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Managing connectivity for freshwater fish



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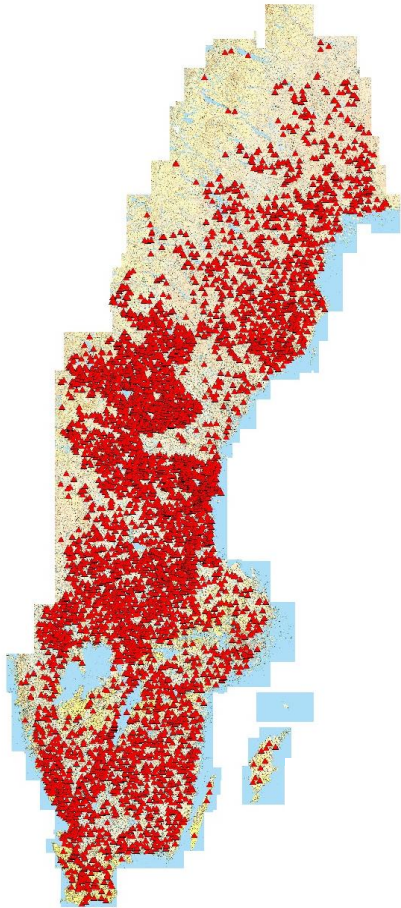
The management problem



Dams hinder fish migration.

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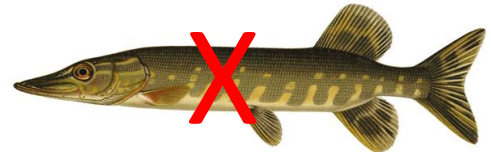
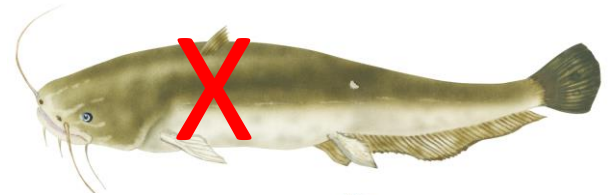
12 000 barriers where remedial
measures need to be taken

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Invasive species



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Restore connectivity or stop invasive species?



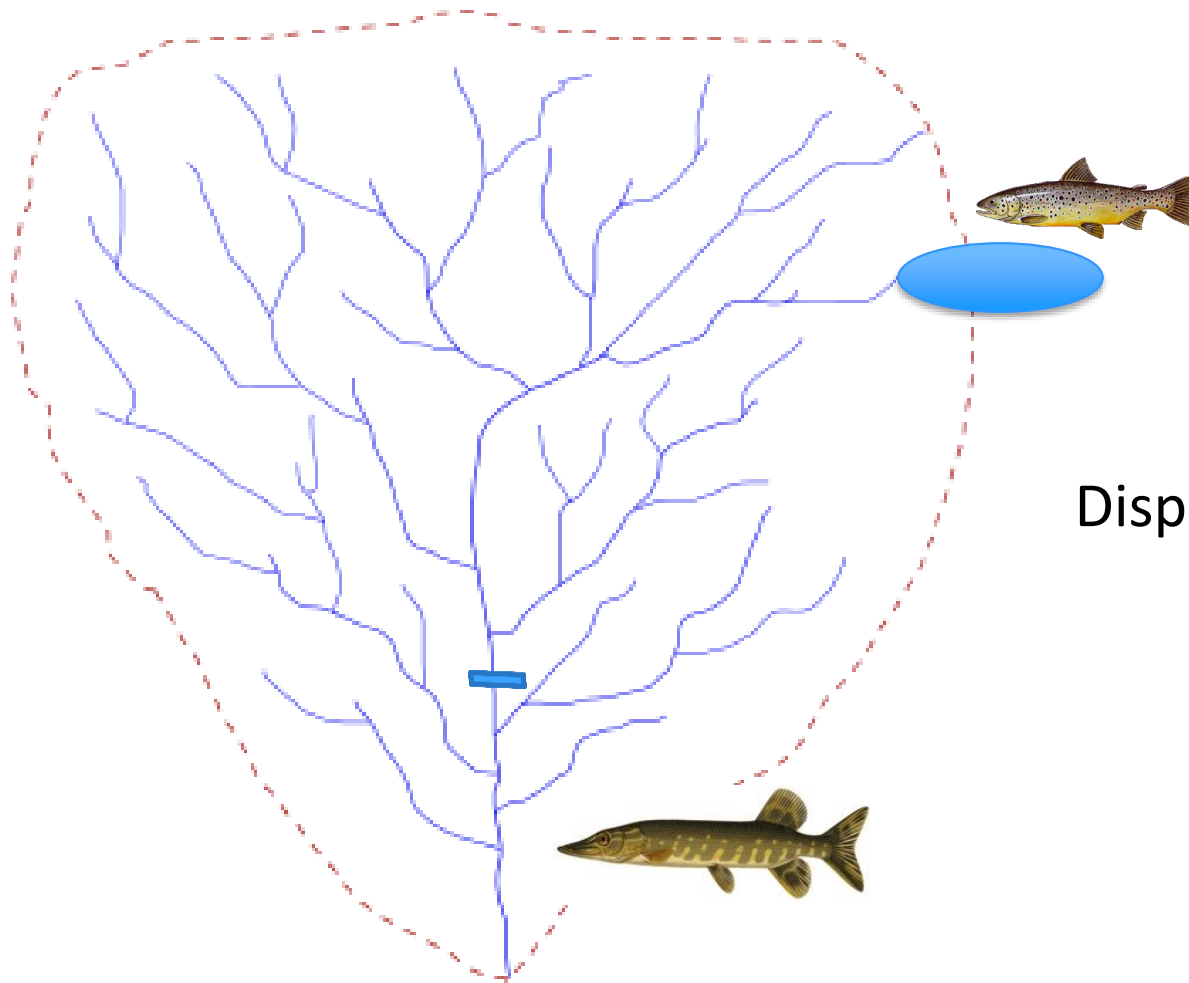
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The solution

- A web based decision support system
- Allows managers to investigate the consequences of different alternatives
- Interactive maps of river-scapes that show colonization probabilities and extinction risks for management scenarios proposed by the user.

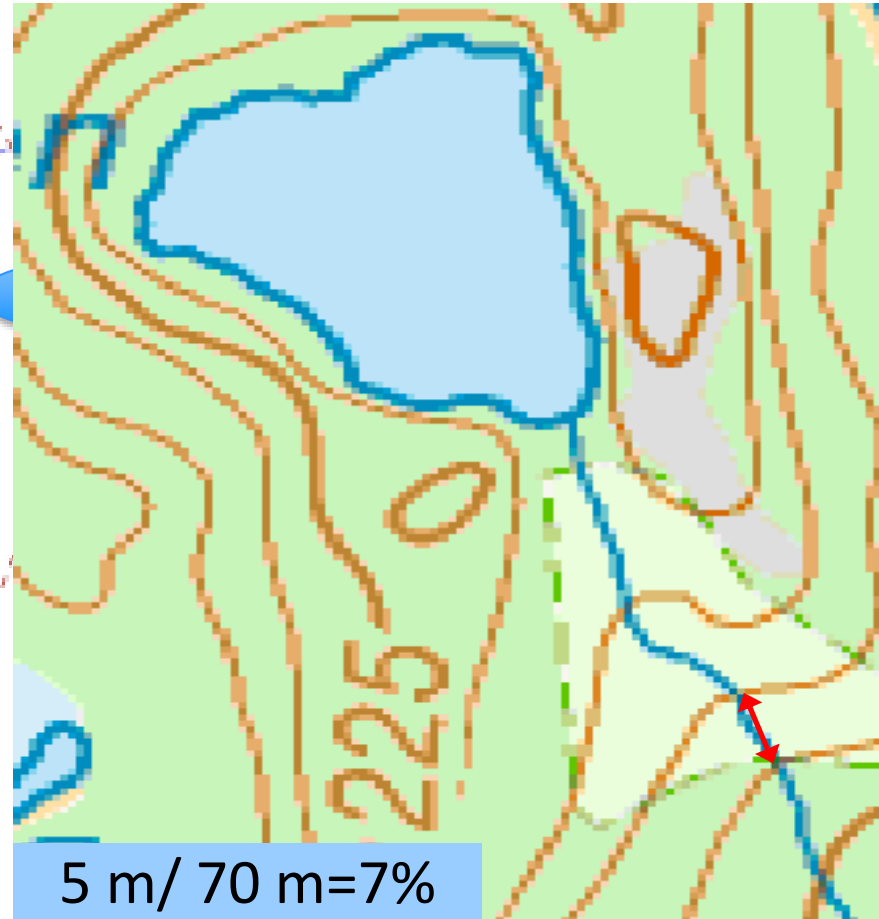
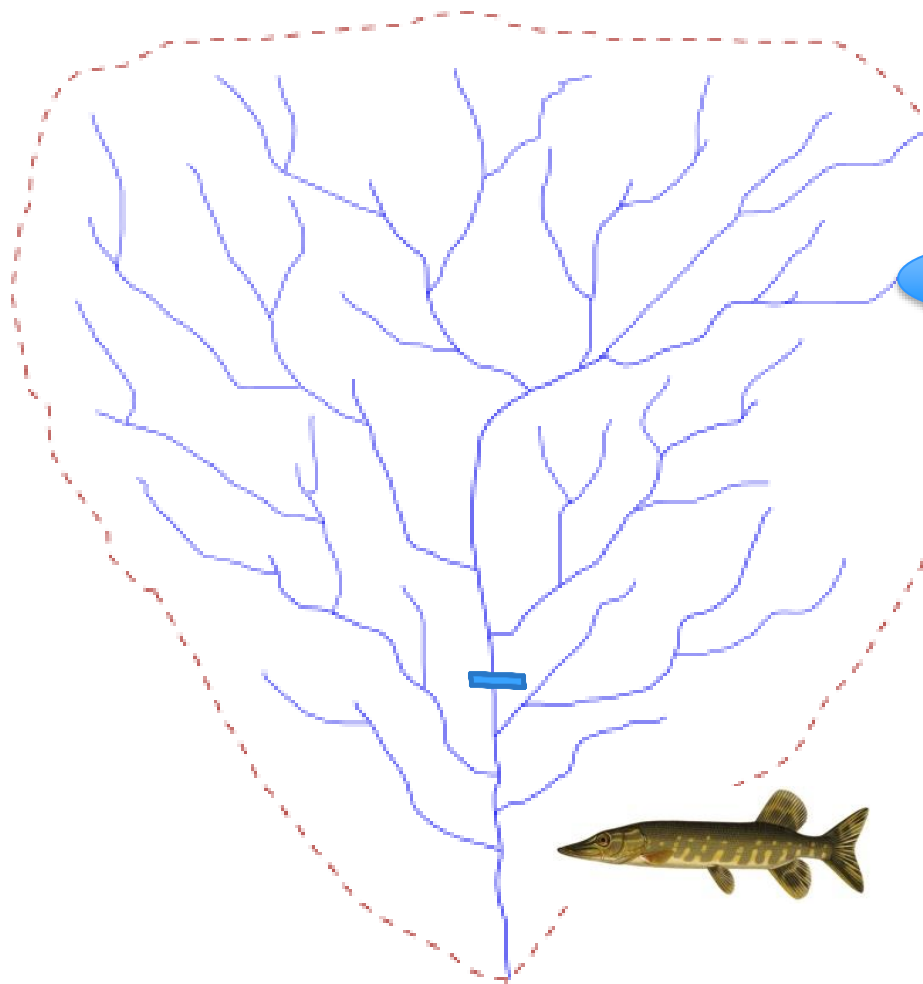




Dispersal?

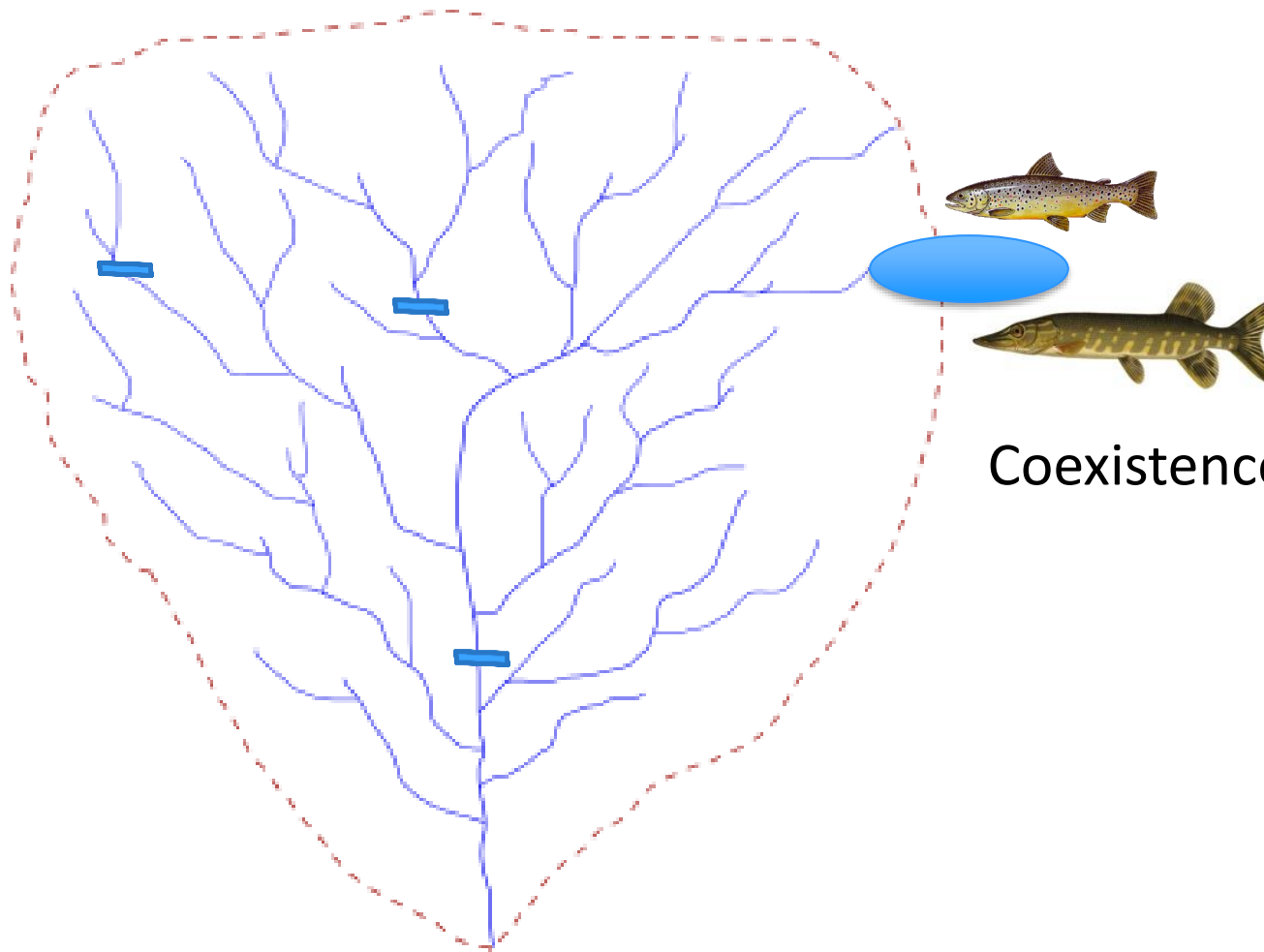
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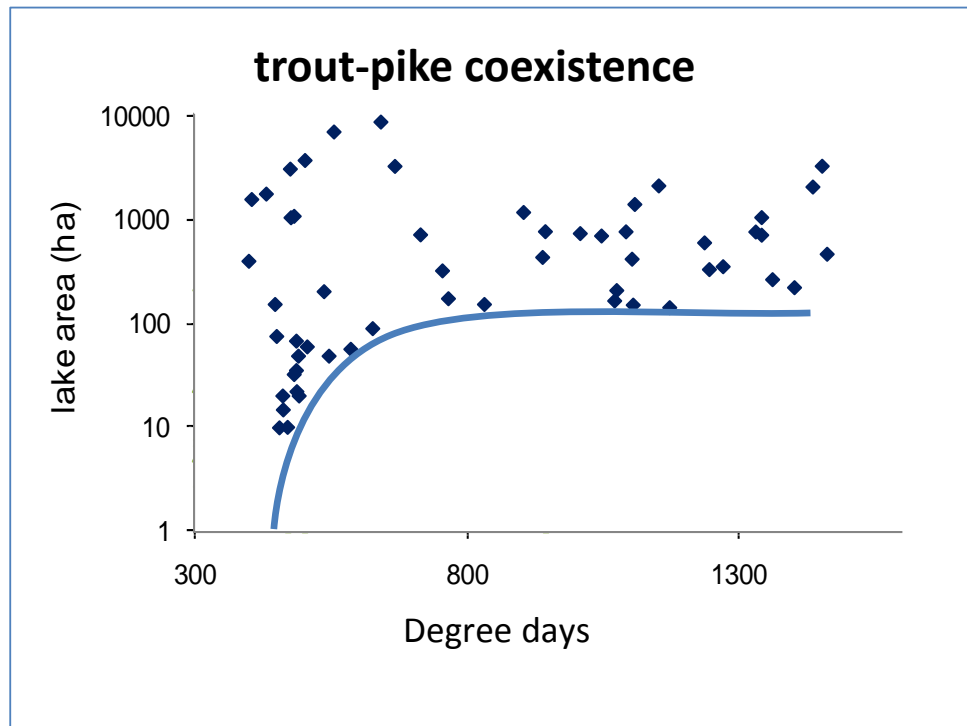


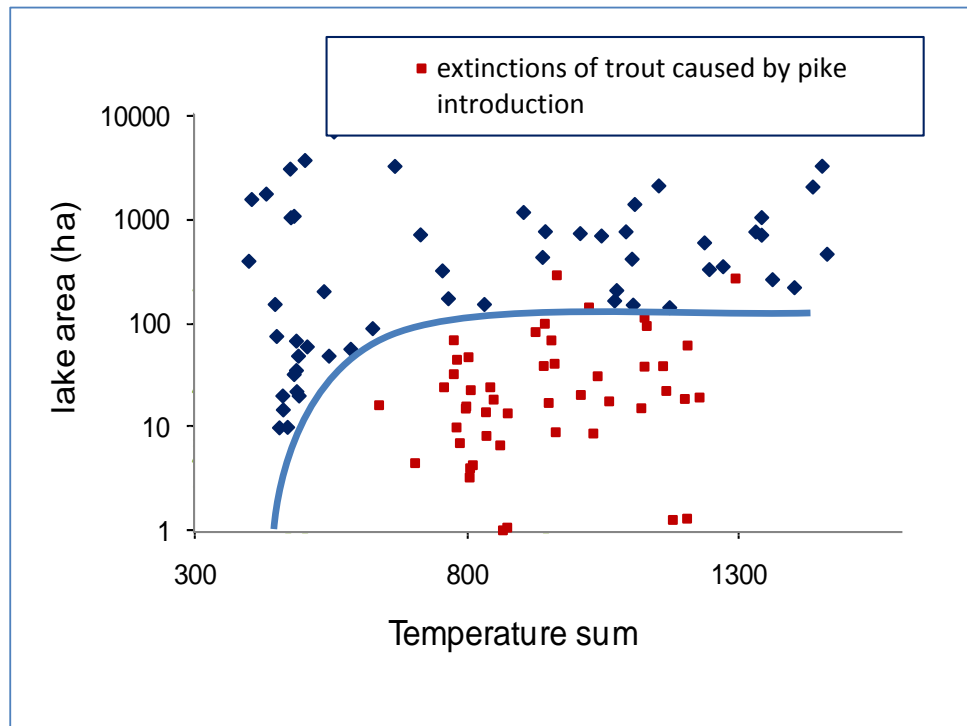
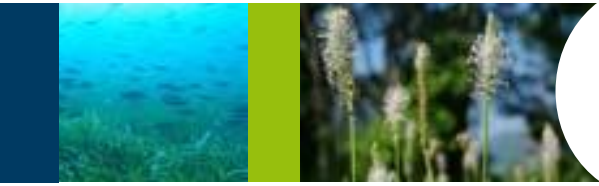
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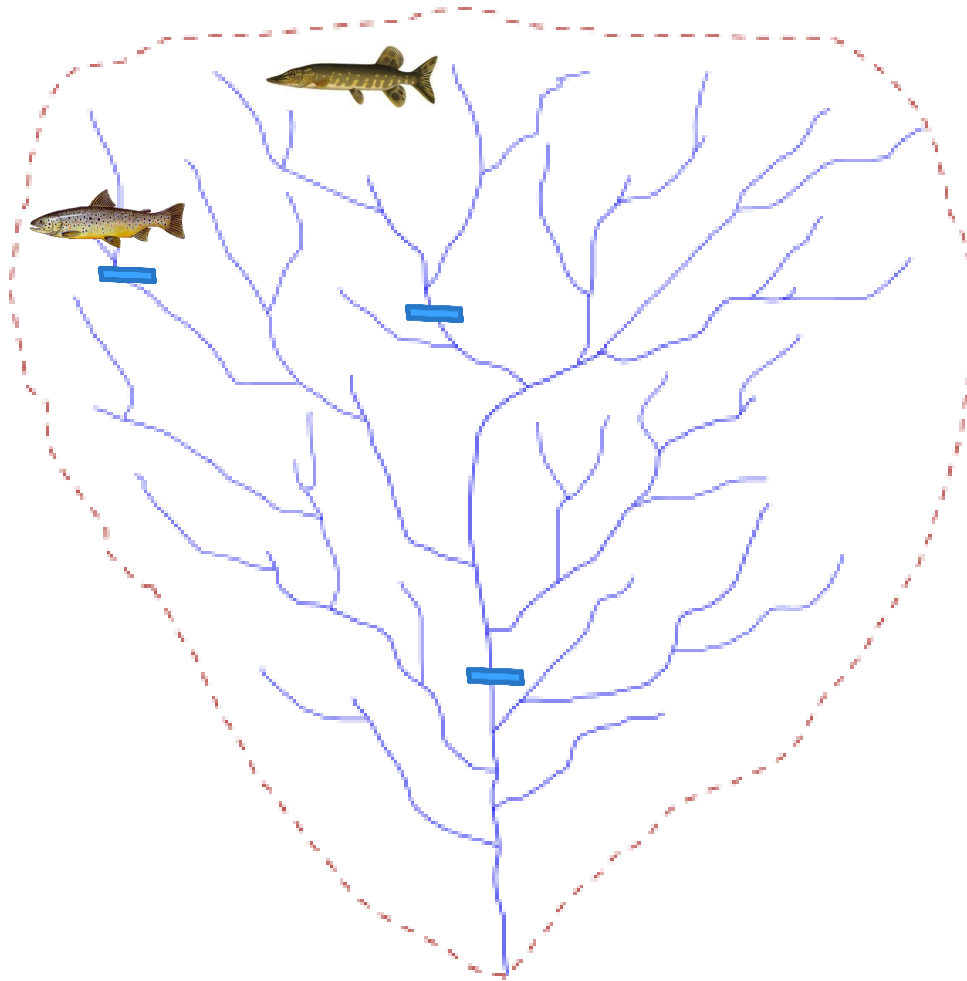
Coexistence or extinction?





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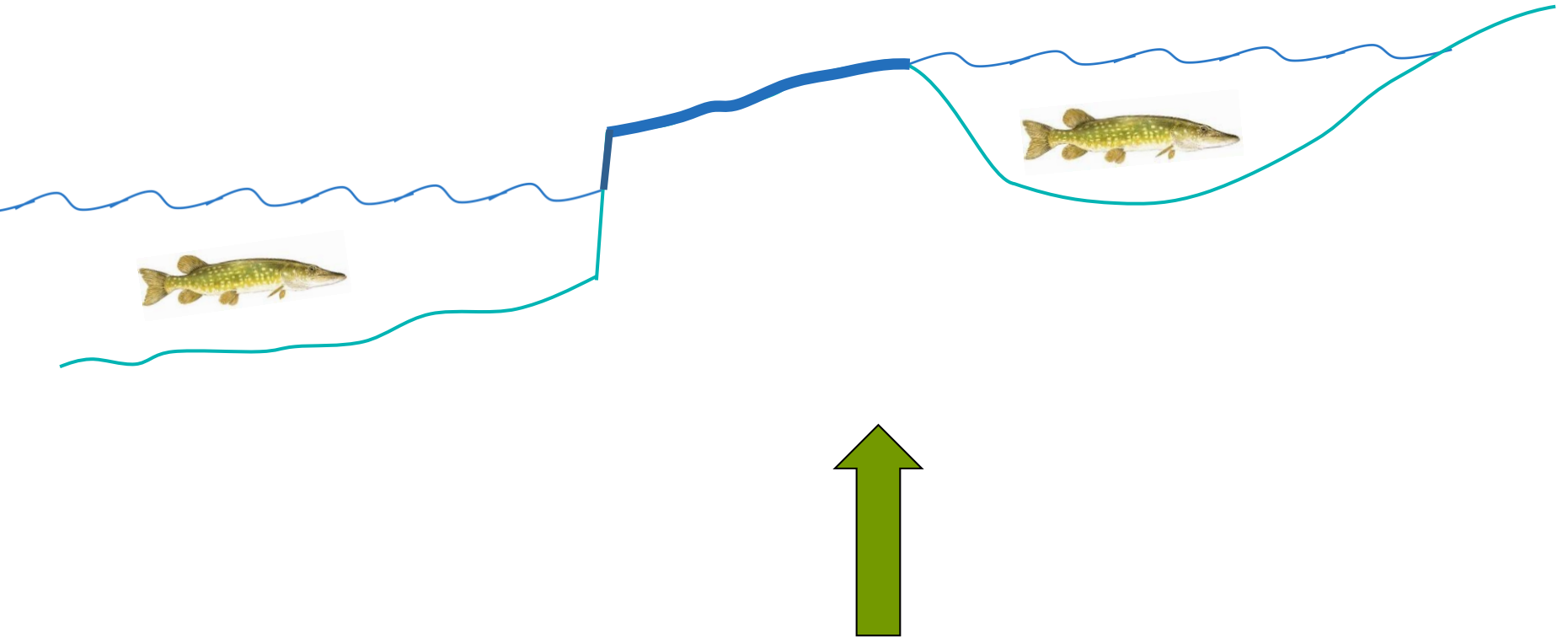
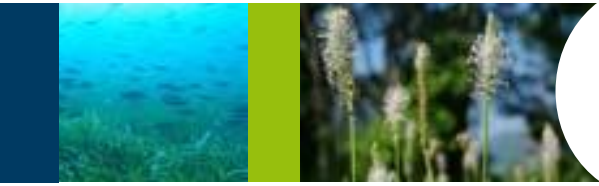


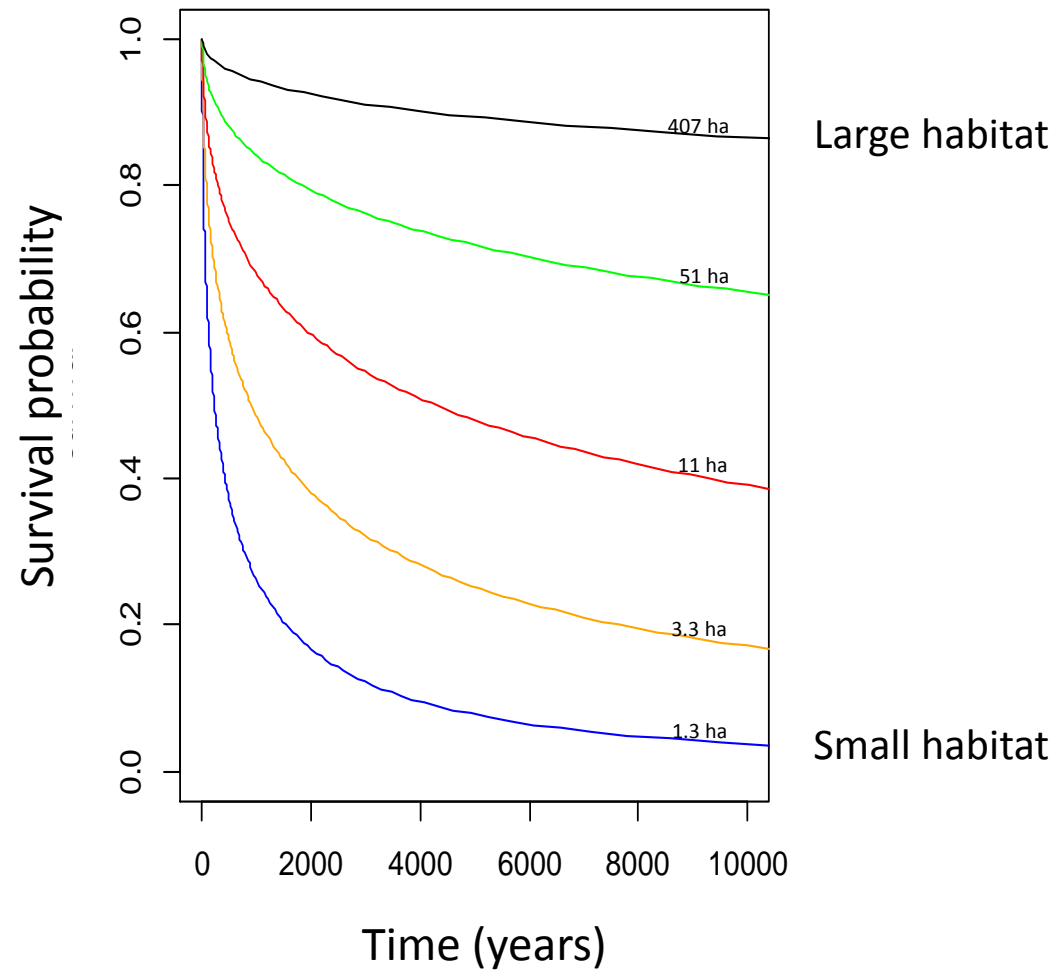
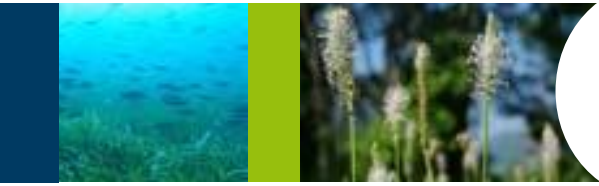
Extinction risk in fragments?

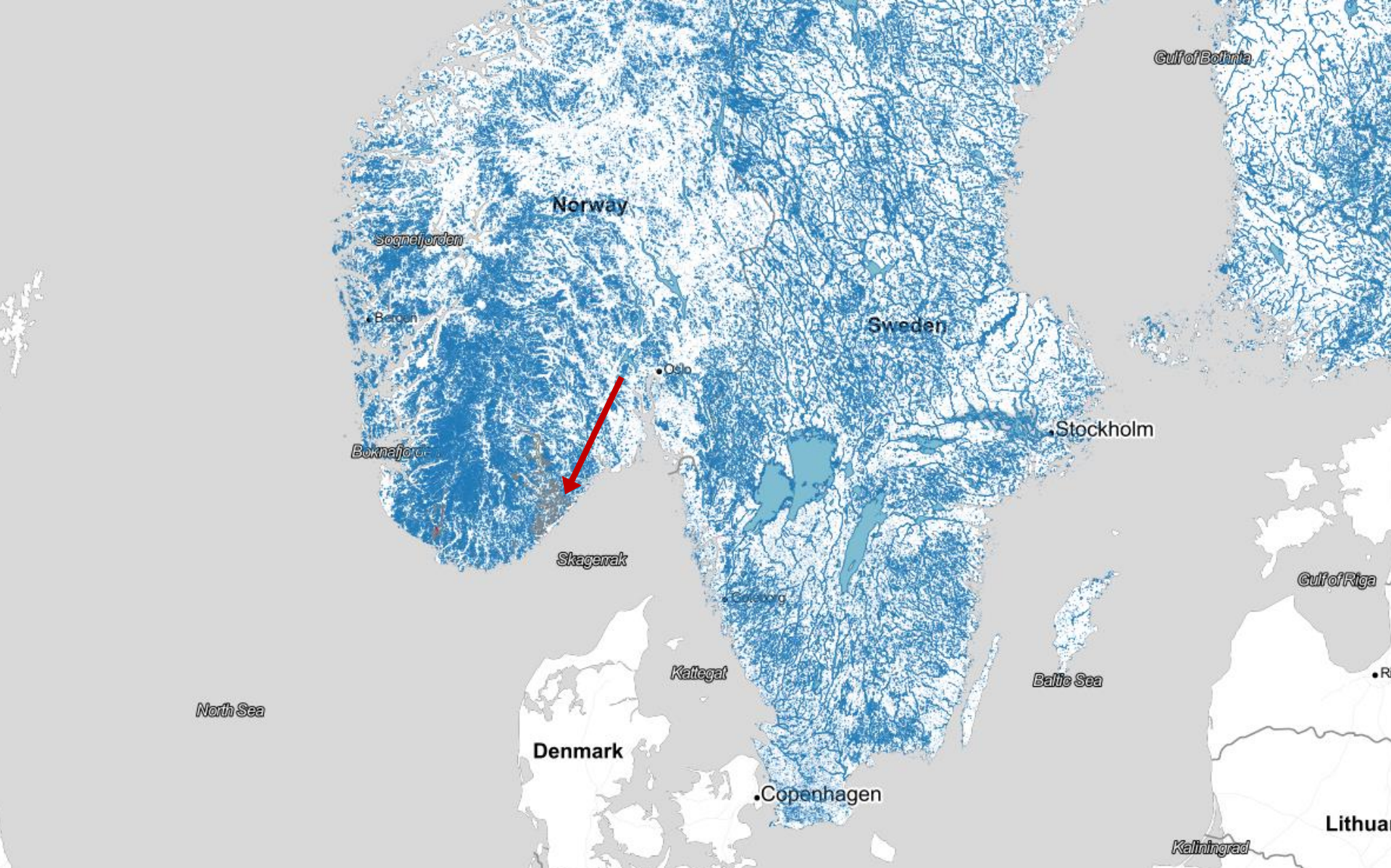


Baltic Sea

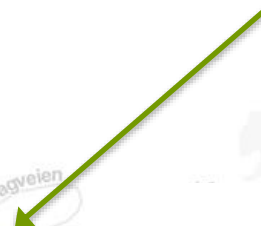








<http://vm-srv-wallace.vm.ntnu.no/lm/index.php/view/map/?repository=1&project=Agder>

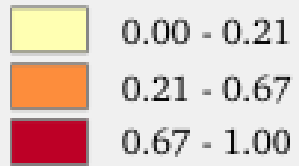


Slope

- 0.0 - 7.6
- 7.6 - 19.7
- 19.7 - 33.0
- 33.0 - 46.4
- 46.4 - 87.0



Probability of dispersal





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Things to implement

- Coexistence and habitat suitability models
- Dispersal models for more species
- Extinction-area models
- Anthropogenic barriers

Further plans

- Expand to whole of Norway and Sweden
- Adapt to the Iberian situation

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Thanks to



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UMEÅ UNIVERSITY



SWEDISH ENVIRONMENTAL
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