



What do we mean by ‘freshwater protected area’?

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Outline

Definitions

Examples

Framework

Conclusions

WARNING:

More questions than answers

What is a protected area?

- *Def (IUCN):* An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.



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What is a **freshwater** protected area?

- *Def (IUCN):* An area of land and/or **water** especially dedicated to the protection and maintenance of **(freshwater)** biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.



Marine PAs

MPA (IUCN): Any areas of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.

- focus on defining 'marine' to include intertidal
- protection of environment, not biodiversity

Marine & Coastal PAs

MCPA (CBD): Any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings.

- used when coastal PAs don't include marine waters
- biodiversity protection can be indirect?

Do we need a
separate
definition for
freshwater
PAs?

...let's assume yes



What comes first?

Definition (e.g. 'an area of land and/or sea...')



Criteria (freshwater, biodiversity, processes, etc.)



Examples (e.g. heritage rivers, fishery reserves, etc.)

Possible criteria

- PA must be explicitly (not exclusively) designed to provide enhanced protection to freshwater biodiversity
- PA need not be fixed in space or time but must be clearly identifiable & enforceable
- PA need not spatially encompass freshwater biodiversity targets but must clearly provide protection to them

Some examples

- Wild & Scenic Rivers/Heritage Rivers
- Fishery reserves/fish sanctuaries
- Floodplain/riparian reserves
- Traditional PAs



Wild & Scenic Rivers/ Heritage Rivers

- generally linear
- impoundments prohibited, some other uses permitted
- sometimes broad riparian or even catchment protections



Canadian Heritage Rivers System

Fishery Reserves/ Fish Sanctuaries



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- Not biodiversity-focused
- Usually cover only the aquatic environment
- Often community-managed or co-managed
- Can shift in space & time

Floodplain/riparian reserves

- Frequently linear
- May not include aquatic environment
- May be established to protect ecosystem services
- May be legislated but unenforced



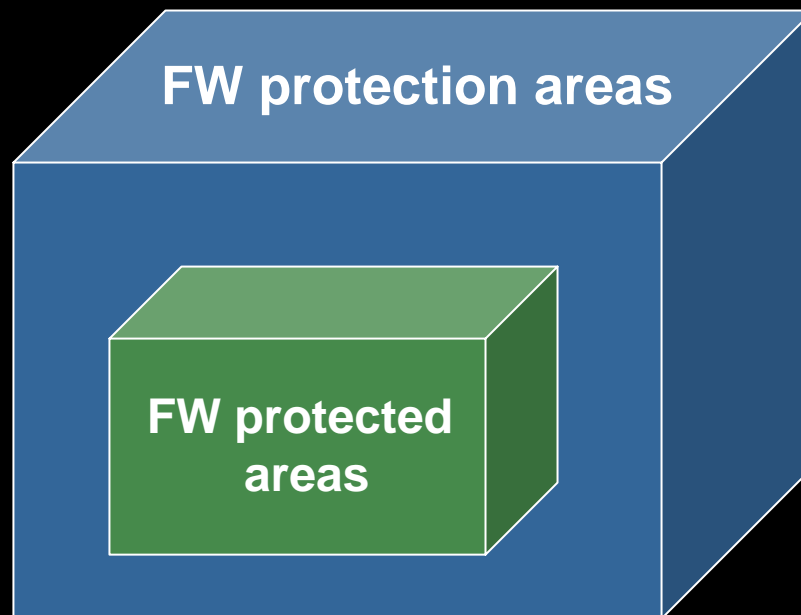
Traditional (non-marine) PAs

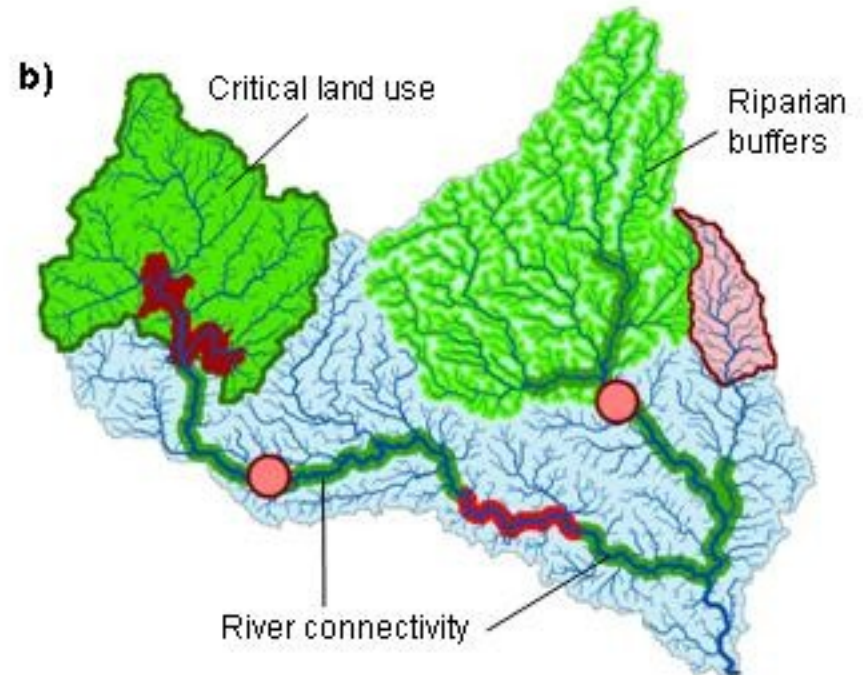
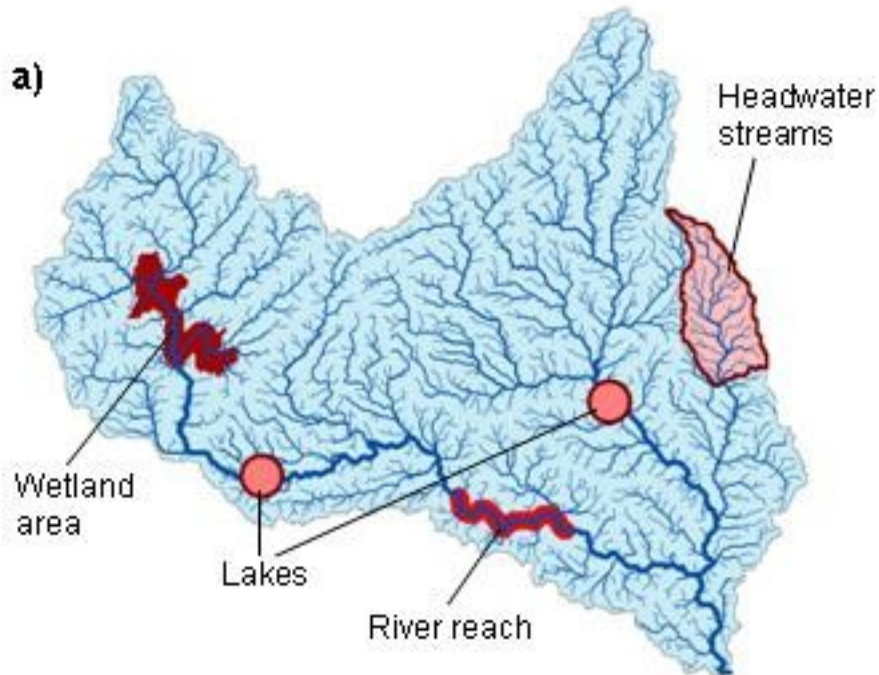
- Most will include FW ecosystems
- Most will not have been designed/managed to protect those FW ecosystems
- No system in place to decide when those PAs are considered FW (except Ramsar)
 - Is a FW PA defined by its targets? design? management?



Freshwater protected areas **vs.** Freshwater protection areas

- What is the distinction between the two?
- When is a FW protection area not a FW PA?





Schematics of proposed freshwater PA zones

a. *freshwater focal areas*

b. *critical management zones*

c. *catchment management zone*

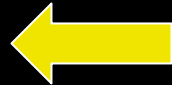
What FW features do we
need to protect?



What are key threats to
those features?



What are those
interventions?



Which threats can be addressed
through place-based interventions?



What criteria distinguish FW protected area
interventions (vs. FW protection areas)?



What is a FW protected area?
(definition)



What are FW protected area
types?

Conclusions

- Freshwater PAs may be a subset of freshwater protection areas
 - Which to focus on?
- Defining freshwater PAs may first require establishing criteria
- Standard IUCN definition may/may not suffice
 - Separate FW definition may help to catalyze discussion & generate interest