

**3<sup>rd</sup> Technical Meeting for the Co-operative Study Cruise**  
**11<sup>th</sup> to 12<sup>th</sup> July 2006**  
**Ansan, Republic of Korea**

**Summary Report**

1. The “3<sup>rd</sup> Technical Meeting for the Co-operative Study Cruise” was held to discuss and finalise the pre-, post-, and during cruise agreements.
2. Mr. Yihang Jiang, Project Manager, opened the meeting, updating participants on the status of cruise approval. He informed the meeting that informal consultations were carried out since the 2<sup>nd</sup> Technical Meeting, and some progress had been achieved with compromises from the participating countries. The official approval process is being carried out in the participating countries. In order to proceed with arrangements for the cruise, this meeting was necessary for the cruise Pollution and Ecosystem Group Leaders to meet together and finalise the technical arrangements. Some of the topics that needed to be discussed included: dates of the cruise, scientists to be on-board, equipment provided by each side, samples to collect, and the relevant budgetary issues.
3. The agreements from the “2<sup>nd</sup> Technical Meeting for the Co-operative Study Cruise” were reviewed, and outstanding issues were highlighted for finalisation at this meeting. Participants were also reminded that benthos and core sampling need more discussion, and the budgets need to be finalised.
4. The list of participants is attached as Annex I.
5. **The agreements from the Meeting are as follows:**

**ADMINISTRATIVE ISSUES**

- The cruise should be conducted from 1<sup>st</sup> to 30<sup>th</sup> September 2006.
- The workplan was revised and is attached as Annex 2.
- The deadline to submit all outstanding information (confirm co-chief scientists names, confirm names of scientists on-board and their passport details, ecosystem budget breakdown details, # of samples to collect and share, confirm CTD sensors) to the PMO is **20<sup>th</sup> July 2006**. See Annexes 2 and 3 for the outstanding items.
- The Ecosystem Team’s budgets will be submitted to the PMO, then PMO will decide whether or how to issue a separate contract for the benthic survey.

**TECHNICAL ISSUES**

- HPLC and benthos analysis of samples from the “square” stations (sample sharing stations) (See Annex 4 – station map) would be done in Korea.
- Van Veen and Smith McIntyre grab samplers will be used for sediment sampling. Box corers may be used when necessary.

- China Ecosystem Team will request budget to purchase a freezer for sample storage.
- China Ecosystem Team will make efforts to arrange CPR training before the cruise starts. The CPR will be deployed in 3 or 4 transects.
- China Ecosystem Team will also confirm that the CTD will include all necessary sensors (PAR, Fluorescence, Transmission sensors).
- The Ecosystem Working Group discussed the budget for benthic work, and agreed that this work should be put to open-bidding, due to the limited available budget, and wide range of estimates for carrying out the work. Members of the working group agreed to submit budgets and proposals to the PMO from China and Korea, to see which institute would be able to carry out the work with the least possible cost and best available qualifications.
- Pollution Team will consist of 4 Chinese scientists and 3 Korean scientists.
- PMO will correspond with SOA North Sea Branch to examine the possibility of the ship crew's help in deploying the CPR.

#### LOGISTICAL ISSUES

- Korean teams will compile all equipment at KORDI, Ansan, and send to Qingdao as one shipment. Mr. Wang Zongling of FIO is the contact person to receive the equipment and assist with customs clearance in China:

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- Samples to take to Korea for analysis will be transported via ferry boat from Qingdao to Incheon.

Additional agreements and decisions from the Pollution and Ecosystem Teams are attached as Annex 5 and Annex 6, respectively.

## Annex 1

### List of Participants

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## Annex 3

### Outstanding Issues From the Topics to Discuss and Agree on During The Third Technical Meeting for the Co-operative Study Cruise in the Yellow Sea Marine Basin

#### Technical:

1. List of samples to be collected
2. List of samples for sharing
3. Equipment to transport from Korea to Qingdao
4. Equipment to be provided by Chinese scientists
5. Sample analysis – who, where, when
6. Workplan

#### Budget:

1. Budget for pre-, post- and during cruise operations **Deadline 20 July 2006**

#### Logistics:

1. Cruise dates – **1<sup>st</sup> Sept – 30<sup>th</sup> Sept 2006**
2. Cruise leader(s) (**co-chief scientists**) – recommend Heo Seung and Wang Zongling. **To be confirmed from both sides. Deadline 20 July 2006.**
3. Team members, contact details - **Deadline 20 July 2006.**
4. Each member's responsibility pre-, post- and during cruise
5. Each member's passport details
6. How to take samples back to Korea

#### Administration: **Deadline 20 July 2006.**

1. Contracting institute name
2. Contract contact person
3. Contract signature authority



## Annex 5

### Pollution Component Working Group Agreement to The Third Meeting for the Co-operative Study Cruise

Wen Quan, Oh Jae Ryoung, Huo Chuanlin

#### **Technical:**

##### **1. List of samples to be collected**

Both Korea and China sides agree on the List of samples provided by PMO (by 2<sup>nd</sup> Technical Meeting). There is no comment on that (Appendix P1).

##### **2 List of samples for sharing**

Both sides agree with decision of the 2<sup>nd</sup> Technical Meeting on this matter. The sampling map from that meeting will be adopted.

##### **3 Equipment**

Dr. Yim already contacted with Prof. Wen on this matter, mainly the pre-treatment equipments need to be transported from Korea to Qingdao, China (NMEMC) will provide the analysis equipments onboard and another set of pre-treatment equipments. China will also prepare the chemical agent for analysis onboard (Appendix P2).

##### **4 Sample analysis**

**Onboard:** Dr. Yim and Mr. Jiang Yuewen are the chief scientists (team leaders) of sampling and onboard sample analysis for pollution.

##### **laboratory**

###### **Korea Side:**

Analysis Metals will be done at KORDI, Dr. Kyung Tae Kim is responsible  
POPs will be analyzed at KORDI, Dr. Un Hyuk Yim is in charge

###### **China Side:**

Both Metals and POPs will be analyzed at NMEMC, Dr. Ziwei Yao is responsible for POPs analysis and Mr. Chuanlin Huo is responsible for metals analysis.

We don't have agreement on the date of submission of analysis result and report, because two months are not enough to finish all the work at laboratory. However, December is reporting month for both sides. Pollution component would like to put forward this issue to PMO, if the report can be sent to PMO on January, 2007.

##### **5 Workplan**

A workplan will be done on the basic of PMO version.

#### **Budget:**

The Budget of Pollution component for Korea side and China side had been made. The Budget for Korea is USD 82,480 and for China is USD 81,640 (Appendix P3K, Appendix P3C).

#### **Logistics:**

Cruise dates: 1<sup>st</sup> Sep. – 30<sup>th</sup> Sep., 2006  
Pollution Team Leader: Dr. Yim

Team members keep unchanged, the contact details and already in the chart provided by PMO. The responsible of each member has already been assigned initially when preparing

the agent and bottles, equipments. Chinese team will provide name and detail of the 4<sup>th</sup> scientist.

Korea side promised to ask members to provide their passport details for visa application (Appendix P4).

**Administration:**

Both sides agree to further discuss on the contracting issues.



## Annex 6

### Agreements for summer cruise in Sep 2006 Ecosystem Working Group

Sinjae Yoo, Xulei Zhang, Jae Hoon Noh, Charity Lee, Eun Jin Yang, Ja-Yang Park

- Sampling will be done at 24 common stations and 12 stations in each country's waters. Due to the high workload required by taxonomic work, taxonomic analysis by the time of reporting will be confined to two depths in the common stations. But analysis will be done at all the depths in each country's own waters (Appendices E1, E2, E3).
- Budget will be equally divided into two except for the additional costs required by Korean work, which include travel expenses, equipment and sample transfer costs, and HPLC analysis. The additional costs were suggested to be U\$24,000 as previously proposed to China. Thus the final budget for China is U\$48,000 (Appendix E4C) and that for Korea is U\$72,000 (=48,000+24,000) (Appendix E4K).
- Budget for sediment core will be U\$12,000 (\$4,000 per core including CPN analysis and dating). U\$42,000 is allocated to benthos survey for 24 stations.
- 14 participants will be allocated in expertise in the following way: 1 chief scientist; 3 for benthos and core; 5 Chinese and 5 Korean for pelagic work (Appendix E5).
- We have not solved berth for CPR experts.