



# Restoration guidance, best practices, lessons learned

For restoration workshop *Advancing Ecological Restoration in Canada: Setting the Agenda*

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Fisheries and Oceans Canada  
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# Presentation Overview

- DFO mandate and role in restoration
- Best practices and lessons learned
  - Described via draft DFO Restoration Principles
- Summary of best practices



# Fisheries and Oceans Canada (DFO) mandate

- Manages Canada's (marine) fisheries and oceans resources
- Helps to ensure healthy and sustainable aquatic ecosystems

## DFO role in restoration:

- **Funding** for restoration implemented by others
- **Fish habitat offsetting and banking** to counterbalance negative impacts to fish and fish habitat (*Fisheries Act*)
- **Aquatic species at risk** recovery and action plans (*Species at Risk Act*)
- **Restoring Pacific Salmon** (*Fisheries Act* & *Species at Risk Act*)
- **Controlling aquatic invasive species** (*Fisheries Act*)
- **Federal Contaminated Sites Action Plan** remediation
- **Identifying restoration priorities** (new initiative)

# PRINCIPLES OF RESTORATION

(draft – from Framework to Identify Fish Habitat Restoration Priorities)

Restoration principles provide guidance to help achieve success in restoration (adapted from UN Decade for Restoration 2021-2030).

1. Restoration activities should address the **root causes of degradation**.

- Identify ongoing impacts and address them before implementing restoration

2. Restoration activities should result in **long-term, self-sustaining habitat improvement**.

- Shift from managing single species to management at the watershed and ecosystem level (e.g., Pan-Canadian approach for species at risk is a place-based, multi-species approach for priorities)

3. Benefits should be considered in the local **cultural, ecological and socio-economic context**.

- Shift from top-down management to more community-based decision-making process

1. Priorities depend on values – frame restoration to connect with various values

• **Engagement and collaboration with stakeholders and rights-holders** should be an integral part of restoration planning.

1. Engagement through [talkfishhabitat.ca](http://talkfishhabitat.ca)

2. Funding programs for Indigenous capacity building

- Partnerships with local communities and governments raised awareness, created buy in, and improved access to additional resources and alignment on infrastructure projects

# PRINCIPLES OF RESTORATION

(draft – from Framework to Identify Fish Habitat Restoration Priorities) - CONTINUED

5. Restoration planning should **integrate the best available information** and knowledge from all sources.
  - Research, information management, and information sharing is continually improving (e.g., authorizations available on public registry)
  - Funding programs support research and planning as well as implementation
6. **Integration of policies and activities across programs** should be part of the planning process.
  - “While often considered outside the realm of conventional fisheries management processes, habitat restoration and enhancement should nonetheless be incorporated into the overall rebuilding process where applicable and appropriate.” – **Guidance for the development of rebuilding plans under the Precautionary Approach Framework** ([https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precautionary-precaution-eng.htm#toc\\_8.7](https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precautionary-precaution-eng.htm#toc_8.7))
7. Effectiveness of restoration should be assessed through **monitoring, and** subject to **adaptive management**.
  - Incorporate a wide variety of metrics, baseline data and traditional knowledge to assess habitat before restoration
  - Set project-specific performance, which include indicators & metrics that are relevant, science based, measurable, aligned with the Offsetting Policy and reflect lessons learned from past projects
  - **Education, information-sharing and outreach** should be part of the restoration program for ongoing success.

# Summary of best practices

- **Work together**
- **Use best available information and share information**
- **Be adaptive, cautious, holistic, inclusive, and strategic**

