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Collaborative nature restoration in the river through partnership approach between river administrator and local community in Japan

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What is Collaborative Nature Restoration?

Collaborative Nature restoration means the small-scale nature restoration implemented by various groups and organizations.



What is Collaborative Nature Restoration?

Collaborative Nature Restoration includes following nature restoration activities;

- ✓ Low financial burden for project drivers
- ✓ Various groups and organizations are able to participate and collaborate mutually
- ✓ Easy to repair and remove

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✓ Low financial burden for project drivers

About project costs of Collaborative Nature Restoration

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.**



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

→ All groups and organizations are able to participate Collaborative Nature Restoration as a proposer, decision-maker, and worker.

→ Involving various groups and organizations generates not only nature restoration but also secondary effect such as welfare, education, awareness of disaster management, landscape improvement etc.

University students, citizens, elementary school students



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✓ Easy to repair and remove

Simple structure made by wood



- Possibility to fail for groups and organizations which have few experiences

→ To facilitate repair and maintenance

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

→ To facilitate removal and reconstruction

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Present state of river restoration in Japan

- ✓ Many small and medium sized rivers are not conducted nature restoration enough due to the various conditions such as size restriction of river width etc.
- ✓ Large-scale nature restoration, conducted by administration, has also difficulties to achieve a consensus of stakeholders.

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Present state of river restoration in Japan

- ✓ **Basic Policy for Nature Restoration** was revised by Ministry of the Environment in Nov. 2014.
- ✓ Collaborative nature restoration is added as one of important way to promote further.
- ✓ “Collaborative nature restoration is expected to lead to wide-area conservation and restoration of natural environment”

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“Cases of Collaborative Nature Restoration in the River”

(Published in March 2015 by JRRN)

It contains.....

- ✓ Introduction and important attention of collaborative nature restoration
- ✓ 13 cases of collaborative nature restoration in the river in Japan
- ✓ Purpose, background, ideas, project organization, scheme and effects in each cases separately



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“Cases of Collaborative Nature Restoration in the River”

(Published in Mar. 2015 by JRRN)

✓ **Supervised by:**

Prof. Nobuyuki Tamai (ARRN/JRRN adviser)

✓ **Edited and Reviewed by:**

Editing committee on waterfront collaborative nature restoration cases (15 members)

- 5 researchers of university
- 3 researchers of public institute
- 6 consulting engineers
- 1 officer of local government

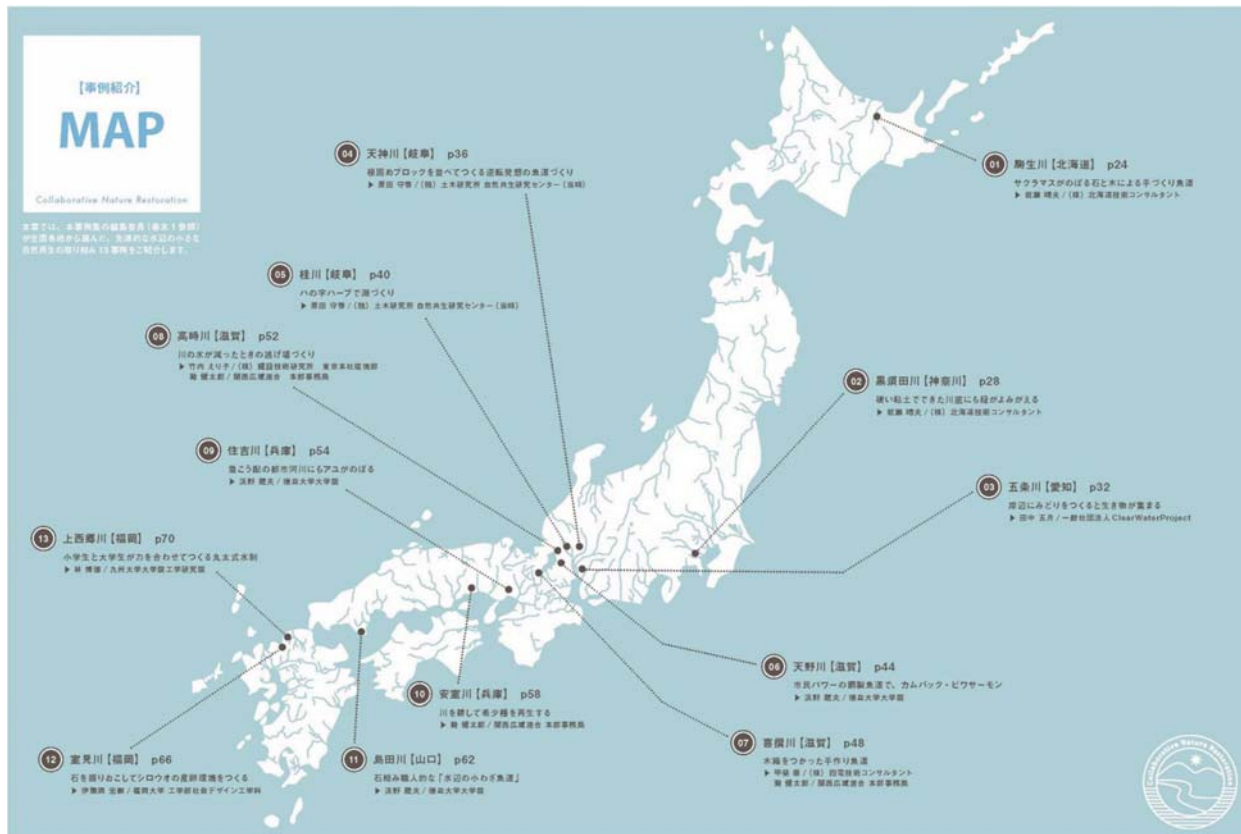
✓ **Published by:**

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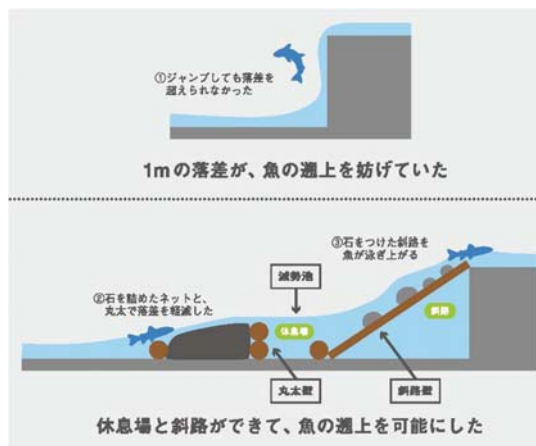
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13 Cases of Collaborative Nature Restoration

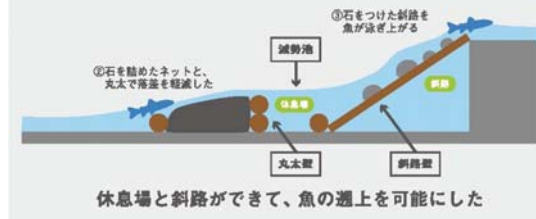


Case example : 1. Komaoi River

Before



After



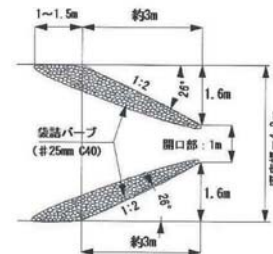
- ✓ Improvement of fish pass using log and net filled with stones
- ✓ Target fish: Cherry salmon
- ✓ 7 fish passes completed
- ✓ Constructed and maintained by volunteer based local citizen group



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



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Case example : 5. Katsura River



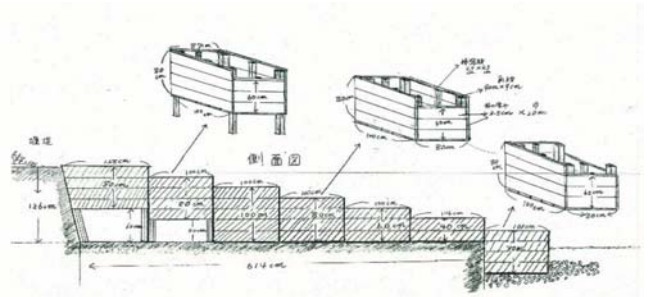
- ✓ Formation of bar and pools using net and broken stone by Barb method
- ✓ Diversification of fish, water depth, velocity etc.
- ✓ Materials and structure assuming undertaking construction with human power only
- ✓ Collaboration with river administrator, contractor, consultant, researcher etc.

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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.



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Case example : 10. Amuro 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



Case example : 13. Kamisaigo River



- ✓ Formation of habitat by installing groins using thinning materials and riprap
- ✓ Diversification of water depth, velocity, river bed material etc.
- ✓ Collaboration with university student and local children



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Thank you

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