

Public Forum on "Revitalising Urban Rivers in Asia: Challenges and Opportunities"
25 November 2017, University of Hong Kong

Collaborative Nature Restoration of River towards Community Development: Concept & Cases in Japan

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What is Collaborative Nature Restoration?

Small-scale nature restoration implemented by various groups and organizations like D.I.Y.



What is Collaborative Nature Restoration?

A group of people, some wearing blue protective suits and others in regular work clothes, are working on a river restoration project. They are installing large wooden structures, possibly weirs or riffles, into a stream. A blue tractor is visible in the background on the left, and a blue tarp is on the right. The scene is outdoors with bare trees in the background.

Collaborative Nature Restoration includes following **three** factors;

- ✓ Necessary fund is raised/prepared by project drivers.
- ✓ Various groups and organizations are able to participate and collaborate mutually.
- ✓ Easy to repair and remove

✓ Necessary fund is raised / prepared by project drivers

High-cost project: *large-scale, high financial burden,
government-led project with groups and organizations*

Low-cost project: *small-scale, low financial burden, volunteer
based many groups and organizations*

-> Setting low financial burden for project drivers
fits with collaborative nature restoration.

- ✓ **Various groups and organizations are able to participate and collaborate mutually**



-> as a proposer, decision-maker, worker etc.

✓ Easy to repair and remove

- Possibility to fail due to few experiences

-> Flexibility of repair and maintenance

- Possibility of being washed away by flood, or making trouble to downstream

-> Flexibility of removal and reconstruction

*Simple structure
made by wood*



Ripple Effect of Collaborative Nature Restoration



Involving various groups and organizations generates not only nature restoration but also **ripple effect that contributes to community development such as welfare, environmental education, awareness of disaster management, landscape improvement etc.**

Important consideration matter for Collaborative Nature Restoration

for ex.

- Does the installation do not interfere with floods?
- Is it safe even if it is washed away by flood?
- Are there any negative impacts on facilities such as revetment and embankment?
- Consideration for river landscape
- Who will do the maintenance?
- Does the work cause turbid water and water quality accidents?



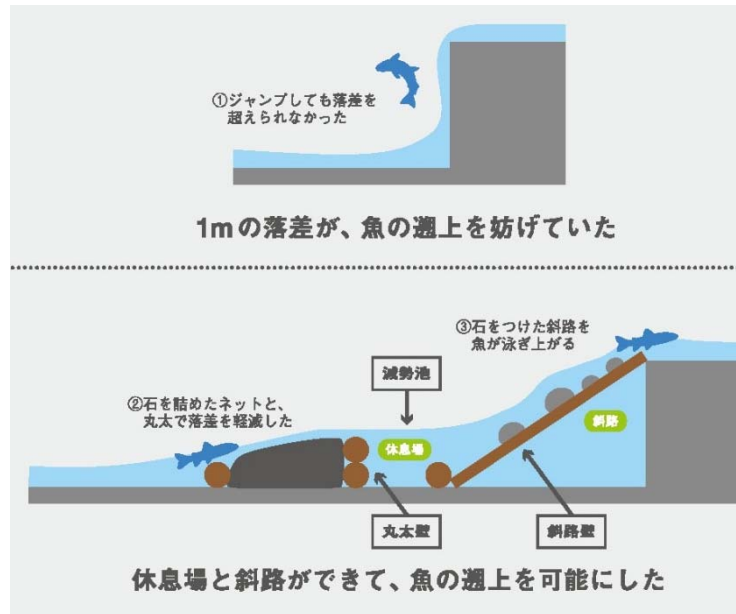
Important consideration matter for Collaborative Nature Restoration

for ex.

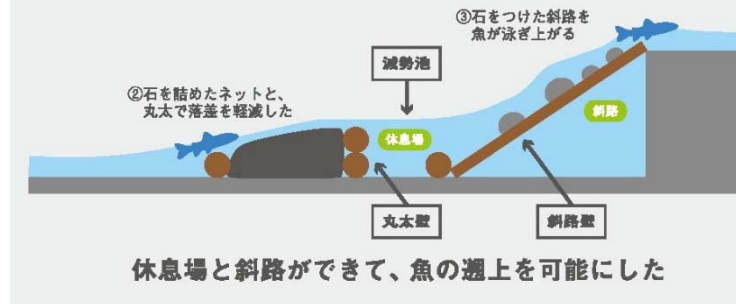
- Adjustment with fishermen and local residents
- Collaborate with river administrators and stakeholders
- Cooperate with the projects and policies led by government
- Safety management at site work

Case example : 1. Komaoi River

Before



After



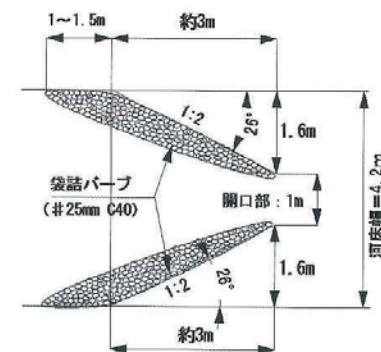
- ✓ **Improvement of fish pass** using log and net filled with stones
- ✓ Target fish: Cherry salmon
- ✓ 7 fish passes completed
- ✓ Constructed and maintained by volunteer based local citizen group



Case example : 2. Kurosuda River



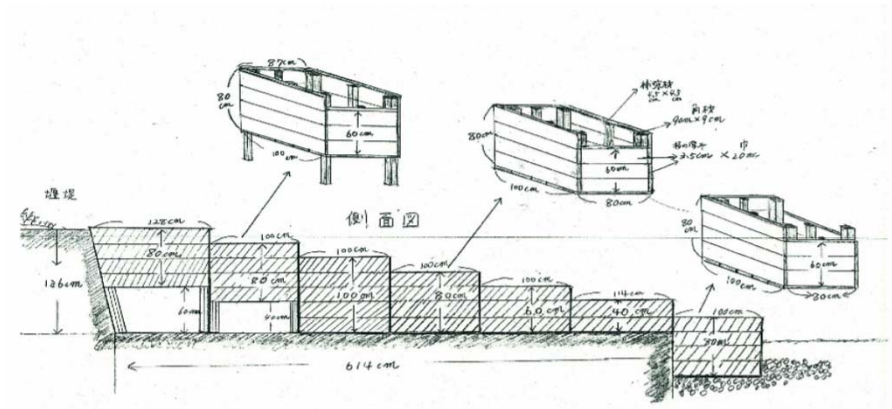
- ✓ **Formation of bar and stagnation** using net and cobble stone by Barb method
- ✓ Using local materials incl. net and stones
- ✓ Constructed and maintained by volunteer based local citizen group supported by river administrator
- ✓ Monitored continuously since its test-construction in 2007



Case example : 7. Kisen River



- ✓ **Handmade fish pass** using thinning wood boxes
- ✓ Installation of trial product and improvement
- ✓ Collaboration with local citizen group, researches, river administrator etc.



Case example : 10. Yasumuro River



- ✓ **Formation of habitat** by stirring of river bed using the human power
- ✓ Target species: local rare aquatic plant and fish
- ✓ River restoration led by children mainly as environmental education activity



Toward promotion of Collaborative Nature Restoration in Japan

Formulating volunteer based research group to promote Collaborative Nature Restoration of River.



Research Group launch
(2014.6)



Publication
(2015.3)



Website
(2016.2)



Training / forum (2015-)

For further information ...

- URL: <http://www.collabo-river.jp/>
- facebook: <https://www.facebook.com/collaboriver/>



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Secretariat of JRRN is operated by **Japan Riverfront Research Center** and **CTI Engineering Co Ltd** as a joint study on development of Asian River Restoration network.

