinks in the Yellow Sea.
- To discuss opportunities for improved nutrient reduction through regional cooperation and policy developments.

Contact Persons

- Ms. Fan YANG, PR China, NMEMC/MEE, PR China
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- Dr. Jae-Ryoung OH, National Coordinator, YSLME Phase II Project, RO Korea
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- Mr. Jeenho MOK, Administrative Intern, YSLME PMO
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Note: *Forum language is English and translation services will not be provided during the session.*

TENTATIVE PROGRAM

DAY 4: 18 July (Thursday)

13:30 - 14:00

Registration for participants

14:00 - 14:10

Session Moderator for Opening Speech:
Ms. Milcah NDEGWA, UNEP

Opening Speech

- **Mr. Ziwei YAO**, NMEMC, PR China
- **Mr. Joong Ki CHOI**, Inha University, RO Korea

14:10 - 15:10

Keynote addresses

Moderator: **Mr. Joong Ki CHOI**, Inha University, RO Korea

GPA/Global Partnership on Nutrient Management (GPNM): Progress and Prospects

Ms. Milcah NDEGWA, UNEP

Shiwa Lake total pollutant load management in mitigation of COD and TP

Mr. Chang Hee LEE, Myongji University, RO Korea

Q&A session

15:10 - 15:30

Photo and Coffee break

15:30 - 18:00

Session 1: Status of nutrients inputs e.g. nitrogen and phosphorus from land-based from selected river basins, atmosphere-based and sea-based sources

Session Moderator: **Mr. Ziwei YAO**, NMEMC, PR China

- **Watershed modelling and nutrient loadings in Haizhou Bay of Jiangsu Province, PR China**
Mr. Lijun WANG, NMEMC of MEE, PR China

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- **Watershed modelling and nutrient loadings in Han River of RO Korea**
Dr. Hong-Lae CHO, Hydrocore, RO Korea
 - **Monitoring and acquisition of data from Yellow sea in RO Korea**
Mr. YoonSeok CHOI, National Institute of Fisheries Science, Ministry of Oceans and Fisheries, RO Korea

Q&A session

- **Monitoring and acquisition of data from atmosphere-based sources in PR China**
Ms. Limin YU, NMEMC of MEE, PR China
- **Atmospheric deposition of inorganic nitrogen to East Asian marginal seas**
Mr. Tae-Wook KIM, Assistant Professor, Division of Environmental Science and Ecological Engineering, Korea University

Q&A session

DAY 5: 19 July (Friday)

09:00 – 09:50

Session 2: Impacts of excessive nutrients loadings in the Yellow Sea

Session Moderator: **TBC**

- **A historical overview of trophic status in Jiaozhou Bay of Yellow Sea**
Dr. Baodong WANG, First Institute of Oceanography, MNR, PR China
- **Coastal Ocean Acidification and hypoxia: the other eutrophication problems**
Dr. Qinsheng WEI, First Institute of Oceanography, MNR, PR China

Q&A session

09:50 - 10:10

Coffee Break

10:10 - 11:30

Session 3: Nutrient reduction or remediation through nature-based solutions

Session Moderator: **TBC**

- **Restoring coastal wetlands as nutrient sinks: case studies and regional strategies**
Mr. Guoxiang LIAO, NMEMC of MEE, PR China
- **Variation in nutrients uptake by cultured seaweeds and a simple evaluation of *in situ* N demand at laver aquaculture farms in South Korea**
Ms. Jeong Hee SHIM, East Sea Fisheries Research Institute, NIFS, RO Korea
- **World Bank Guangdong Project on Nutrient Management**
Mr. Birun LIN, World Bank Guangdong Project
- **Implementation of Nitrates Directive in Romania**
Mr. Mihai CONSTANTINESCU, Specialist, Agriculture and Forestry, Ministry of Waters and Forestry, Romania

Q&A session

11:30 - 12:00

Wrap-up of the session and closing remarks
