

Outline of UNESCO-CHARM

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I am going to talk about

The International Center
for Water Hazard and Risk Management
under the auspices of UNESCO
(UNESCO CHARM)

- n Background
- n Outline of the Public Works Research Institute (PWRI)
- n Planned Activities of the Center
- n Preparatory Activities to date
- n Toward setting up the Center



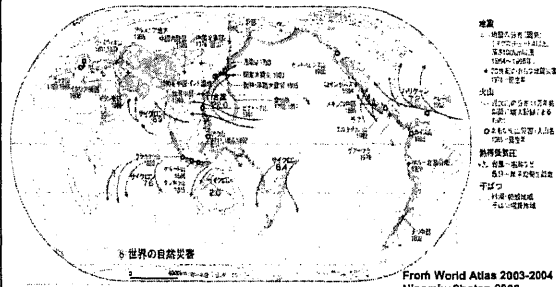
Internationally common recognition

2002 World Summit on Sustainable Development
(Johannesburg)
2003 3rd World Water Forum
(Kyoto, Shiga & Osaka)

Water related disasters such as flood and drought are major challenge for ensuring sustainable development

Urgent needs for appropriate actions to prevent or mitigate impacts from water related hazards

Various Natural Disasters over the World

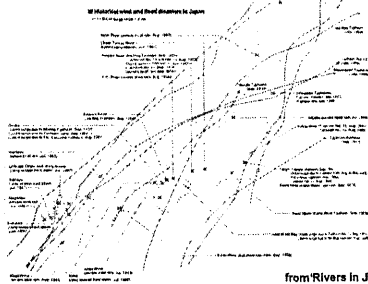


From World Atlas 2003-2004
Ninomiyashioten 2003

Historical wind and flood disasters in Japan

Great destructive power of trees felled by storms.

Strong winds at Tama River (1871) caused 1000 trees to be felled. Trees felled by strong winds suddenly during typhoon hit the river. After the typhoon, the river was blocked.

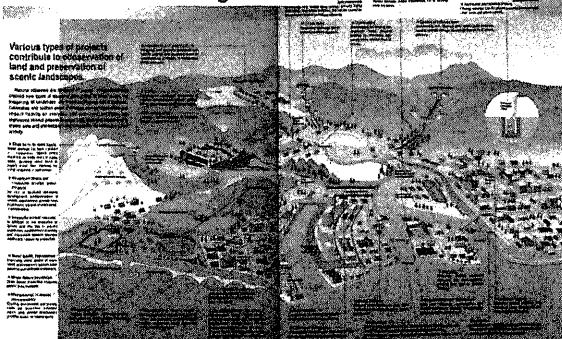


from 'Rivers in Japan' MLIT, 2003

Geographic Conditions of Japan

- n 70% of land is covered with forests and mostly mountainous
- n 50% of population and 75% of assets are concentrated in flood plains (10% of land)
- n Heavy rainfall occur during rainy season in June-July and in the typhoon season in August-October
- n Rivers are short and steep, causing sharp hydrograph
- n The ratio of maximum/minimum discharge is extremely high (about 100 for Tone River)

Various Measures for integrated River and Basin management



from 'Rivers in Japan' MLIT, 2003

Public Works Research Institute (PWRI)

- History
 - 1927: Established
 - 1979: Relocated to Tsukuba (Area:126ha, Staff: 550)
 - 2001: Re-organized into two institutes (PWRI and NILIM)
- Staff : 219 (including 151 researchers)
- Research topics: about 200
- Budget (FY 2004): 6 billion JPY (55 mil. US\$)

200 Research topics focusing on 14 priority research projects

- to ensure safety
- to conserve and restore the environment
- for efficient management of infrastructure

9 Research Groups with 20 teams

- Construction Technology Research Dept.
- Material and Geotechnical Engineering
- Earthquake Disaster Prevention
- Water Environment
- Hydraulic Engineering
- Erosion and Sediment Control
- Road Technology
- Structure
- Niigata Experimental Laboratory

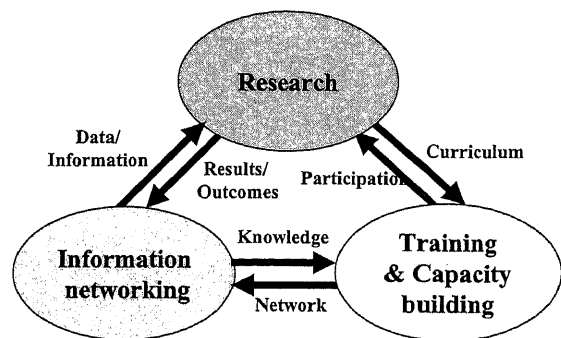
Framework of UNESCO-CHARM

- n Accumulated knowledge and experience trying to overcome
- n water-related disasters
- n Global network of UNESCO-IHP for internationally sharing valuable information



Contribution to prevent or mitigate water-related disasters in the world

Pillar Activities of UNESCO-CHARM



Activities

- Research -

- n Contribution to international projects such as WWAP and IFI/P (UNESCO/WMO)
- n Hydraulic / hydrological prediction, observation, modeling and analysis
- n Risk assessment and risk management technologies for water-related hazards under various socio-economic, geographic and climatic conditions

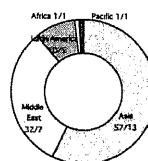
Activities

- Training and Capacity building -

PWRI has long experience in conducting JICA training courses for over 35 years

including

- River and dam engineering
- Sabo engineering



Total Number of Trainees/Countries
101/27
in FY 2003



Activities

- Information Networking -

Information networking will be synergized with research and training activities in order to enhance integration and coordination:

Through the information network...

- Research output will be widely disseminated
- Feedback from countries / regions will be reflected in the research projects
- Trainees will develop domestic links to their own countries/ regions
- Local needs for training items would be clarified

Preparatory activities

- ÿ October 2003
- ÿ 32nd UNESCO General Conference
 - ‡ Announcement of intention to establish the Centre by the representative of Government of Japan
- ÿ October 2003
- ÿ RSC in Southeast Asia & Pacific and in Latin America & Caribbean
 - ‡ Resolutions strongly supporting the establishment of the Centre

Preparatory activities (continue)

January 2004

International technical workshop at PWRI
Experts from Asia, Africa, East & West
Europe, and North & South America

Summary Report on directions of the Centre
International Symposium in Tokyo

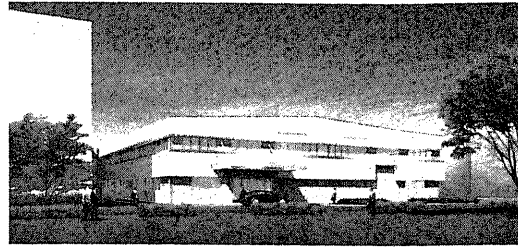
April 2004

Proposal of the new Center was welcomed at
UNESCO IHP Bureau Meeting

July 2004

A preparatory meeting of IFI/P hosted by PWRI

A Blueprint of the Centre Building



- u Research Staff : 20 (at the initial stage)
- u Center building : will be completed in autumn 2005
- u Office space : 2,000m²

In the Future

We have submitted a proposal for consideration at the forthcoming UNESCO Executive Board.

And to obtain an accreditation of the new Center at the UNESCO General Conference in autumn 2005.

END

Thank you for your attention

<http://www.unesco.pwri.go.jp>

Satellite symposium: Discussion

Question: How can University people come to be involved on UNESCO-CHARM activities (research, information networking and Training capacity building)?

Answer: CHARM is to be created as an internal organization of the Public Works Research Institute. Research, training and information networking are the main areas of activity of CHARM. Approximately half of the research staff will be internationally recruited. Moreover, CHARM will make use of the framework of JICA for the capacity building programme for the engineers of developing countries for a fixed period. Up until now, the Public Works Research Institute has concluded cooperation agreements with various overseas organizations and universities, etc. and has advanced exchange and joint research among researchers. Such efforts will be continued by CHARM.

Question: Out of the topic of UNESCO-CHARM, but I am interested in the integrated river and basin management. Is there a special

organization of river and basin management in the national and regional / basin level which coordinate among ministries or regional organizations?

Answer: In Japan, various central ministries, such as the Ministry of Land Infrastructure and Transport (MLIT); the Ministry of Agriculture, Forestry and Fisheries; the Ministry of International Trade and Industry; the Welfare Ministry of Labor; and the Ministry of Environment, are specifically engaged in general water resources management based on a viewpoint of river basin management. In the past the comprehensive adjustment of each ministry was carried out by the Water Resources Department of the National Land Agency, which was succeeded to MLIT.

Question: 1 : Why flood occurred in Fukushima and Nigata prefecture? Is it due to heavy rainfall (283 mm/day and 421 mm/day) in a particular day) as well as due to typhoon?

2 : Is the course of the Tone River naturally changed or artificially changed to minimize flooding and vice-versa i.e. bringing plain land

under cultivation by its tributaries?

Answer: (1) As introduced in the lecture, Fukushima, Niigata and Fukui heavy rains originated from a stationary rain front not a typhoon. During the 2004 fiscal year, ten typhoons, the largest in recorded history, hit the Japanese Islands and caused serious calamity including loss of human life, houses and floods in various places.

(2) The Tonegawa Eastward Movement project has been artificially managed for more than 60 years since 1590. Before the completion of the project, the course of the river had changed with every big flood making it difficult for stable land use. It may be said this is the foundation for the formation of present Tokyo, prosperous capital of Japan.