

Advanced Training Workshop on Reservoir Sedimentation Management

10-16 October 2007

International Research and Training Centre on Erosion and Sedimentation,
Under the Auspicious of UNESCO,
Beijing China



Sponsored by

International Sedimentation Initiative (ISI)-UNESCO-IHP
Ministry of Water Resources, Government of China

Co-sponsored by

World Association for Sedimentation and Erosion Research (WASER)
The Chinese National Committee for IHP

INTRODUCTION: The International Sediment Initiative (ISI) has been launched by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), as a major activity of the current Sixth Phase (2002-2007) of the International Hydrological Programme (IHP). The overall objective of the International Sedimentation Initiative is to promote and interact with activities that will result in:

- Increased awareness of sedimentation and erosion issues;
- Improved and sustainable management of soil and sediment resources;
- Better advice for policy development and implementation.

The 36th Session of the International Hydrological Programme (IHP) Intergovernmental Council's Bureau (31 March to 2 April 2004) approved the report of the ISI TFG of April 2004. The Bureau recommended that the International Research and Training Center on Erosion and Sedimentation (IRTCES) in Beijing play a key role in implementing the ISI.

The 16th session of the Intergovernmental Council of the IHP was held at UNESCO Headquarters in Paris from 20 to 24 September 2004. In the Resolution XV-8 of the Final Report, it says, "The ISI Advisory Board was formed and a basic document on global assessment has been prepared. IRTCES was invited to take the lead in coordinating the implementation of the initiative and China has also expressed its strong support for this programme." The Council also approved that the IRTCES play a key role in implementing the ISI.

In consideration of the aforementioned background, International Research and Training Center for Erosion and Sedimentation (IRTCES) in Beijing, China has been identified as the ISI Project Technical Secretariat. Based on the mandate of the Technical Secretariat IRTCES will be organizing the International Training Workshop on Reservoir Sedimentation Management during 10-16 October 2007.

INTERNATIONAL TRAINING WORKSHOP: Reservoir sedimentation will occur after impoundment of a reservoir due to reduction in water surface slope and velocity. Many impacts can be induced by reservoir sedimentation, such as on life-span of reservoir, flood control, power generation, water quality, obstruction to navigation, headward extension of backwater deposits and degradation below reservoirs, etc. In China there are lots of reservoirs constructed on heavily sediment-laden rivers, so reservoir sedimentation problems are very serious. Chinese scientists and engineers involved in sediment research have accumulated rich experiences and taken effective methods in the reservoir sedimentation management for a long time. IRTCES wishes to share these findings and issues with all people engaging in sediment research of the world.

The Advanced Training Workshop on Reservoir Sedimentation Management is designed in fulfilling demands and needs for hydraulic engineers, managers, stakeholders and decision-makers in the countries suffering of serious reservoir sedimentation. Through lectures, discussions, exchanges and one-day field study the participants can improve their professional sediment theory and knowledge, get much latest concepts and techniques, and information and establish linkage among participants.

The general objectives of the training course will focus on the following points:

- ✓ Understand basic sediment theory and necessary knowledge
- ✓ Understand reservoir sedimentation features, management and control
- ✓ Understand Chinese experiences accumulated in the reservoir sedimentation management
- ✓ Promote exchanging information and ideas in the related fields

The Advanced Training Workshop on Reservoir Sedimentation will be organized as a major activity of the International Sedimentation Initiative (ISI) of UNESCO for 2006-2007. It should meet the fourth objective of ISI "Education and capacity building for sustainable sediment management". In the next few decades more than 50% of the world's reservoir storage capacity

may be lost due to sedimentation, and realizing that appropriate sites for water storage are limited so that the sediment management practice in rivers, watersheds and reservoirs is of great importance and should be improved.

UNESCO Office Beijing is extending financial contribution for organizing this training course under ISI of IHP-UNESCO.

COURSE CONTENTS

1. Sedimentation in reservoirs and its impact on reservoir function
 - ✓ Introduction on the function of reservoirs and possible problems
 - ✓ Sedimentation in reservoirs
 - ✓ Preventative methods for the sedimentation in reservoirs
 - ✓ Impacts of sedimentation on the function of reservoirs
2. Management for sedimentation in reservoirs and techniques for capacity restoration
 - ✓ Mode of Reservoir Operation and drainage of sediment
 - ✓ Density flow and drainage of sediment
 - ✓ Other methods for reservoir capacity maintenance such as dredge
3. Flood management and reservoir operation
 - ✓ The formation and process of floods
 - ✓ Key techniques for flood prevention in reservoirs
 - ✓ Relationship between flood management and reservoir operation
 - ✓ Introduction on automatic reservoir operation system
4. Ecological Environment in Water Reservoirs and the Restoration Techniques
 - ✓ The Status Quo of Ecological Environment in Water Reservoirs and Rivers
 - ✓ The Impacts of Reservoir Construction on River Ecological Environment, including those on fish migration, climate change, and earthquake
 - ✓ The physical, chemical and biological methods for ecological restoration techniques of Reservoirs
5. Introduction of typical reservoirs as cases

METHODOLOGY: During the programme, participants will be exposed to fundamental concepts through lectures presentations and discussions. Participants will be given an opportunity to visit the IWHR laboratory to see the physical demonstration. One of the best case study on three gorges dame will be dealt in details in order to provide the knowledge to the participants on the mega problems in reservoir sedimentation. Participants will be encouraged to bring their case study to make presentation to the other audience as well experts from China will also be present during this session to provide expert feedback on sediment related issues.

FACULTY: The faculty members from IRTCES, Chinese National Committee for IHP IWHR, and other national universities. Efforts are being made to get international experts to provide lectures on various topics.

INSTRUCTIONS TO PARTICIPANTS:

Language: The whole process will use English. So it is strongly suggested that the participants must be good at speaking and reading English.

Background: Engineers and scientists who specialized reservoir management, sediment and erosion issues, geomorphology etc.

BOARDING AND LODGING:

Participants will be provided with standard furnished double bed room (sharing) accommodation. The basic condition includes 24 hours hot water, breakfast, separate bath

room. Food (Lunch and Dinner) will be served. If there is any special requirements for food please indicate your preference to the course organizer they will try to organize your need.

TRAVEL EXPENDITURES:

The training course organizer will arrange for return air ticket from home country to Beijing and back for participants from Mongolia, DPRK. For other countries, you may try to get support for travel from your organization or try to apply for partial support from the local UNESCO Office or other donors. Local organizer will be happy to cover your local expenses (board and lodge) at Beijing.

VISA AND OFFICIAL INVITATION: To enter in to China every one requires valid Chinese visa, it is strongly advised to secure Chinese Visa before leaving the home country. The organizer will arrange the official invitation document for helping participant's visa application.

EXPENDITURE TO BE BORNE BY PARTICIPANTS/NOMINATING AGENCIES:

Daily Subsistence Allowances (DSA) if any, cost incurred by participants with respect to medical insurances, loss or damage to personal property, compensation in the event of death or disability of participants while attending the workshop and any other claim by the participants towards any other expenses incurred during the program and travel; also, in the event of hospitalization during the program, the participants have to bear the related expenditures.

INSURANCE

All the participants are advised to take adequate insurance towards health, medical, accident or any other health related incidences/cases during their stay in China, UNESCO / IRTCES shall not be responsible for such expenses.

Interested participants should send their application in the enclosed form duly forwarded and recommended by the National MAB Committee

APPLICATION SHOULD REACH THE COURSE ORGANIZER WITH A COPY UNESCO OFFICE BEIJING WITH A COPY TO THE ORGANIZER AT IGSNRR BY 31 August 2007.

Ms. Tong Yuling
IRTCES
P.O. Box 366,
No.20 Chegongzhuang West Rd.,
Beijing, 100044, P. R. China
Tel: +86-10-68786683,
Fax: +86-10-68411174,
Email: tongyl@iwhr.com

Ms. Wang Jin,
Programme Assistant, Natural Science Sector,
UNESCO Office Beijing
Waijiaogongyu 5-15-3
Jinaguomenwai Compound,
Beijing 100600, China

Tel: +86-10-6532 7683
Fax: +86-10-6532 4854
Email: jin.wang@unesco.org

Advanced Training Workshop on Reservoir Sedimentation Management

10-16 October 2007

International Research and Training Centre on Erosion and Sedimentation,
Under the Auspicious of UNESCO, Beijing China

1. Name:
2. Date of Birth and Gender (M /F):
3. Designation
4. Name of the Nominating authority:
5. Educational Qualification:
6. Previous Knowledge in Sedimentation Control:
7. Motivation for attending the Course and future plans:
8. Address for Communication:

Phone No. (office):
Phone No. (home):
Fax (office / home):
Email:

9. Passport details:
Number:
Date of Issue:
Data of Expiry:
Place of Issue:

I have read the terms and conditions mentioned in this brochure, and agree to abide by them.

Date:

Signature of Applicant

Signature and Stamp of
Nominating Authority
(National IHP Committee/ UNESCO
National Commission)