International Network for Water and Ecosystem in Paddy Fields

INWEPF




Attributes of paddy water management and establishment of the INWEPF

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Paddy cultivation in Monsoon Asia

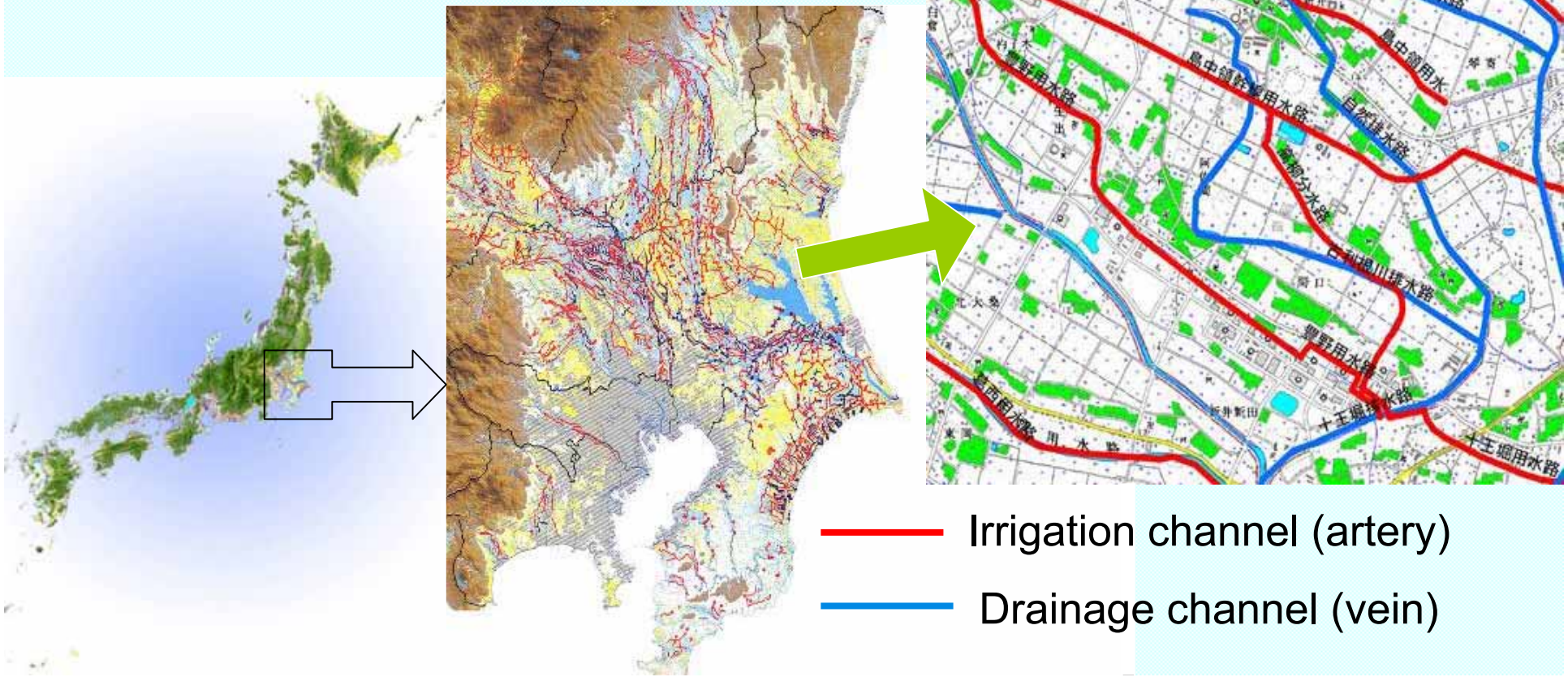
In Monsoon Asia, diverse forms of paddy cultivation and community based water management have developed, reflecting geological, social, economical, environmental and cultural diversity.

➢ Historically developed extensive network of paddy irrigation and drainage channel networks have formulated fundamental socio-economic and environmental characteristics of rural regions.

・Major channels 45,000km

・Total length including branch channels 400,000km

(10 times the earth's circumference)



- After repeated water disputes over hundreds of years, rural communities have established customary water use rules and formulated community based traditional water management system.

Water disputes in Feudal times Japan

These disputes often escalated into violent confrontation.

Rural collective decision making and coordinating system

Traditional wisdom and basic rules to best manage limited resources for sustainable use

"Rural social capital"

Traditional community based water management system as a basic institution for participatory water governance

- In history of paddy cultivation over thousands years, generations in rural communities have worked together for sustainable paddy production and water management.

Examples of traditional water management systems in Asia

Traditional System	Summary
Subak (Indonesia)	➢ Each Subak has water management office and small shrine. ➢ Subak meeting decides issues including planting time and schedule for religious ceremonies.
Muanfai (Thailand)	➢ Maintain and manage irrigation facilities, labor and funding, act as mediator in water supply dispute. ➢ Local rules known as “Sunya”.
Kanna (Sri Lanka)	➢ Responsibilities of the members are stipulated by common legal regulations known as “Shirisu”. ➢ Those who violate “Shirisu” are no longer permitted to use the water supply.

Source: ・Toshio Tabuchi, Rice Paddies of the World and Japan, 1999
・International Commission on Irrigation and Drainage, Global Review of Irrigation and Drainage, 1995

Traditional community based water management system as a basic institution for participatory water governance

Functions of traditional water management system

- Coordinate distribution of water
- Maintain irrigation & drainage facilities
- Play a vital role in traditional and cultural events
- Coordinate local decision making as collectives

In Japan, traditional local water user associations are given a legal status management system to “Land Improvement Districts (LIDs)” by Land Improvement Act of 1949.

- The role of water user associations encompass wider fields, more than water delivery, reflecting multiple services of paddy cultivation.

The brief introduction of multi-functional roles of Paddy Fields

- Paddy cultivation and associated water management have been weaved into socio,economic, cultural as well as environmental structure of rural regions.

MULTIPLE SERVICES OF PADDY AGRICULTURE

Food**: **Safe and Stable food supply

Environment:** **Preservation of biodiversity, River flow stabilization and recharge, flood prevention, prevention of landslides, landscape preservation

Culture:** **Cultural values and heritage, field for hands on experience for education

Multiple water use of paddy farming

- Water for paddy farming is utilized other than irrigation.
- The water is closely related to local lives.

Fishery in paddy

Navigation

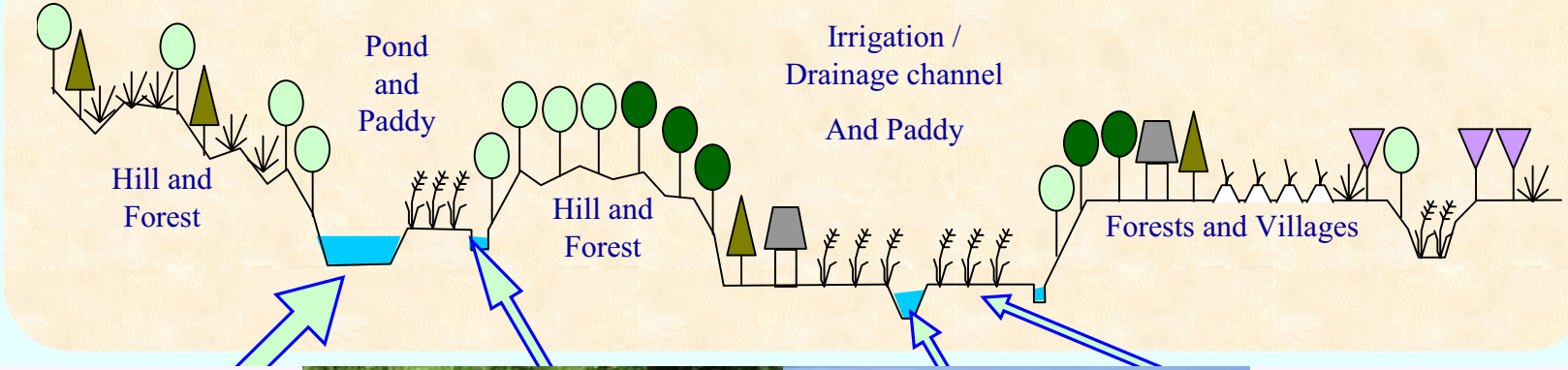
Irrigation water for domestic use

Flood prevention and River flow stabilization

- Temporal storage of excessive rain and gradual release of water to downstream decrease the risk of flooding.
- Water gradually seeps into groundwater and river, thus sustaining river flows during dry months.

Biodiversity conservation

- Formed and maintained over thousands years, paddy fields have developed ecosystem with rich biodiversity as semi natural system.
- This semi natural ecosystem provides rich habitats for diverse insects, animals and plants.



Formulating Landscape

- Paddy fields have formulated beautiful landscapes in rural regions.

Tradition and Culture

- Roles in stewardship of cultural values
- Through the generations, events in the farming calendar have been the integrated component of local culture.

Traditional festival related to paddy farming

Education

- By experiencing paddy cultivation, people gain appreciation of how food is produced and promote awareness on interaction between natural environment and human activities.

Experiencing

Rice planting

Participatory water management for food and environment

- Participatory water management framework provides an effective platform for enhancing multifunctional services of paddy fields in collaboration with multi-stakeholders including local governments, residents, and NGOs.

Case 1: Restoring fish habitats

Case 2: Contributing for watershed protection

Case 1: Restoration of fish habitats
～ Shiga, Japan ～

Problem: Deterioration of fish habitat with modernization of paddy Agriculture.

Traditional paddy farming

Modernization

Local species of carp

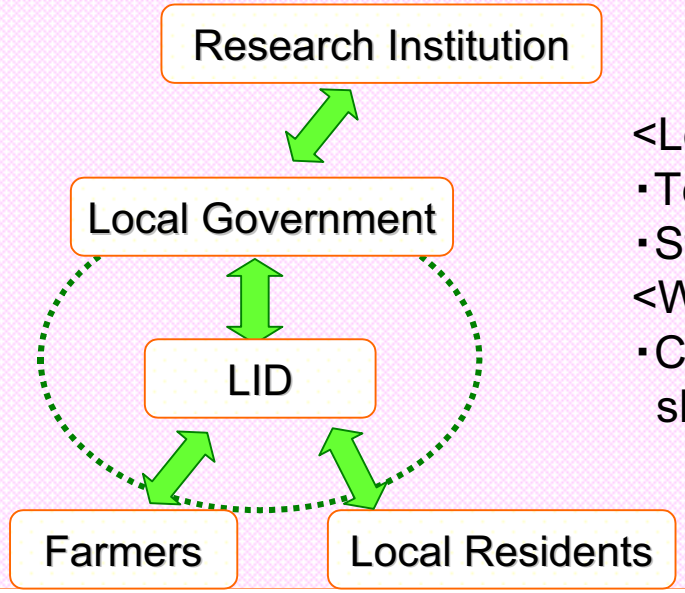
Carassius auratuss grandoculis

Action: A local government and Water user association (LID) take an initiative to restore fish habitats in close collaboration with researchers and local residents.

Step 1: Local government, Water user association (LID), research institutions, and local residents formulated multi-stakeholder taskforce to elaborate on fish habitat restoration tactics.

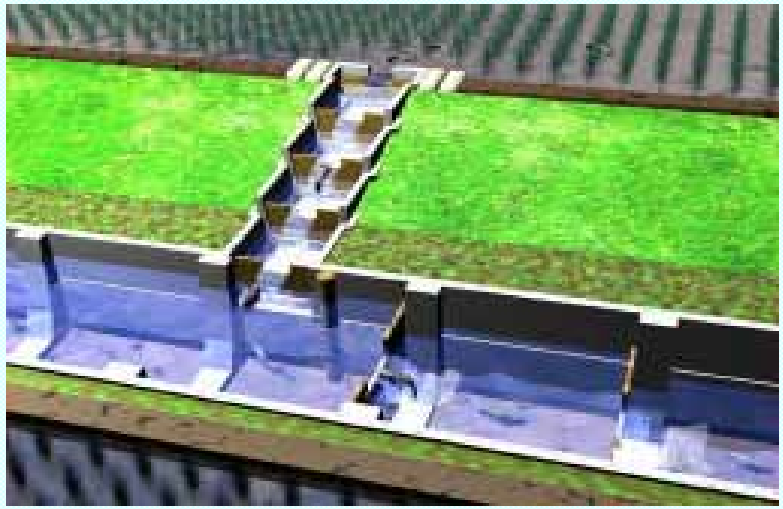
Step 2: ・Community learning through workshops and group discussions
・Ecological survey and experiment on new technology for fish friendly drainage channel
・LID played a vital role in coordination between public sector and farmers.

Step 3: Development of fish habitat friendly channels and adaptive water management practices by LID



<Local Government>
・Technical financial support
・Stakeholder empowerment
<Water Use Association (LID)>
・Catalyst for information sharing and coordination

Innovative drainage channel functioning as fish ways installed in paddy water system

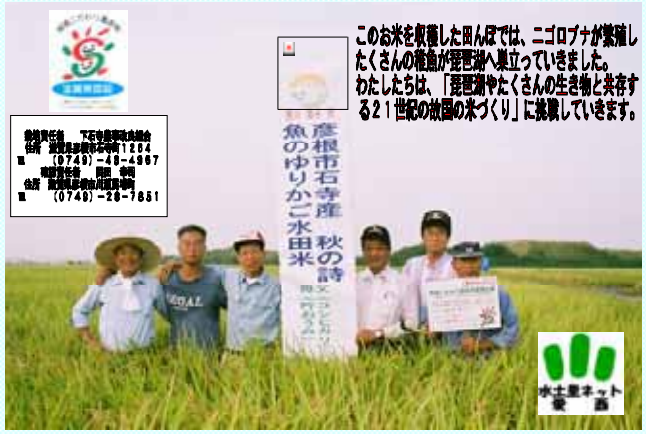


Survey fish in a modified drainage channel

Fish returns to the drainage channel

Result: Restoration of fish habitats raised awareness for environmental friendly farming with multi-stakeholder involvement.

Fish return to paddy fields



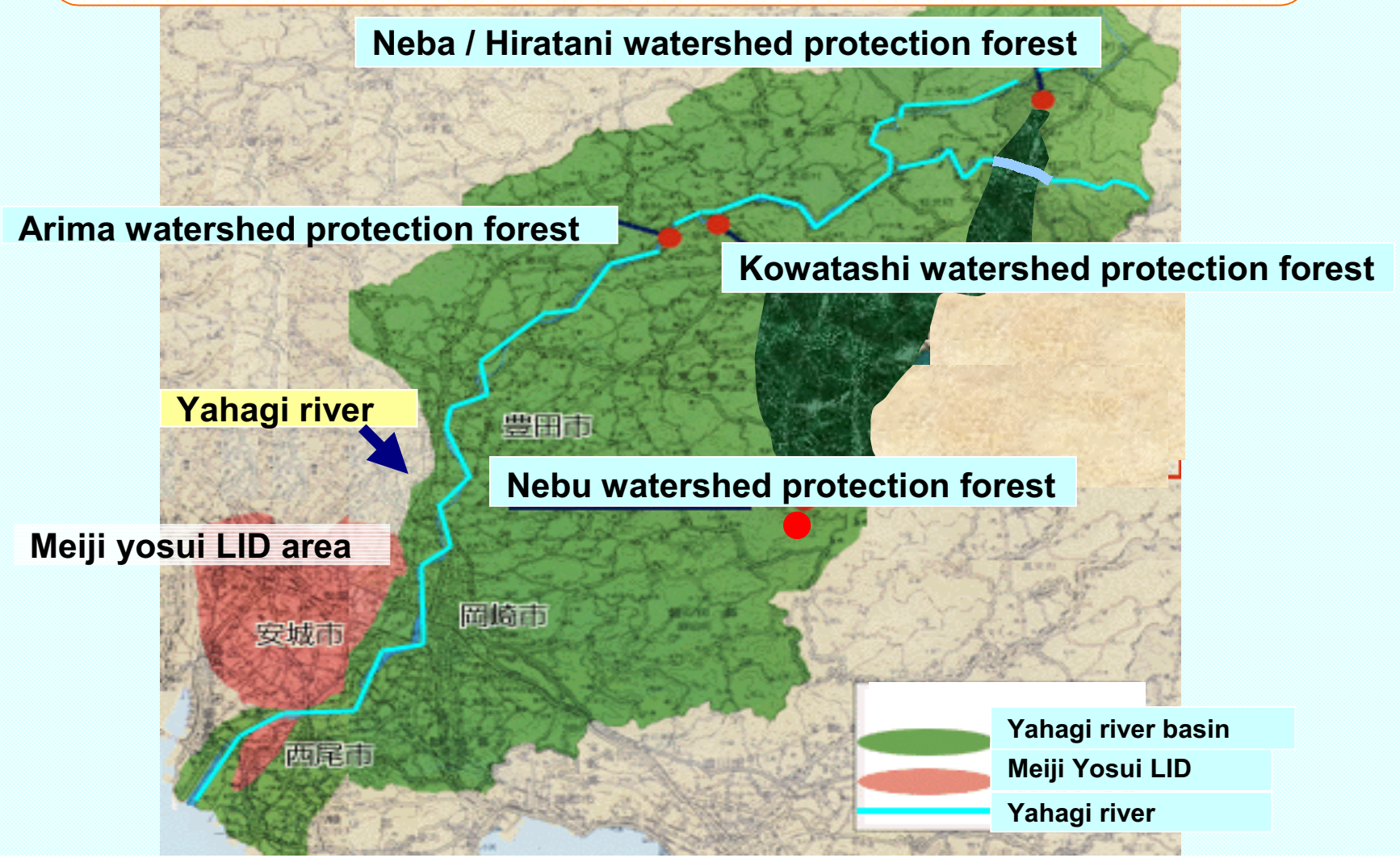
Environmental friendly farming

Local residents participation
Release fish into drainage canal

Enhanced community learning

Case 2: Water user association contributes for watershed protection (Meiji Yosui, Japan)

➢ *Downstream water user (Meiji Yosui LID) purchases and maintains upstream watershed protection forests, thus contributes to upstream environment.*



Possible merits of participatory Water Management

Merits for Farmers

- Efficient and sustainable water use
- Development sense of ownership and responsibility

Merit for Government

- Reduce public expenditure on operation, maintenance and management
- Work as a catalyst in local collective decision making

Merit for Society

- Maintain Multiple roles of Agricultural water and paddy fields
- Provide a platform to facilitate local multi-stakeholder involvement
- Maintain and enhance “ Rural Social Capital”

The Third World Water Forum
Ministerial Meeting on
"Water for Food and Agriculture"

The 3rd World Water Forum
March 16-23,2003 in Kyoto,Shiga and Osaka, Japan

1. Date/Venue:
   March 21st 2003 , Otsu, Shiga Japan

2. Three Challenges adopted by participating ministers
   1) Food Security and Poverty Alleviation
   2) Sustainable Water Use
   3) Partnership

3. Follow-up action
   Establishment of international consortium for better management of water and environment in paddy fields ⇒ INWEPF

The 1st Steering Meeting of INWEPF

1. Date: November 2, 2004
2. Venue: Tokyo, Japan
3. Participants

- Bangladesh, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam
- FAO, WB, ICID, IRRI, IWMI, INPIM,MRC,PAWEES,APO

Establishment of INWEPF
Vision Statement

The INWEPF will provide an open platform for

- promoting dialogue,
- exchanging information and experiences,
- creating synergy among existing forums,
- strengthening capacity building,
- developing good practices and formulating ideas for innovative policy and management options

in the field of sustainable paddy water use, conservation of environment and better governance.

Prioritized theme

- Efficient and sustainable water use to address poverty alleviation and food security from environmental, social and economic aspects
- Multiple use and ecosystem functions of paddy fields
- Better governance to improve sustainable water management, including participatory irrigation management and capacity building

Framework

a) Open for

Government, International Organization, NGO, etc

b) Four tools to achieve outcomes:

1) Virtual Meeting
2) Steering Meeting
3) Open Forum
4) Working Groups

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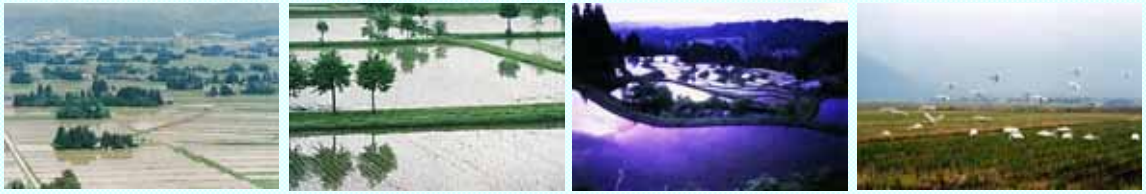

http://www.maff.go.jp/inwepf/index.htm