Fish Habitat Banking at DFO: Lessons learned and next steps

Session K – The Good, the Bad & the Ugly: Lessons Learned

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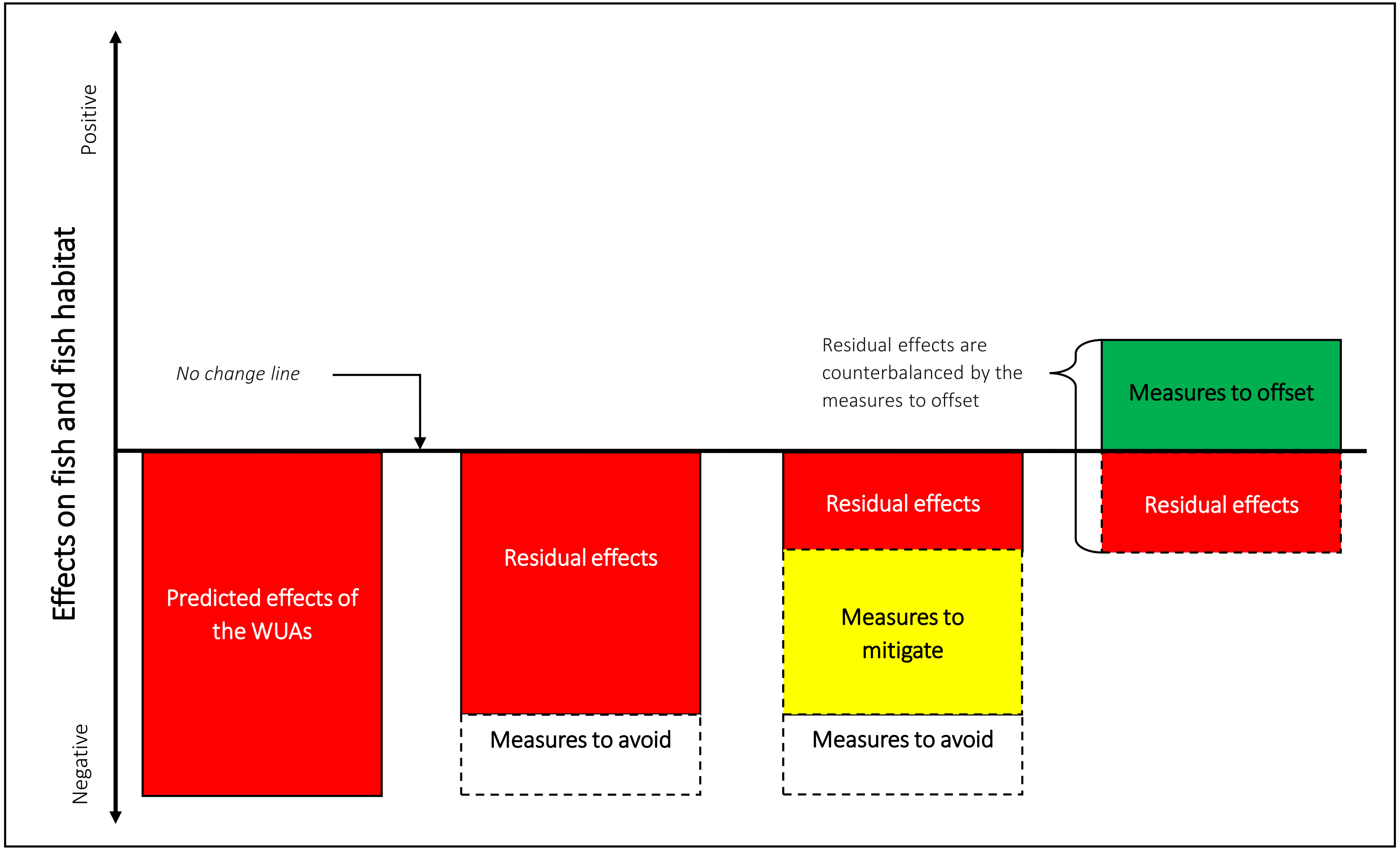
Outline

- Introduction
- DFO’s rules for Habitat Banking
- Science advice
- Examples
- Next steps

Introduction

Background

- 1986: **No Net Loss** of productive habitat capacity → requires proponents to balance unavoidable habitat losses with replacement habitat
- Onus is on proponent to define and implement compensation
- There are limits to what can be offset
- Benefits from offsetting measures must counterbalance harmful impacts, including time lags and uncertainties
- Offsetting is last in a hierarchical list


Effects on fish and fish habitat
Positive
Negative
No change line
Predicted effects of the WUAs
Residual effects
Measures to avoid
Residual effects
Measures to mitigate
Measures to avoid
Residual effects are counterbalanced by the measures to offset
Measures to offset
Residual effects

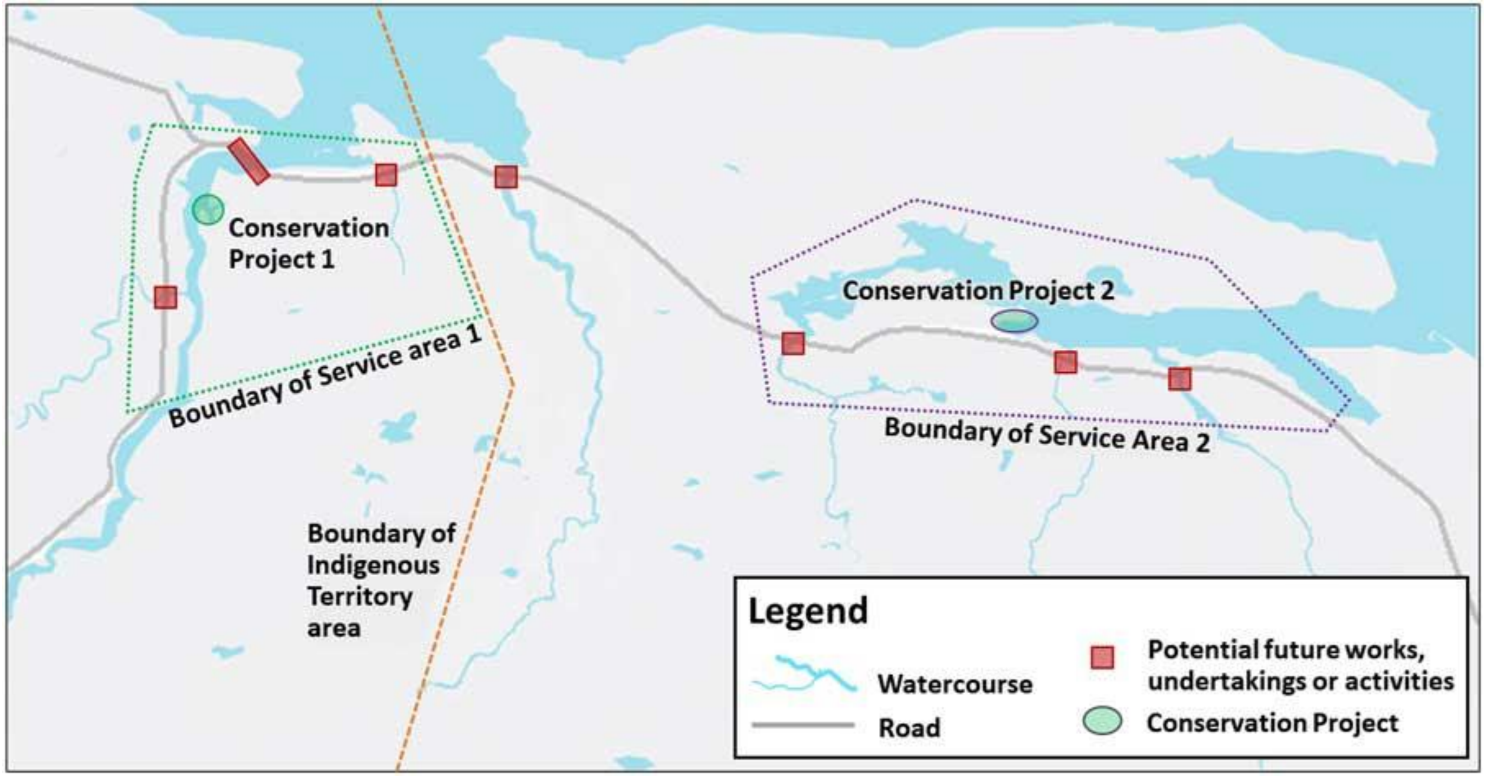
Banking Rules

DFO’s Rules for Habitat Banking:

1. Subject to a Habitat Banking Arrangement
2. Require consultation with Indigenous Peoples
3. Functioning habitat > credit withdrawal

Habitat Banking Arrangements*

- Service area(s)
- Conservation project
- Monitoring methodology
- Credit calculation
- Credit certification



*Third-party banking

- Credits cannot be sold or traded to a third party to meet offsetting requirements (credit owner and project proponent must be the same)
- A proponent may choose to subcontract the construction or monitoring of a conservation project to another party (for example, an environmental group specializing in restoration or an Indigenous group)
- However, the proponent remains responsible for achieving the objectives set out in the conservation project plan

Consultation with Indigenous Peoples

- Crown legal duty to consult:
    - Establishing a bank
    - Approving conservation projects
    - Authorizing subsequent WUAs that utilize habitat credits
- Equitable opportunities must be provided to participate in the establishment, management, and operation of fish habitat banks
- Indigenous Peoples may possess Indigenous Knowledge relevant to the design, implementation and monitoring of the proposed habitat bank

Credit certification

- Means habitat credits are “deposited” into the habitat bank and are available to be used as an offsetting measure for future harmful impacts on fish and fish habitat
- Certification phased based on **monitoring** benchmarks

Arrangements respecting fish habitat banks

42.02 (1) For the purposes of sections 42.01 to 42.04, the Minister may

> **(a)** establish a system for the creation, allocation and management of a proponent’s habitat credits in relation to a conservation project; and
>
> **(b)** issue a certificate to the proponent respecting the validity of any habitat credit acquired from the carrying on of a conservation project.

Science Advice

Habitat compensation effectiveness (2012)

- Scientifically-defensible effectiveness monitoring framework
- For each of the five habitat types / life history stages as defined in the Fisheries Act
- Research completed with publication of an accompanying DFO Technical Report (Smokorowski et al., 2015) with further details on methodologies*

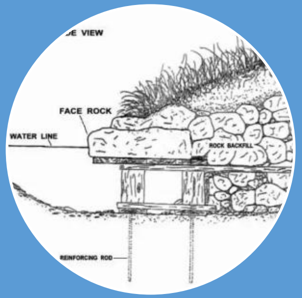
Science Advisory Report 2012/060

Offsetting to manage productivity (2013)

- Offsets should be larger than the area destroyed to counter-balance uncertainty, and/or delay in becoming functional habitat
- Monitoring and auditing are essential to determining the success of any offsetting program
- An adaptive management component should be included in offsetting programs

Science Advisory Report 2013/074

Determination of offset requirements (2017)



In-kind habitat

Habitat functions

Habitat indices

Fish biomass or abundance

Fish or ecosystem production

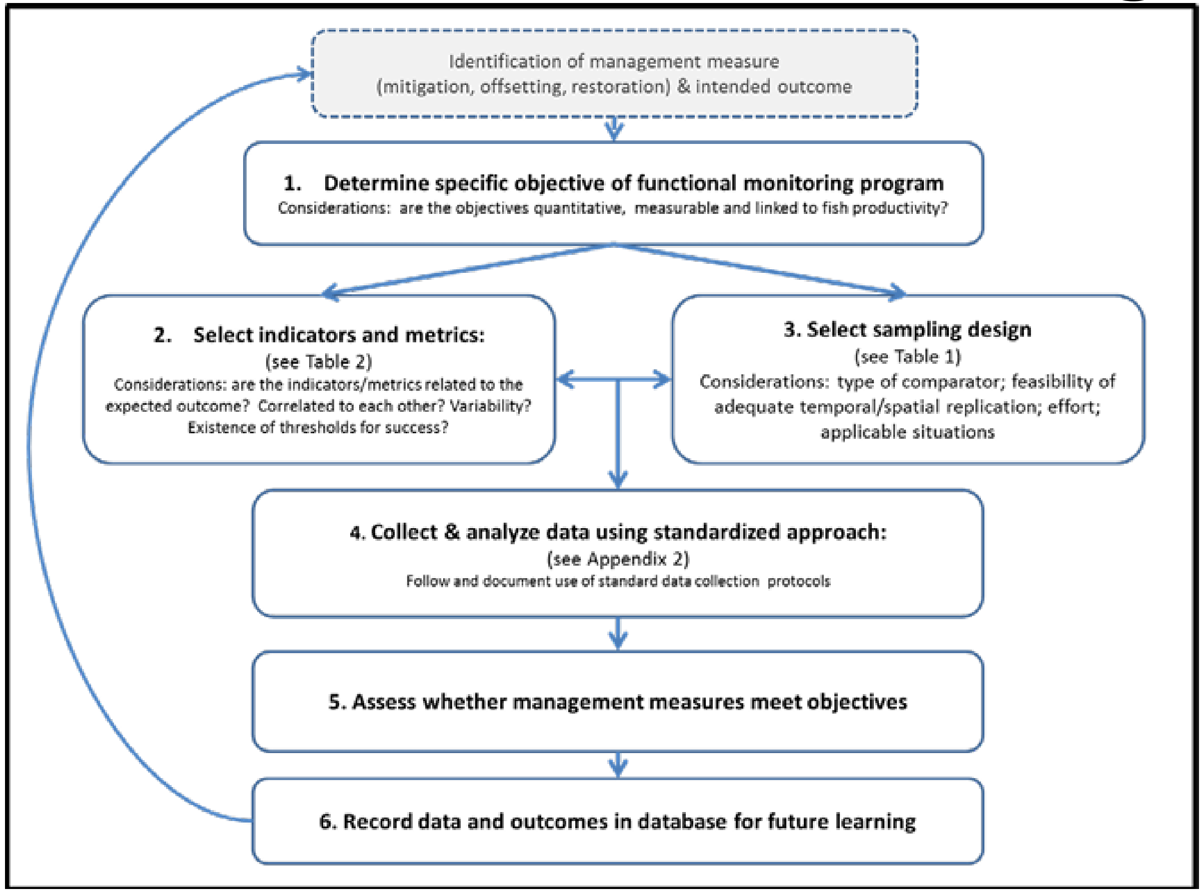
Fishery metrics

Determination of offset requirements (2017)

Metric class	Example application	Example metric
Habitat	In-kind habitat replacement	Area and habitat type
Habitat or ecosystem function	Replacement of lost function potentially using unlike offset measures	Habitat function metrics (e.g., cover, substrate) Secondary production
Habitat suitability or capacity for select species	Reductions in habitat quality or quantity offset by (unlike) improvements to habitat quality	Weighted useable area, Habitat Suitability Indices
Fish abundance	Creation of new habitats with similar expected fish communities. Created habitat may be unlike affected ones	Biomass, density, smolt production observed (baseline) or predicted (offset). Regional fish density reference data may be used
Fish production	Habitat loss or ecosystem transformation requiring unlike offsets. Can be used when new fish community is unlike affected one	Fish production lost/gained; direct measurements or regional standards, P/B predictors
Yield/fishery benefits	Predicted benefits to fishery (catch, angler satisfaction, participation) of the offset relative to losses to the fishery	Observed fishery statistics or predictions based on fishery models

Science Advisory Report 2017/009

Guidance on functional monitoring (2019)



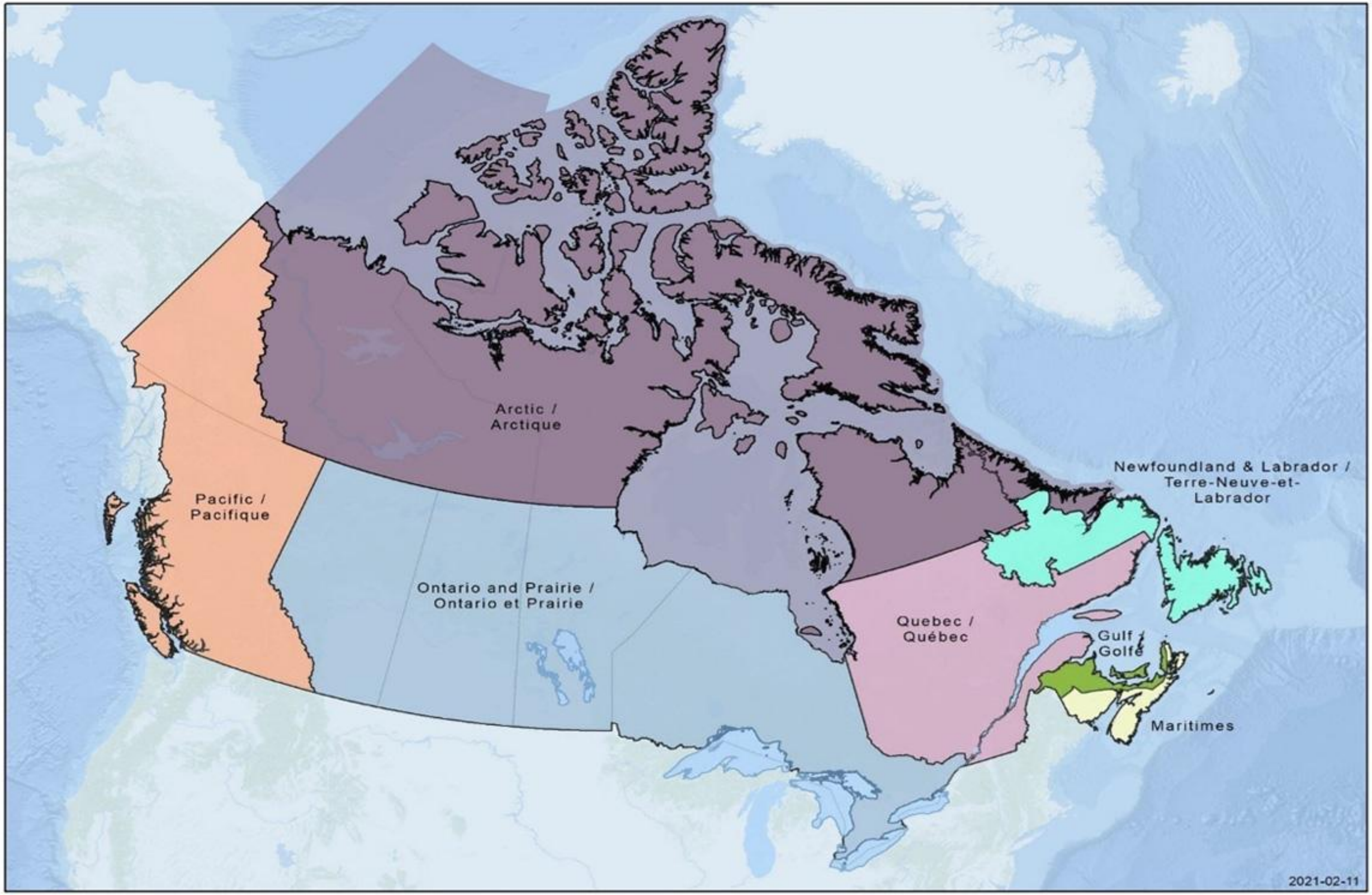
Science Advisory Report 2019/042

Estimating impacts, offsets for DOF (2022)

- When data exist, the ‘total biomass lost’ method is recommended as it best aligns with the productivity considerations of the *Fisheries Act*
- Uncertainty in both the timing and effectiveness of offsets – as well as uncertainty about the level of harm – can be addressed by applying compensation ratios in a range of 1:1.5 to 1:5
- Restoration benefits the whole fish community, while enhancement tends to benefit specific species, with both approaches being most effective for early life stages

Science Advisory Report 2022/052

Examples



Arctic /
Arctique
Pacific /
Pacifique
Ontario and Prairie /
Ontario et Prairie
Newfoundland & Labrador /
Terre-Neuve-et-
Labrador
Quebec /
Québec
Gulf /
Golfe
Maritimes
2021-02-11

Pacific

Maritimes

- Smith Gut Salt Marsh (Merigomish)
- Mavillette
- Cheverie Creek tidal marsh

Québec

- 25 habitat banks have been created or proposed
- The majority of the Québec based habitat banks (13) have been created or proposed by Transports Québec (MTQ)
- Other habitat banks have been created by various Port Authorities, Makivik Corporation (a non-profit organization owned by the Inuit of Nunavik), Hydro Québec, the Canadian Coast Guard, Transport Canada, Parks Canada, and Développements Lanak Inc. (a private residential land developer in Québec)

Ontario & Prairies

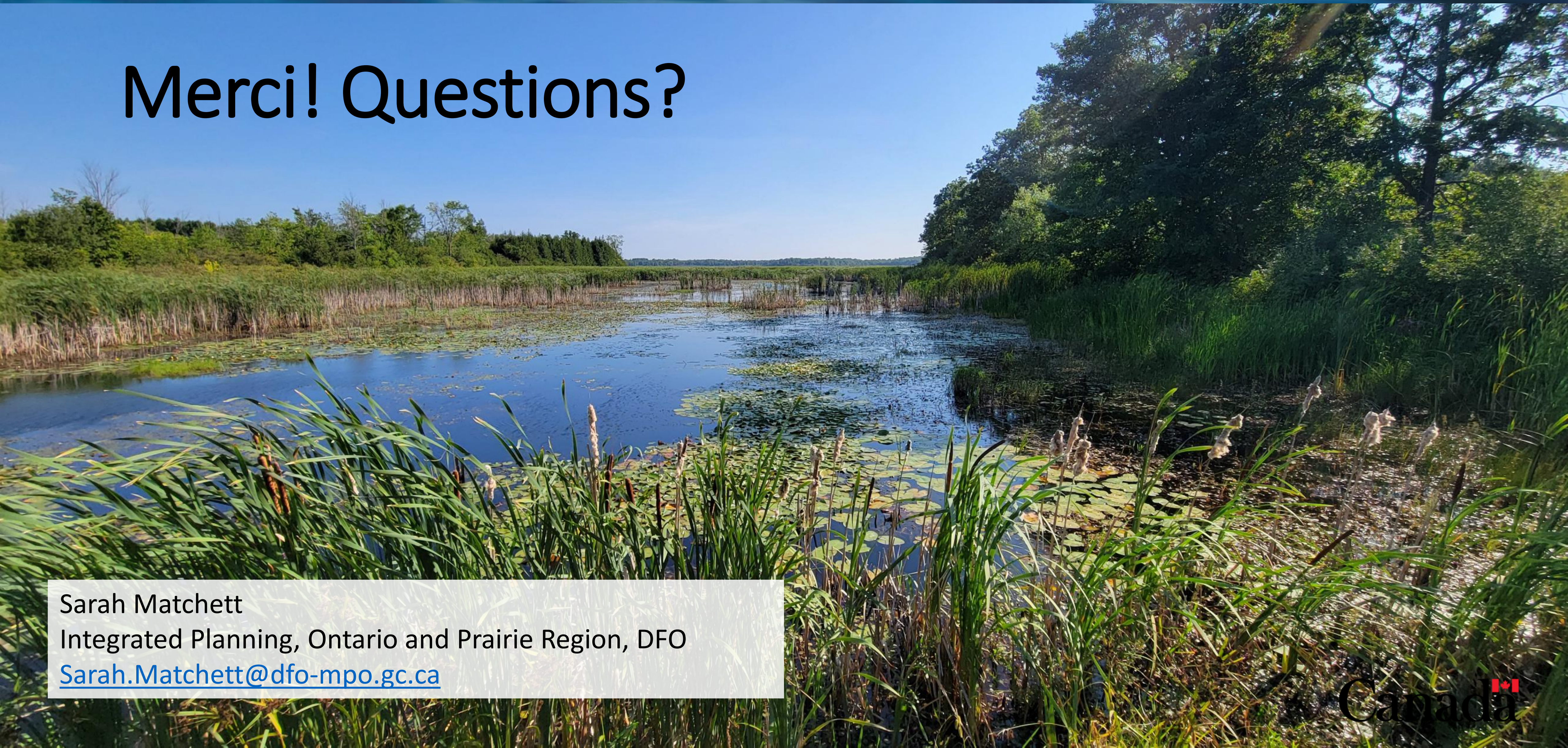
- City of Calgary (130,622 WHU)
- City of Kitchener (15,000 m^2)

Next Steps

Next steps

- O&P region staff are actively working on new HBAs with numerous proponents, both private and public
- Updated guidance finalized and published May 2026
- Credits have only been used in one instance so far in this region
- Working with other regions to improve national coherence – increased uptake will require streamlined process
- More effort required to ensure all types of offsetting is effective

Merci! Questions?



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