# Minutes

of

# 2<sup>nd</sup> Meeting Regarding 4-Lateral Exploration of Risk-Based Flood Management Approaches

1 October, 2009, TSUKUBA, JAPAN

### **Participants (see Annex)**

#### 1) Welcome

Mr. Toshio Okazumi welcomed participants and introduced the planned agenda for the day's deliberations.

#### 2) Opening

All participants introduced themselves. Minutes of the March 20, 2009 meeting were formally approved.

#### 3) Group discussion

The discussion was chaired by Mr. Okazumi.

#### Theme 1: How do we consider and assess flood risks?

Following the presentations from the representatives of 4 countries, a question-and-answer session was held. The summary of presentations and discussions are as follows:

- Presentations by representatives of each country made it clear that the situations of risk assessment vary from country to country as follows:
  - UK: Risk assessment at a national level;
  - USA: Case Studies (Sacramento River/San Joaquin River and Gulf Coast);
  - Japan: Cost benefit analysis of economic damages
  - Netherlands: Separate analysis of individual risk and social risk
- The efforts of 4 countries supplement each other, and applying the efforts to a
  comprehensive framework could be valuable. While the framework for classifying the
  efforts could be useful, it could be difficult to apply a country model to a general
  framework. Clarifying gaps among countries, uncertainties, risk levels, effectiveness
  of methodologies, and feasibility is proposed as another framework.
- It is proposed that the next meeting focus on 1 to 2 topics. A topic is to identify gaps
  among countries, necessity of knowledge sharing, and match-making of opportunities.
  Other possible topics are how to implement cost-benefit analysis in each country, how
  to address environmental problems, and how to identify allowable risk. Of interest are
  the details of situations of discussion on assessment at a national policy level and
  their methodologies.

## Theme 2: How do we cope with flood risks?

Following the presentations from the representatives of 4 countries, a question-and-answer session was held. The summary of presentations and discussions are as follows:

- Presentations by representatives of each country as follows:
  - UK: TE2100:
  - USA: National Flood Risk Management Program;
  - Japan: Case Studies (Tone-River, Arakawa-River, and Kitagawa-River);
  - Netherlands: Risk Assessment of Dike Rings
- Adaptive approach for determining flood risk is to identify allowable risk levels and uncertainties and the required investments.
- Which is better, short-term or long-term plan? Climate change planning could contribute to risk reduction.
- The focus should be shifted from protection to risk reduction.
- Risk still remains even if structural measures are enhanced. Therefore, we should live with socially allowable risk.
- Optimal combination of structural or non-structural measures is necessary. Efficient communication and response and evacuation systems, such as hazard map, emergency response systems in communities are necessary.

# **Concluding Discussion**

On the basis of the above discussions.

- Mr. Alphen (Netherlands) showed a framework that clarifies the position of the discussions at this meeting. (Past-Present-Future (Climate Change), National-Local-Stakeholder Level). The framework was supported by the participants.
- Flood management in each country varies, thus understanding of mutual gaps among countries is necessary. It is important to classify background information about policy challenges and efforts in each country, such as natural, historical, financial conditions, river basin characteristics.
- The proposed discussion agenda identified the following for inclusion in the framework and subsequent draft document:
  - Risk assessment, mapping, communication
  - Understanding differences among countries
  - Long-term vision for climate change, monitoring, assessment, maintenance, and investigation
  - Emergency response
  - Classification of river basin characteristics
- Ms. Bourget (USA) proposed USACE will host the next meeting in October 2010. It
  was also decided to confirm with Mr. Rooke whether UK has the intention of hosting
  the next meeting in the interim.
- Japan will draft the minutes of this meeting and Mr. Alphen will produce a draft outline
  of the final report on the basis of the discussions at the meeting. And then, the
  documentation should be prepared based on the draft outline. Each country will begin
  to draft some of its contributions to the document in advance of the next meeting.

- Minutes and presentations from the meeting will be posted to a website accessible to the group.
- Mr. Ikeuchi made closing remarks. He expects that the meeting outcome initiated by 4 countries could contribute to facilitate concrete adaptation measures against increasing severe disaster events in developing countries as well. He also expects to enhance cooperation among countries.