



# Mapping and Prioritising River Development Structures Across the LMB

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# What is a Barrier?



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Any structure that inhibits the movement of fish





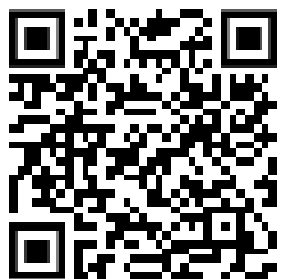
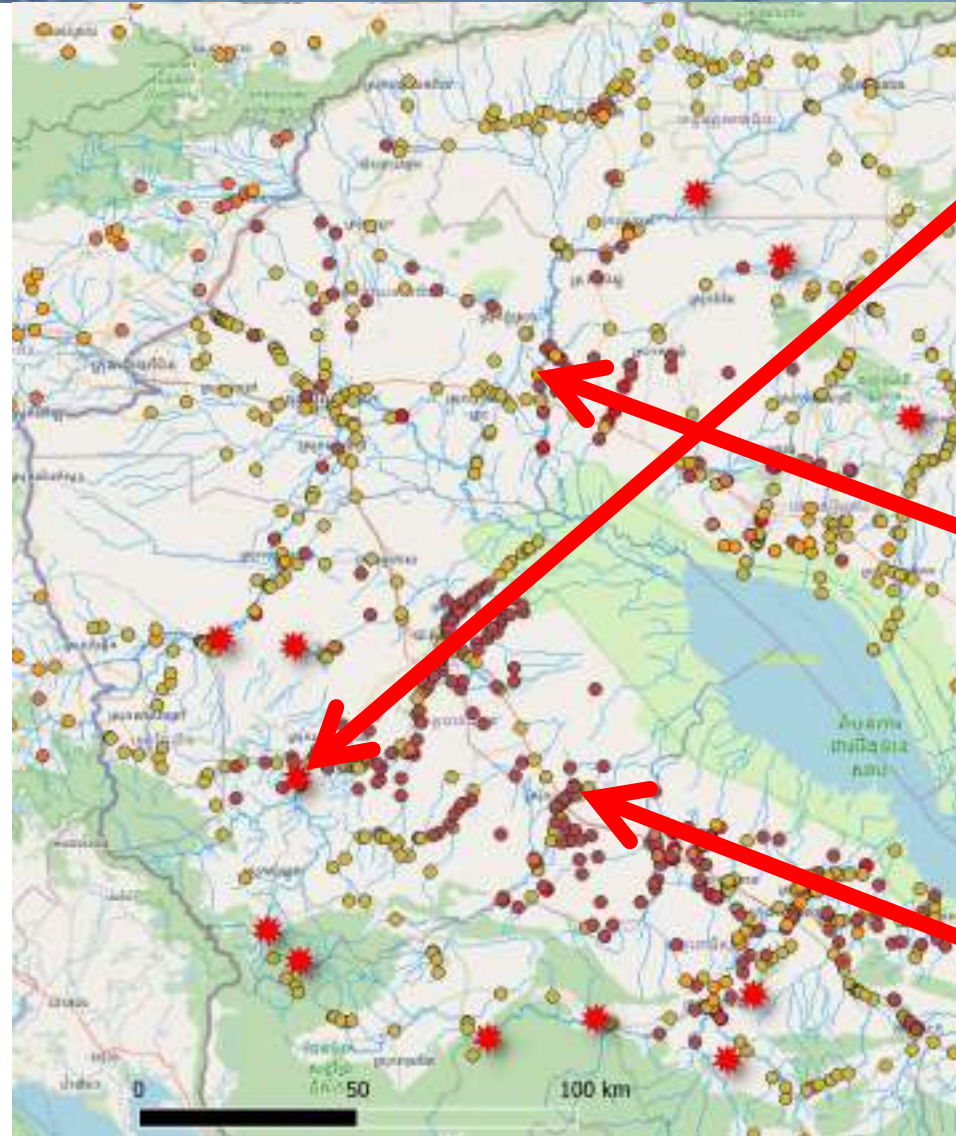
# Underestimated Barriers



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- Underestimation common
- Large scale mapping identifies few barriers.
- Actual numbers are orders of magnitude larger.
- Prioritisation gives on-ground resources to find these barriers.

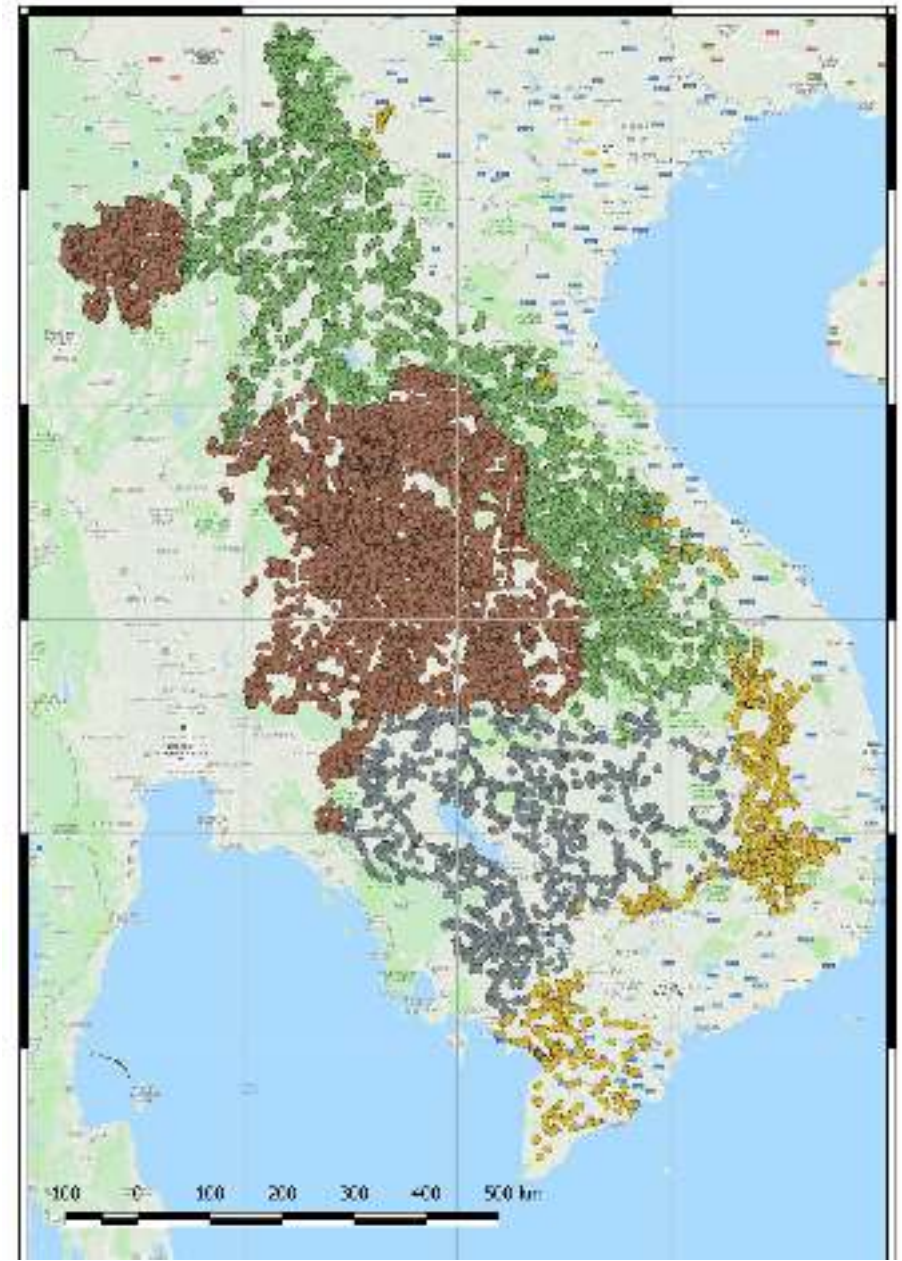


Lee J Baumgartner, Tim Marsden, Deanna Duffy, Ana Horta and Nathan Ning (2022) Optimizing efforts to restore aquatic ecosystem connectivity requires thinking beyond large dams. *Environ. Res. Lett.* 17 (2022) 014008



## Barriers are common

- Thousands barriers already exist.
- Thousands more are planned.
- Fragmentation of rivers is bad for fish
  - Limits access to habitat
    - Breeding
    - Feeding
    - Refuge from dry season



# What is Prioritisation



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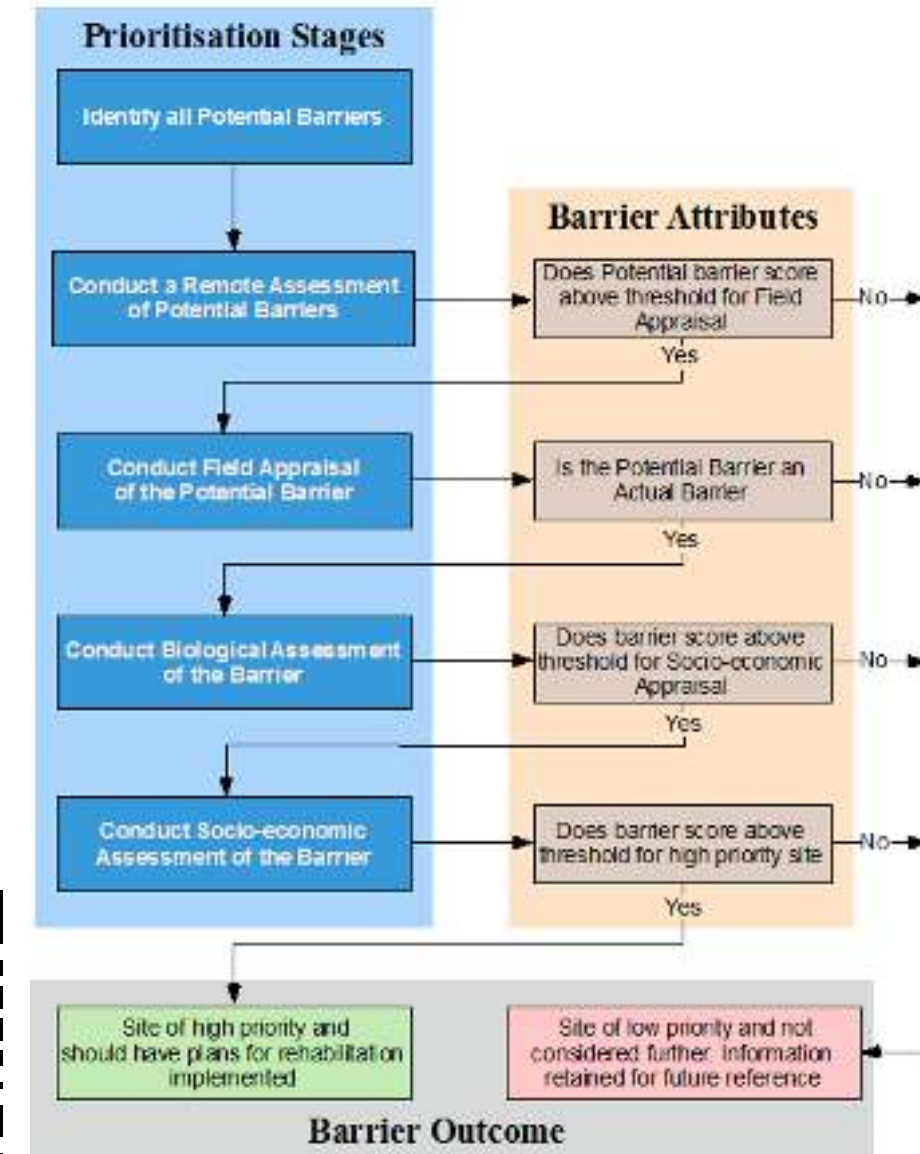


- Provides rapid assessment of barriers
- Identifies barriers isolating fish populations.
- Needed due to high barrier numbers.
- Limited funding for barrier remediation.
- Funds must optimise fishery outcomes.
- Reports guide best funding investments.
- Remediate the most critical barriers.

Tim Marsden, Lee J. Baumgartner, Deanna Duffy, Ana Horta, Nathan Ning (2023). Evaluation of a new practical low-cost method for prioritising the remediation of fish passage barriers in resource-deficient settings. Ecological Engineering, Volume 194, 2023, 107024, ISSN 0925-8574



## Barrier Assessment Procedure





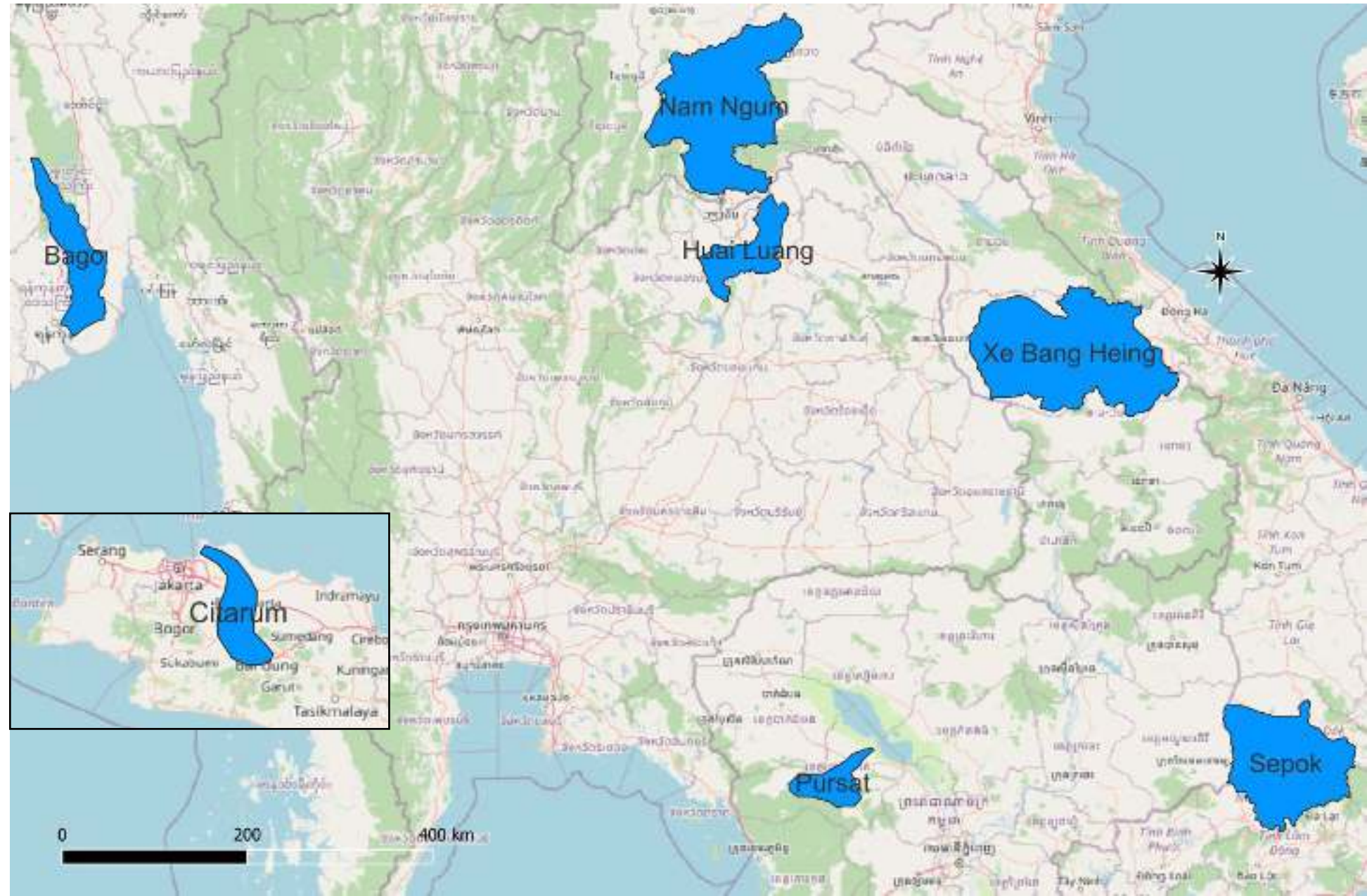
# Where?



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- Completed in several countries
- Many more required





# Field Appraisals



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# Results



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Australian Fish Passage Services



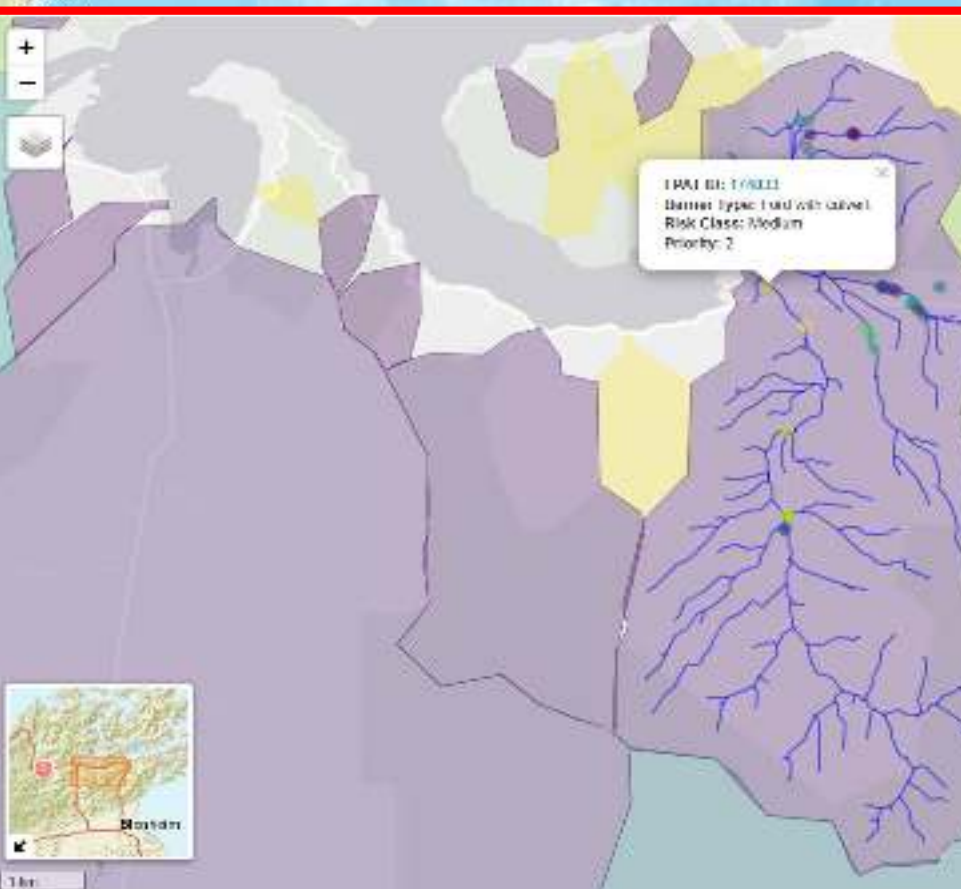


## More Work Required

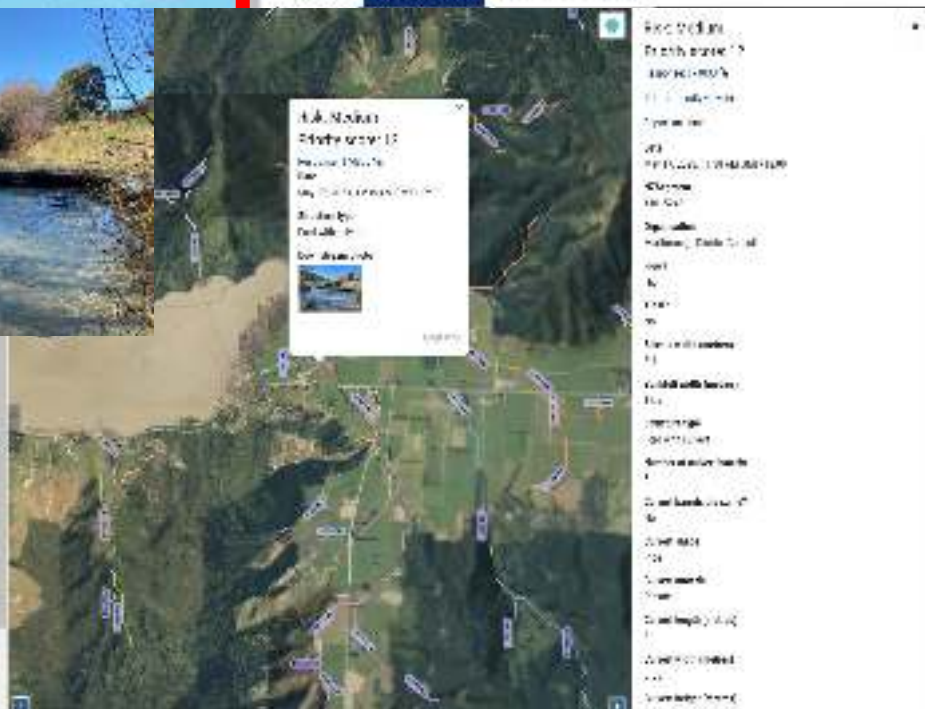
- Expansion of coverage area
- Linkage into Agencies for uptake
- Update of Prioritisation Techniques



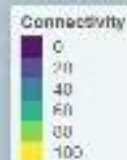




Category	Total length
Swedish film	12,170
Foreign film	10,110
Foreign TV	14,170
Documentary	2,170



Correctivity (wide)



- *„Lernaktivitäten“* (z.B. Simulationen, Fallstudien, etc.)

Stream: Centre

Received 1 April 2003

2008年12月16日

Fish up 2 (green points)

Select item(s)

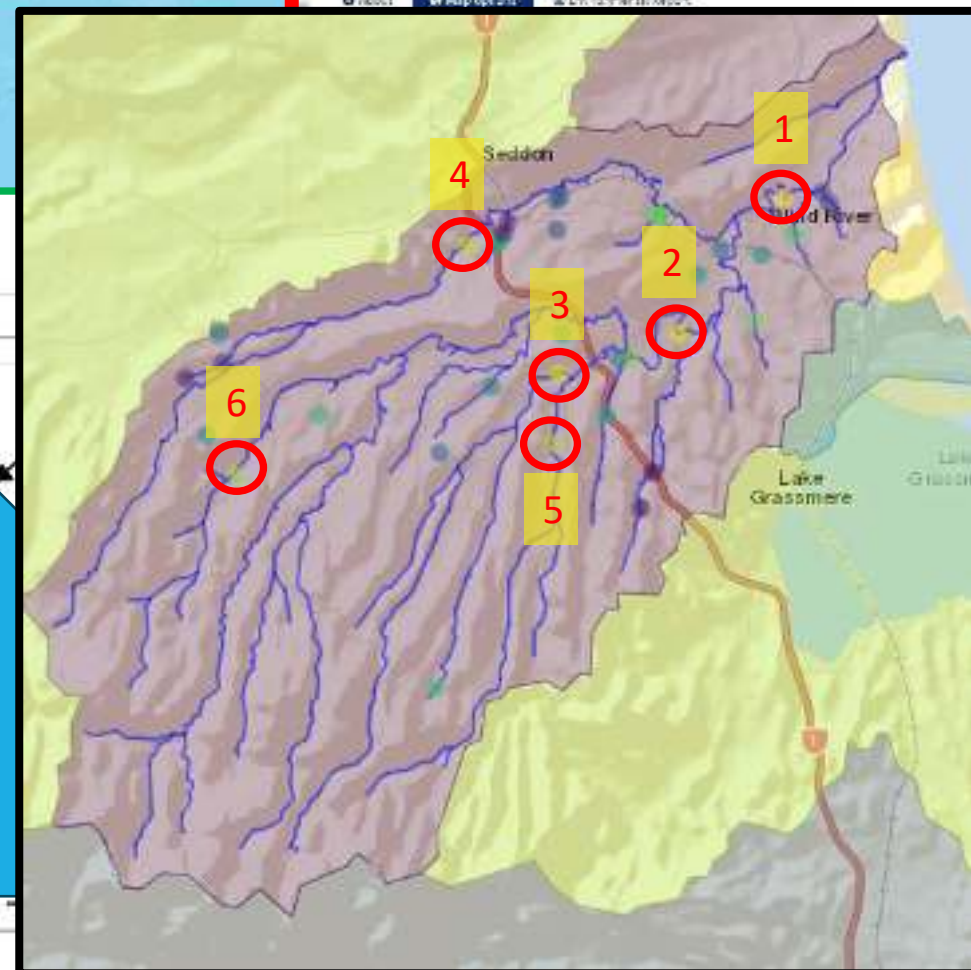
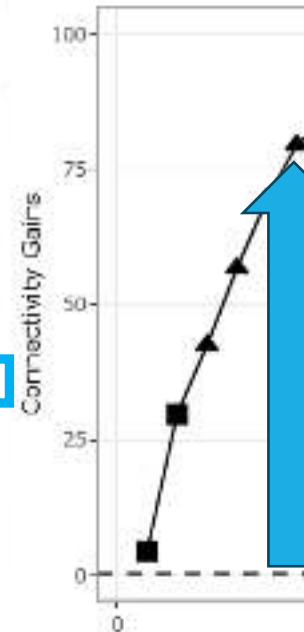
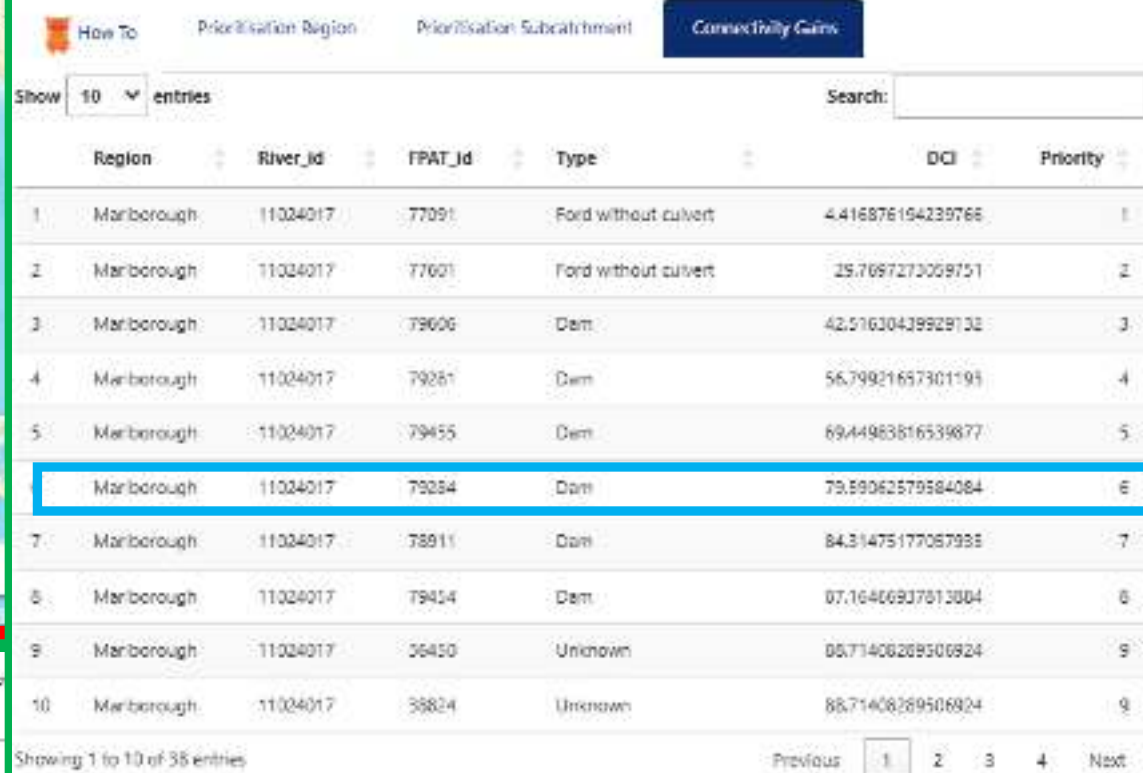
Weighted Volume 10

Weight Value=4

1


University of North Carolina





Barrier Priority

Structure   ●   Culvert   ▲   Dam   ■   Ford without culvert   +   Unknown

### Barrier Prioritisation

Fish up 2 (green points)

Weight Value = 4

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- *„Das ist ein sehr interessantes Thema, das ich gerne weiterverfolgen möchte.“*
- *„Ich habe noch eine Frage, die ich Ihnen stellen möchte.“*

### Stream Cages





# Thank You

