

WASER — WORLD ASSOCIATION FOR SEDIMENTATION AND EROSION RESEARCH

SEDIMENT PROBLEMS - MATTER OF GLOBAL CONCERN In the twenty first century, humanity will be confronted with three major problems, namely rapid increase in population, shortage of natural resources and protection of the environment. Sediment problems in general, including those arising from land erosion, sediment transport in streams and sediment deposition in reservoirs and lakes, will directly affect the rational development of water and soil resources, the control of floods in rivers and the protection of the environment as well as ecology in river basins and hence will impact all the three problems listed above.



According to preliminary sediment statistics available for the world, the annual erosion of surface soil from river basins amounts to 60 billion tons, of which 17 billion tons are discharged into the oceans. In the process, as much as 5 to 7 million ha of farmland are annually ruined and about 1% of the precious storage capacity of the world's reservoirs is annually lost to deposition.

In addition to the loss of flood-control storage due primarily to reservoir deposition, there are numerous instances of aggravation of flood disasters and deterioration in ecology and environment caused by erosion and deposition of sediment. Extensive erosion of bare lands by water or wind has intensified desertification and turned the rivers turbid, after depriving the land of good top soil. Aggradation due to heavy deposition of sediment in river channels has transformed the downstream reaches of many rivers into "perched" rivers with beds higher than the riparian valley floor. Steep slopes with a loosely formed soil surface and lack of adequate vegetative cover under torrential storms have often triggered debris flows, which devastate both rural and urban areas. Slope disintegration, another form of soil erosion, along with landslides, has caused extensive movement of coarse materials downhill to cover much of the once fertile land in foothill regions. Adsorption of nutrients and heavy metals onto fine sediments deposited in reservoirs has contaminated the water of many reservoirs and lakes through eutrophication and other biological as well as chemical processes. Heavy sediment deposition in river channels, harbours and estuaries has impeded inland navigation, especially the passage of large vessels between inland metropolitan areas and important coastal cities.



The sediment problems described briefly in the foregoing are typical ones, which have constituted the core of sediment research in the past. There are more sediment problems and their possible solutions yet to be addressed in the future. Only the sound management of erosion and sedimentation may contribute to the mitigation of sediment problems and help strive toward the sustainable development of natural resources, especially soil and water.

THE NEED FOR MORE COMPREHENSIVE ORGANIZATION TO PROMOTE SEDIMENT RESEARCH

Many international organizations, such as ICOLD, IAHR and IAHS among others, also direct attention to sediment problems. Some of them have even set up *ad hoc* divisions or committees in the area of sediment research. Understandably, however, the scope of these divisions or committees is often limited to the specific topics of interest in the individual organizations. To date, a truly comprehensive organization for promotion of sediment research, embracing most, if not all, of the relevant disciplines is still lacking. Its present status is thus contrary to the interdisciplinary nature of sediment problems and there is the urgent need to promote their study. For this reason, the International Research and Training Center on Erosion and Sedimentation (IRTCES) hereby proposes a world organization to promote multidisciplinary sediment research. Emphasis is to be placed on the interdisciplinary nature of an organization needed to embrace all the disciplines listed above. It is believed that an organization of this nature can grow to the extent that it can benefit all countries through the sound progress of sediment research. This type of organization is definitely and urgently needed now and even more so in the coming years, if the sustainable development of the world economy is to be achieved. The proposed organization is aimed at uniting the world's scientists and engineers engaged in various fields of sediment research, thereby helping to solve all kinds of sediment problems in the world, using an interdisciplinary approach. A holistic effect on the advance of sediment research may be expected through mutual inspiration, when specialists in different disciplines come together.



The proposed organization is expected to cooperate closely with other related organizations, thus complementing rather than competing with them. The proposal has received warm responses worldwide. So far, more than 60 scientists and engineers from 16 countries have made responses to the proposal in support of the new association to be founding members. UNESCO, IAHS and other organizations expressed their support to the proposed association.

NAME OF THE ORGANIZATION

World Association for Sedimentation and Erosion Research (WASER)

OBJECTIVES AND MISSIONS OF WASER

The objectives of the WASER are to promote the study and development of the science of erosion and sedimentation interpreted in its widest sense, and to foster the application and dissemination of knowledge of sedimentation and erosion. WASER will aim to further the progress of the understanding and application of the sediment transportation through international contacts among scientists, engineers, organizations, institutions, and governments.



SECRETARIAT

IRTCES can serve as the Secretariat of WASER. IRTCES was founded in 1984, under the joint sponsorship of UNESCO and the Chinese Government, to promote research and training in solving scientific and engineering problems related to the erosion and deposition of sediment. Since then, it has organized many international training courses and workshops in fields pertaining to sediment research in the Asia-Pacific region. Its headquarters in Beijing comprise offices and conference rooms with modern communication and video-audio facilities.

STATUTES

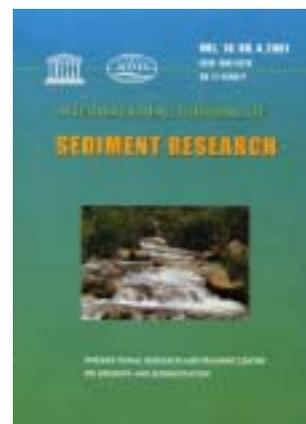
A draft statutes of the association is prepared and will be circulated for revision. The Council consisting of eminent scientists and scholars from all over the world elected by the first assembly of the Association will lead the Association. This Council in turn will elect the President and Vice-President from the Council members. The Council under the general direction of the President will prepare byelaws for divisions or committees under the Association with the assistance of the Secretariat.

WASER SYMPOSIA

Ever since its founding, IRTCES has served as the permanent Secretariat of the international series of Symposia on River Sedimentation. To date, eight such symposia have been held in China, U.S.A., Germany, India, Hong Kong and Egypt, respectively. The next one is scheduled to be held in 2004 at the site of the partially completed Three Gorges Project on the Yangtze River near Yichang, China. This series of symposia will be scaled up to serve as the official Symposium of the Association.

WASER JOURNAL

Since 1986, IRTCES has published the *International Journal of Sediment Research*, which is the only English language journal that is devoted exclusively to the field of sediment research in the world. It is presently published quarterly and has become an important international journal for sediment researcher and river engineer to publish their papers. This journal will become the official journal of the Association.



MEMBERSHIP

Members of the Association should be holders of degrees or diplomas in related disciplines from universities or colleges or their equivalents, and should be actively engaged or interested in soil erosion and sedimentation studies, including both research and engineering practice. Persons without the said degrees or diplomas but with appropriate practical experience may also apply for membership. A committee will be appointed by the President of the Association to consider these applications. The annual membership fee for a regular member will be 30 US dollars. This membership fee includes a subscription to the *International Journal of Sediment Research*, which is published quarterly, with postage for sending the journal by surface mail included.



INQUIRY FORM FOR WASER

NAME	SEX	AGE	TITLE	AFFILIATION	
TEL:			FAX:	E-MAIL:	
ADDRESS					
SUPPORT WASER OR NOT?	YES	NO	WILLING TO BE A MEMBER?	YES	NO
SUGGESTION					

Thank you for your support to the WASER, please fill the form and send it to the following address.

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