

Transition and Cases of Community Based River Restoration and River Education in Japan

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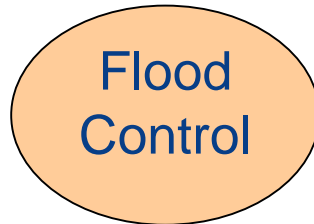


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Transition of River Restoration and Education

Transition of River Law revision in Japan



Flood
Control

1896

Establishment of modern “River Law”

Flood
Control

Water
Utilization

1964

Integrated system of Flood control and Water utilization

Flood
Control

Water
Utilization

Environ
ment

1997

Comprehensive system for river management

- Improvement and preservation of river environment
- System to consult public opinion in planning stage of river improvement works

Transition of River Restoration and Education

Historical steps for River Restoration in Japan

(Main Target)

(Main Measures)

1960's

Water quality
Water quantity

- ✓ Continuous survey of water quality
- ✓ Developing sewerage systems and WTP

1970's

River open space

- ✓ Accessibility between rivers and urban

1980's

Water-friendliness

- ✓ Improvement of urban landscaping, riverfront amenities

1990's

Harmonized River,
Nature, Ecosystem

- ✓ Nature oriented river works
- ✓ Nature restoration project

2000's

Connectivity

- ✓ Improvement of relationship between river and human, community and nature

2010's

Sustainability,
Social design

- ✓ Deregulation, Private sector involvement

Transition of River Restoration and Education

Major events focusing on river partnership and education

Year	Social movement	Administrative movement and measures
1990s	<p><u>Needs for nature conservation</u> 1992: Convention on endangered species of wild fauna and flora 1993: Basic Environment Law</p> <p><u>Activation of civil activities</u> 1998: Promotion of specified non-profit activities act</p>	1990: Nature-oriented river work 1990: National census on river environments 1995: Proposal on future river environment (River Council) 1997: Revision of River law (River environment improvement and river improvement enhanced) 1998: Proposal on “Realization for ‘Learning from River’ society” (River Council) 1999: Proposal on river management by partnership approach (River Council)
2000s	<p><u>Needs for nature restoration</u> 2002: Promotion of nature restoration act</p> <p><u>Needs for biodiversity</u> 2004: Invasive alien species act 2004: Landscape act</p>	2000: Proposal on collaboration policies with citizen's groups in river (River Council) 2002: Nature restoration project 2006: Basic guideline for Nature-oriented River Management 2008: A technical standard of river channel planning for medium and small-sized rivers 2009: System to support “rivers and city planning”
2010s	<p><u>Expectations to new public</u> 2011: Revision of Promotion of specified non-profit activities act (Number of NPO: 40,000)</p> <p><u>Increasing awareness of natural disaster</u></p>	2011: Deregulation to make river spaces more accessible 2013: River Cooperation Organization system 2014: Water circulation Law 2017: Proposal on sustainable Nature-oriented river management 2020: New Government school curriculum guideline

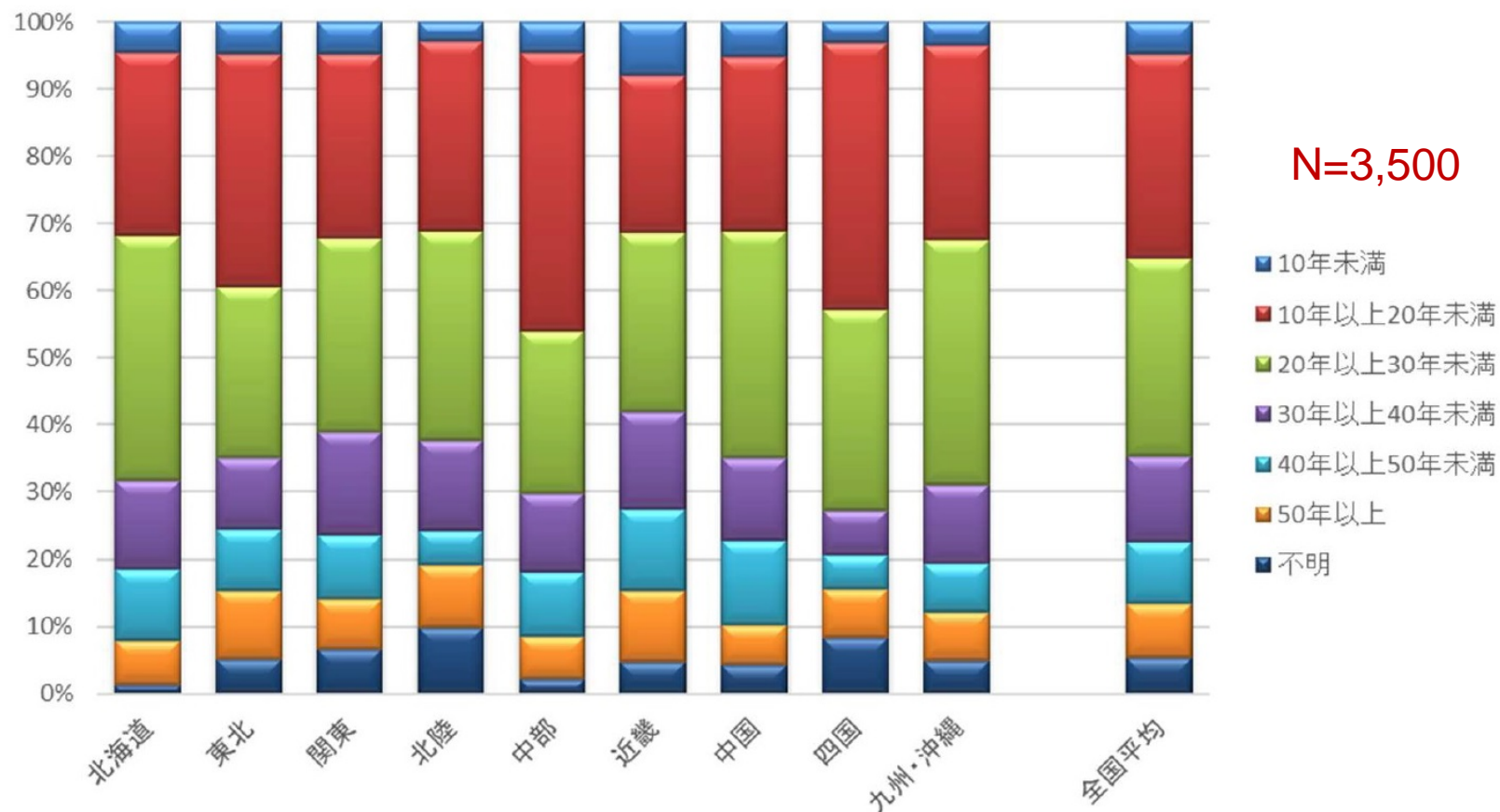
Transition of River Restoration and Education

1998: Report by “Learning from the River” subcommittee of River Council

- **Rivers are the best place for environmental education**, as they are places to show all the relationships between humans and nature.
- It is our responsibility to **restore the relationship between rivers and people towards the 21st century** and to pass it on to the next generation.
- The basic point of view when considering the desirable form of the river is that the **river forms one system from upstream to downstream and plays an important role in the water cycle.**
- It is important to realize the rivers and human society that are distinctive in each river basin, **with good understanding of relationship between rivers and humans.**
- We think following four basic policies are important for **realization of "learning from river" society.**
 1. **Attractive rivers that raise people's attention**
 2. **Providing accurate and extensive knowledge and information**
 3. **Offer of opportunity to learn in river**
 4. **Proactive and continuous activities**

Transition of River Restoration and Education

Years since establishment of Citizens' group on Water and River



Source: Survey of group activity on Water and River field, Japan River Association, 2017

Community Based River Restoration and River Education

Case-1

Field activity at Izumi River for environmental education



Case-2

Traveling exhibition for water and river education



jawanet



Case-1: Izumi River

- Area: 12 km²
- Length: 9.4 km

<River Restoration History>

- 1987: Master plan for Izumi River Environment Improvement (by Yokohama City, Local Municipality)
- 1989: Designation for Community River Improvement Project (by Ministry of Construction, Central Government)
- 1991: Start of Community River Improvement Project (construction)
- 1997: Start of Waterfront Hospitality System by Yokohama City
- 2006: Establishment of Seiya Environment Net (Citizen group)

Community Based River Restoration and River Education

Case-1: Izumi River



Before (1970's)



After (2000's)

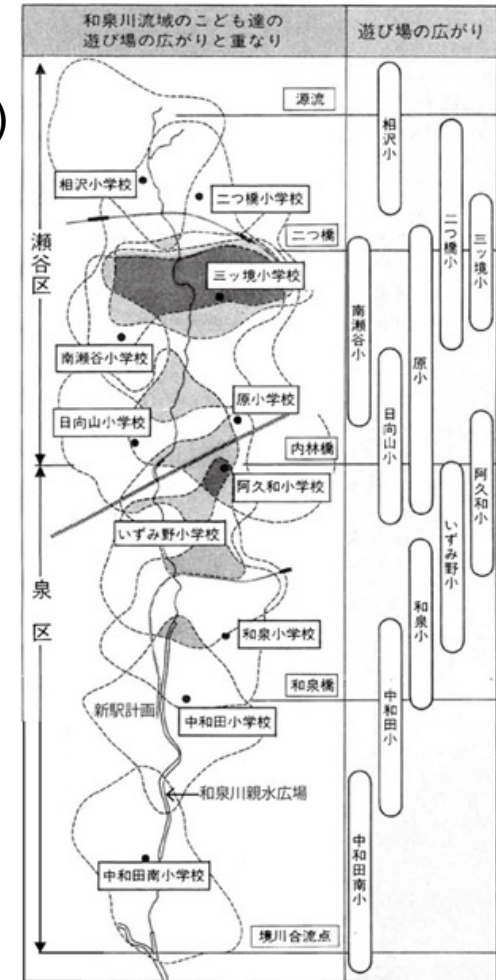
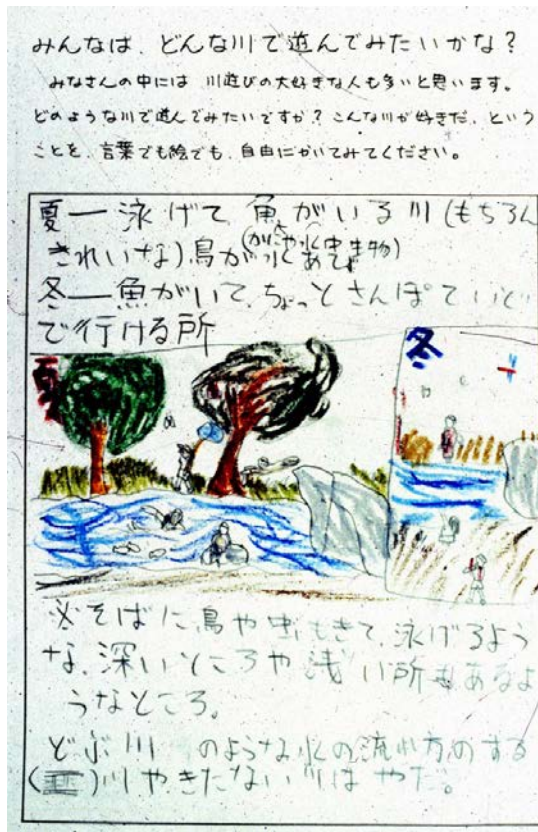
Source: <http://www.engineer-architect.jp/serial/cate/note/1970/>

Community Based River Restoration and River Education

Case-1: Izumi River

1987: Master plan for Izumi River Environment Improvement

→ Children's Play Environment Research Workshop in 1987
(11 elementary schools, 4th grade, 11 classes, 400 students)



Source: <http://www.engineer-architect.jp/serial/cate/note/1507/>

Community Based River Restoration and River Education

Case-1: Izumi River

Current major activities by local community

1. Mowing and Cleaning by Waterfront Hospitality Group
2. Environmental education, monitoring and Cleaning by volunteer citizen group



Community Based River Restoration and River Education

Case-2: Traveling exhibition

Backgrounds & Purpose

- Japan has a lot of water related museums (100~ aquariums & 150~ river related museums!) , and most of these museums are public. However, they do not have enough resources and staffs to make a new exhibition.
- Traveling exhibitions were developed to revitalize museum activities and enhance water and river environmental education.

Japan water exhibition network (jawanet)

- Traveling exhibition project team, started in 2011
- Consists of university students, faculty members, institute researchers, designers, and administrative officials



Community Based River Restoration and River Education

Localized Torrential Rain exhibition

Case-2: Traveling exhibition



Brief story about
Localized Torrential Rain



Movies & Sounds



- Started in 2012
- Traveled **45** museums

Community Based River Restoration and River Education

Rain and Creatures exhibition

Case-2: Traveling exhibition



Rain instruments & toys



Interactive contents



- Started in 2013
- Traveled **32** museums

Community Based River Restoration and River Education

Rain exhibition: blessing & fear

Case-2: Traveling exhibition



- Started in 2018
- Traveled **7** museums



New approach of River Education in Japan

Government school curriculum guideline:

- Criteria for organizing educational curriculum of each school based on the School Education Basic Law, updated about once every 10 years
- Education related to water and rivers is carried out in science, society, and integrated learning time

Fundamental Law
of Education

School Education
Basic Law

**Government school
curriculum
guideline**



Textbook

<Update schedule of guideline>

2017: Publication of new guideline

2018: Selection of textbooks corresponding to new guideline

**2020: Full implementation of new guideline
(elementary school)**

New approach of River Education in Japan

Major Changes in New Guideline regarding water/river education:

(1) Introduction of proactive and **interactive learning**

- Educate the qualities and abilities necessary for a new era **through interactive, group and experiential learning**
- **Emphasis on experiential activities in nature**

(2) Addition of units to support the **concept of basin**

- "The whereabouts of rainwater and the state of the ground" were added in fourth grader science
- Water flows from high to low, and **concept of basin is trained.**

(3) Strengthening **water disaster education**

- Enhance basic knowledge of natural disasters and disaster response.
- Learn how to be **aware of and deal with water disasters in each area.**

New approach of River Education in Japan

Supporting materials for school teachers and River Administrators:

For School Teachers

2018



2018



For River Administrators

2018



Source: <https://www.kasen.or.jp/mizube/tabid107.html>