



United Nations
Educational, Scientific and
Cultural Organization



International Research
and Training Center on
Erosion and Sedimentation



International Symposium of
Category 2 Centres under
the Auspices of UNESCO

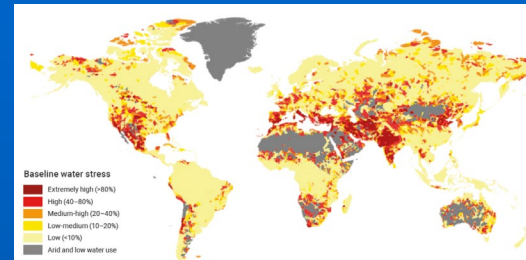
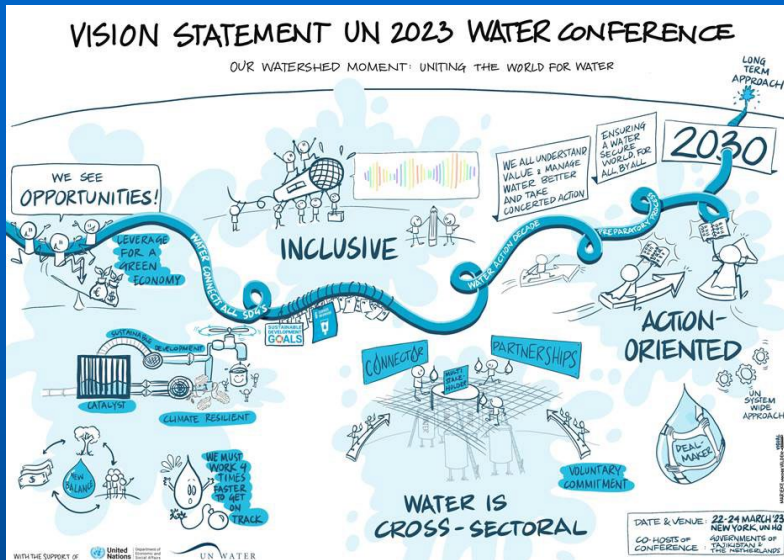
International **R**esearch and **T**raining **C**enter on **E**rosion and **S**edimentation (IRTCES)

China **I**nstitute of **W**ater Resources and **H**ydropower **R**esearch (IWHR)

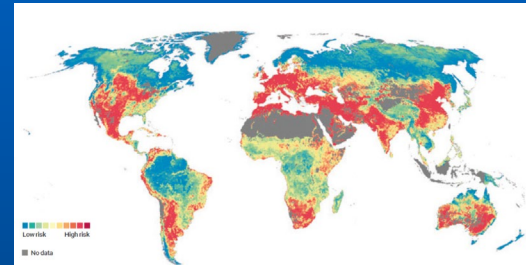
Professor, Deputy Director-General,
ZHANG Jianli

15 – 17 May 2024, Kuala Lumpur, Malaysia

i - challenges



Annual baseline
water stress,
WWDR2023



Global risks of poor water quality, WWDR2023

Progress on water related goals and targets remains **alarmingly off track**



Water Shortages



Climate Change



Water Pollution



Biodiversity loss

1 Background ii - IRTCES

Established in 1984



First UNESCO category II center



World Association for Sedimentation and Erosion Research



World Association of Soil and Water Conservation



International Sediment Initiative

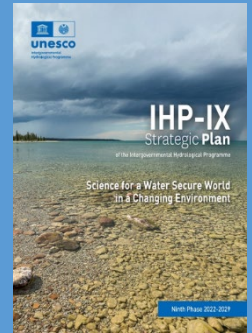


3 experimental bases

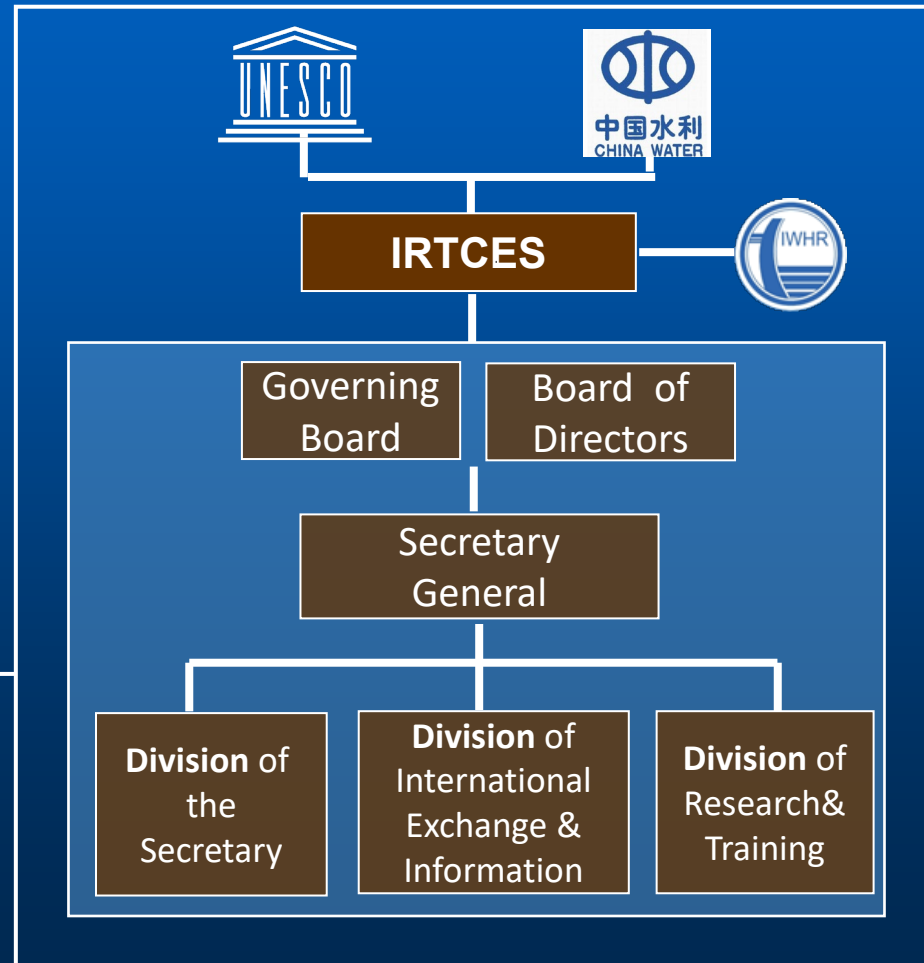


Water-related SDGs

IHP IX
2022-2029



Activities



2 Bridge and linkage i: Initiative/Program



ISI: UNESCO IHP flagship Programme

Establishment

Launched by UNESCO IHP in
2002.

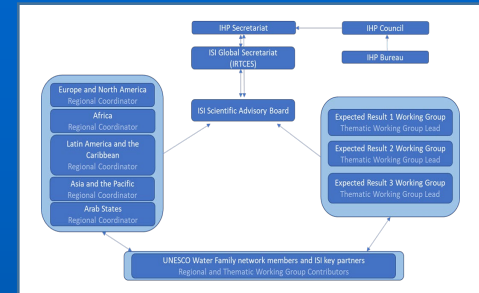
Achievements

- **Global Evaluation of Sediment Transport (GES Project)**
- **Case Studies for River Basins as Demonstration Projects**
- **Review of Erosion and Sedimentation-Related Research**
- **Education and Capacity Building for Sustainable Sediment Management**
- **Net working**



Renew ISI Governance

- **Structure**
- **Regional Thematic**



Aligning the objectives

- **Develop tools and methodologies**
- **Develop education materials and build capacity**
- **Facilitate outreach and scientific related to sediment monitoring and management and facilitate the development of a community of practice**

Implementation activities

- **Capacity building**
- **Case studies:** more case studies are proposed.
- **Data sharing:** Global Data of Erosion and Sedimentation; ISI Information System
- **International conferences**
- **Research and Consultations, and Publications**

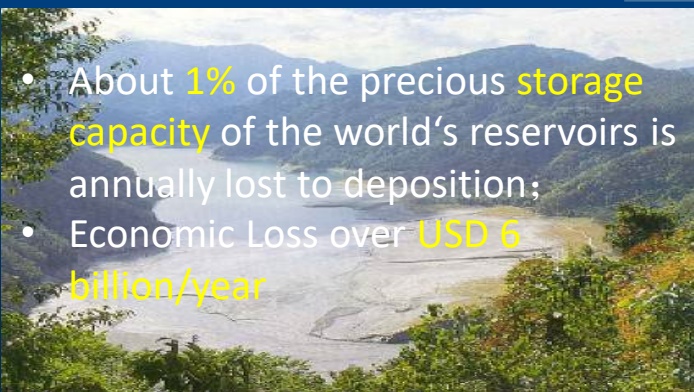
2 Bridge and linkage ii: Research/Consultant

200 research and consultancy projects

Area: River and reservoir sediment, soil erosion, soil and water conservation, water environment and ecology



- The annual **erosion of surface soil** from global river basins amounts to **60 billion tons**;
- **5-7 million ha** of **farmland** are annually ruined



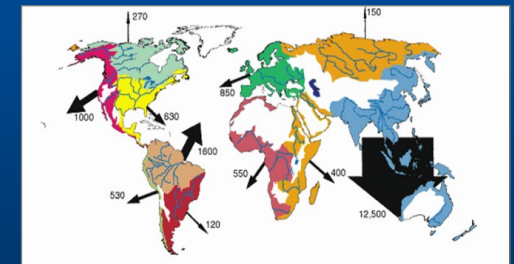
- About **1%** of the precious **storage capacity** of the world's reservoirs is annually lost to deposition;
- Economic Loss over **USD 6 billion/year**

- 50 international projects by the UNESCO, UNDP, World Bank and other country's governments...



Case: Program on “Construction of Warping Dams and Its Effect on Environment, Economy and Society in Loess Plateau” in China

- Domestic projects supported by the MOST, NSF, MWR...



Case: Program of China “Technical Cooperation Study on **Global River Water and Sediment Changes and Integrated Sediment Management**”

2 Bridge and linkage iii: Conference/workshop

Organized **international conferences and workshops** to promote international academic exchange and cooperation

4 Brand Conferences 1/3year

International
Symposium on
**River
Sedimentation**
(ISRI)



International
Conference
on **Estuaries
and Coasts**
(ICEC)



International
Youth Forum on
Soil and Water
Conservation

WASWAC
Conference

Other Conferences

- International Forum on Land Degradation, Soil Conservation, and Sustainable Development
- Side event of the United Nations 2023 Water Conference
- ...



1980
1st, Beijing

1983

1986
3th, USA

1989

1992
5th, Germany

1995
6th, India

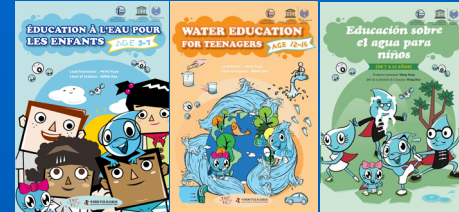
... 2001 ...
8th, Egypt

2007 ...
10th, Russia

2023
15th, Italy

2 Bridge and linkage iv: Training/education

- **>50** training courses
- River sedimentation, soil erosion, watershed management and flood control...
- **>5000** participants
- **>40** countries and regions



English,
French,
Spanish,
Cambodian



International Advance
Training Workshop on
Reservoir Sedimentation
Management



UNESCO-ISI Training
Workshop on
Sediment Transport
Measurement and
Monitoring



Demonstration class Kenya, Cambodia,
2022



Master's
and
doctoral
students



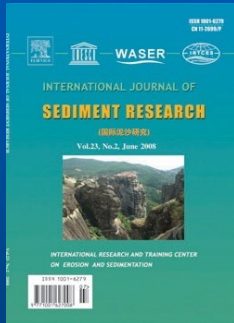
Short
training
course

2 Bridge and linkage v: Open Science/data

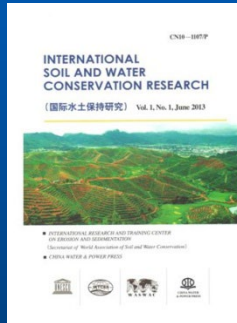
Journals and Publications

International
Journal of
Sediment
Research

International Soil
and Water
Conservation
Research



IF: 3.6



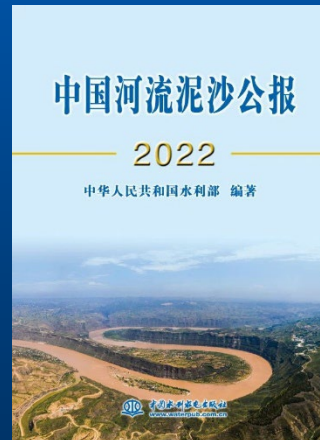
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EI, SCOPUS, DOAJ



Gazette of River
Sediment in
China



Global Database of Erosion
and Sedimentation

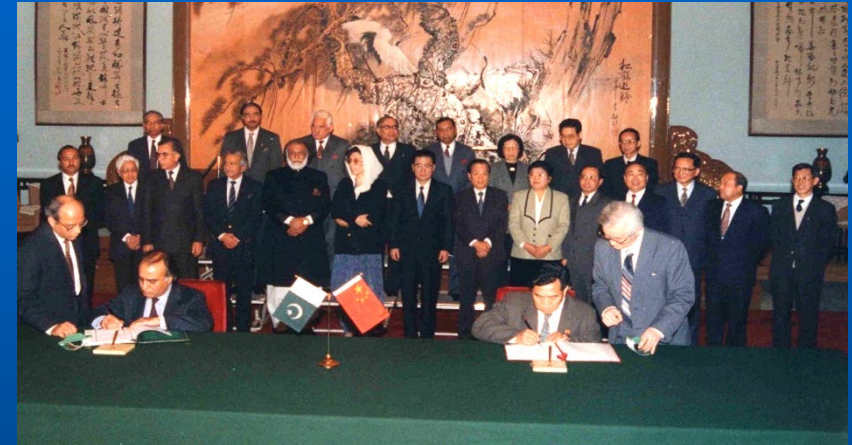


ISO TC :
Erosion and sedimentation



2 Bridge and linkage vi: partnership

Good linkage and cooperation with many international organizations



Chinese Premier Li Peng and Pakistan Premier Benazir Bhutto between IRTCES and the Pakistan Commission of Water Resources



MOU between IRTCES and India

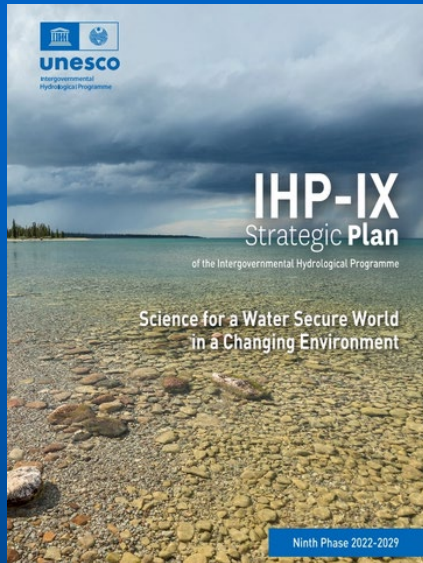


MOU between IRTCES and ICHARM



Other partners (IWHR)

3 Future collaboration

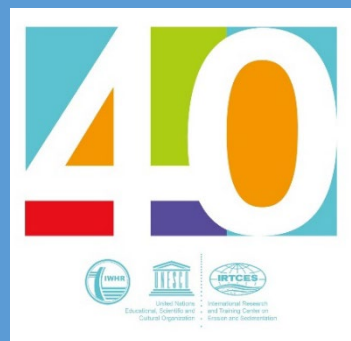


Cooperating with the UNESCO family

UNESCO Category II Center should play important role supporting water related SDGs and UNESCO IHP-IX.

Initiative, research, conferences, training, education, open science/data, partnership...





1984-2024

The 40th anniversary event of IRTCES

(International Research and Training Center on Erosion and Sedimentation)

Theme: Exchanges and Mutual Learning for a Clean and Beautiful World

Beijing, China, **September, 2024**

