



*Complex dynamics of aquatic ecosystems  
faced with human-induced and environmental stress*

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# Complex dynamics of aquatic ecosystems faced with human-induced and environmental stress

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Canada



## MY GROUP WITHIN EACH PROJECT



### Current:

Silva Uusi-Heikkilä (university researcher)

Tommi Perälä (post-doc)

Etsuko Nonaka (post-doc)

Sara Hocevar (PhD student)

Milko Vesterinen (PhD student)



### Current:

Antti Eloranta (university researcher)

Maria Tirronen (post-doc)

**EMIL AALTOSEN SÄÄTIÖ**

### Current:

Jouni Salonen (post-doc)

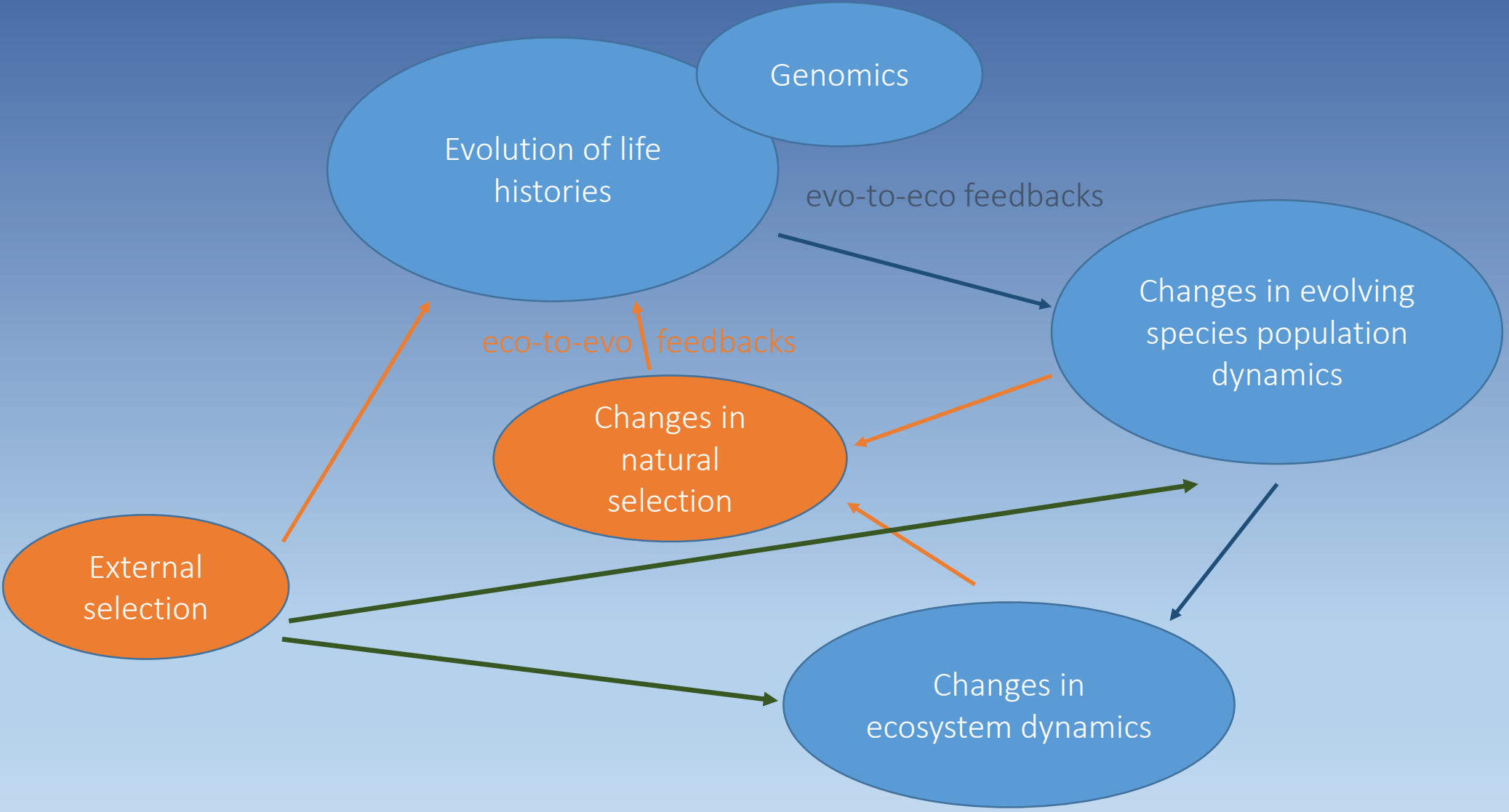
Pauliina Ahti (PhD student)



### Upcoming:

Post-doc currently being recruited

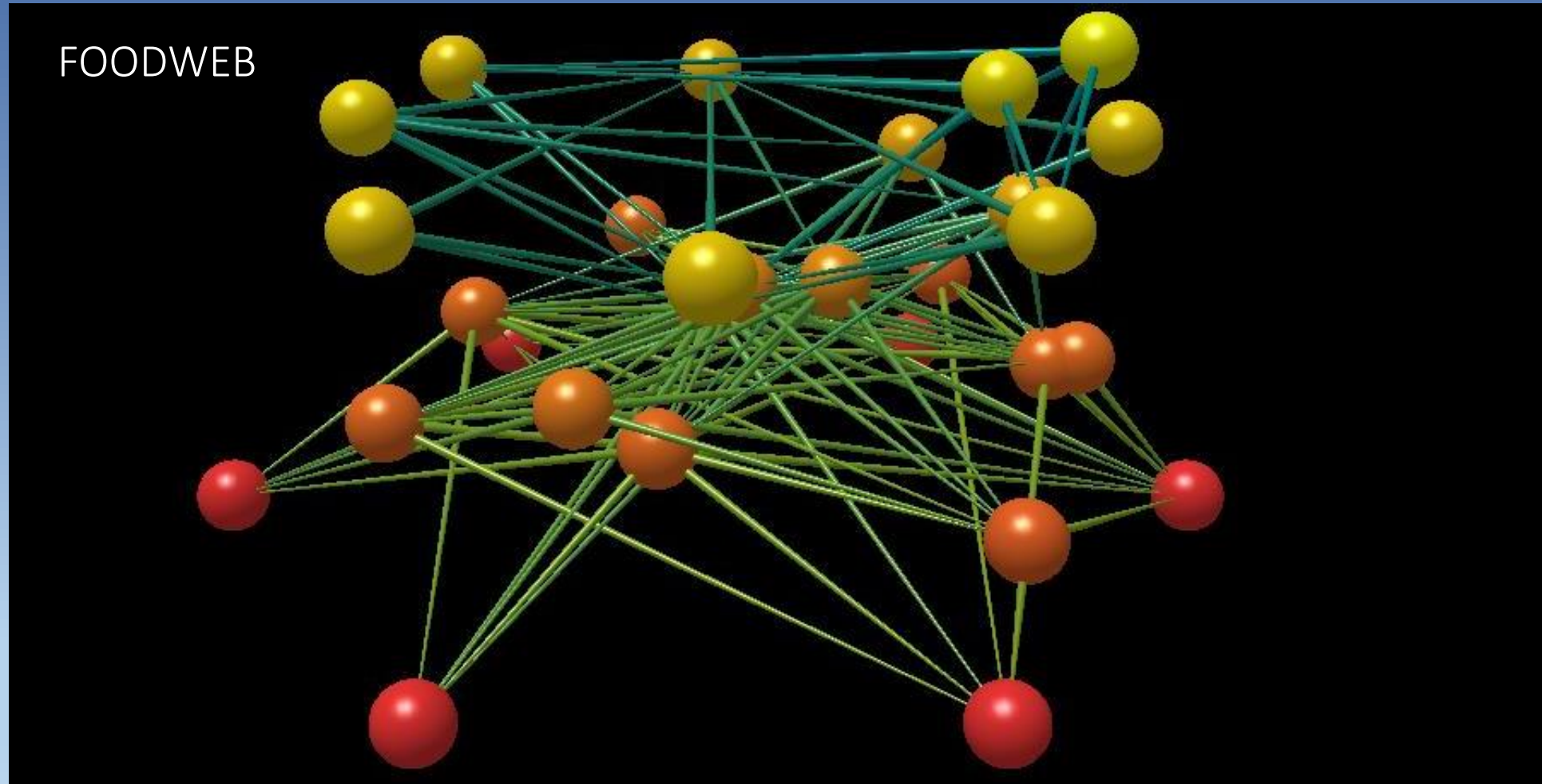
# COMPLEX ECO-EVOLUTIONARY DYNAMICS: from single to multispecies interface



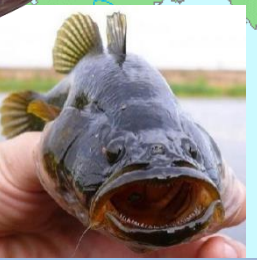
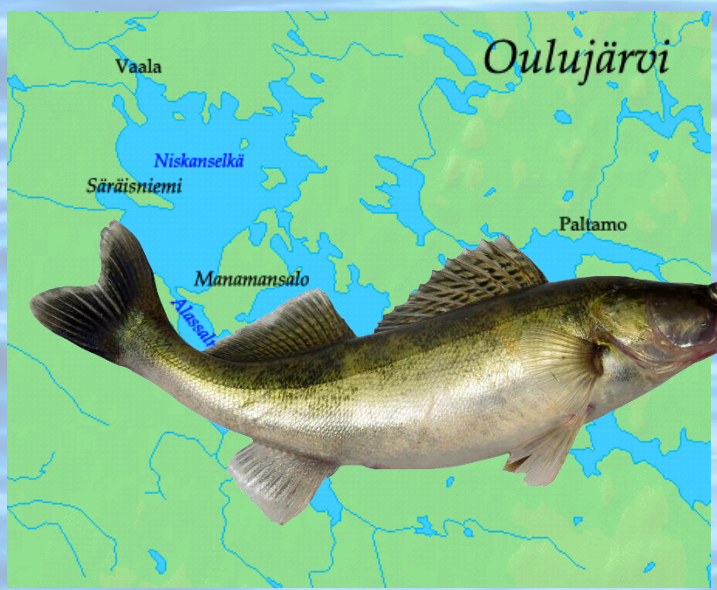
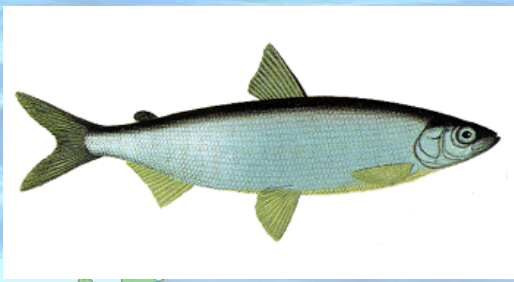
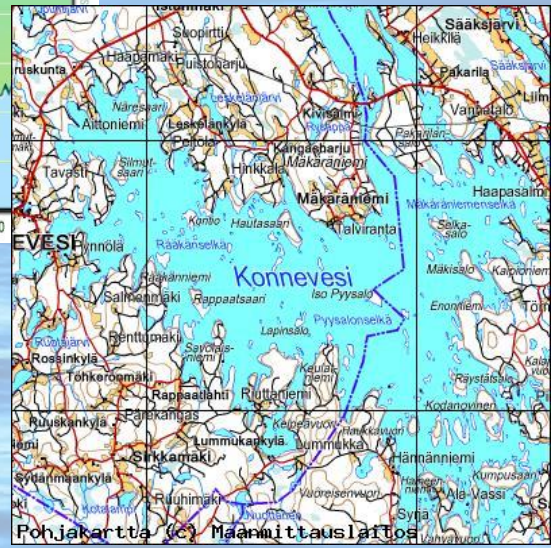
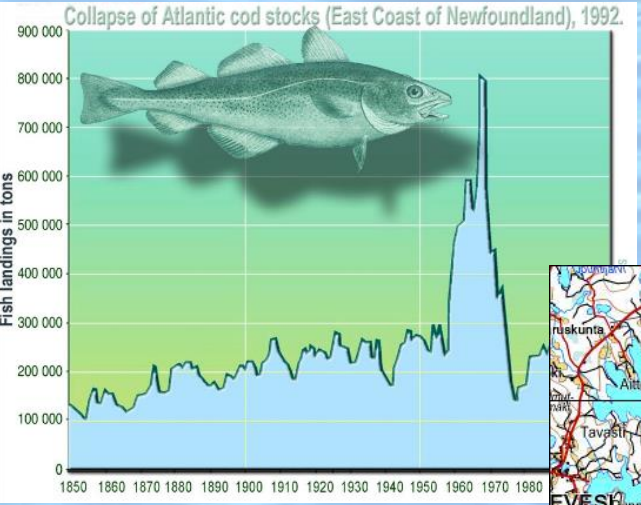
# COMPLEX ECO-EVOLUTIONARY DYNAMICS OF COMMUNITIES: the structure



Together, multiple food chains form a network:



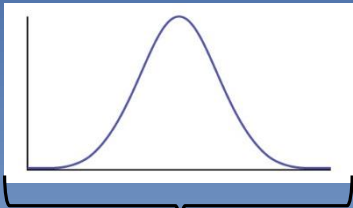
# OUR STUDY SYSTEMS: EMPIRICAL SYSTEMS AND APPLICATIONS



# FUTURE DIRECTION: MERGE EVOLUTION INTO ECOSYSTEM DYNAMICS



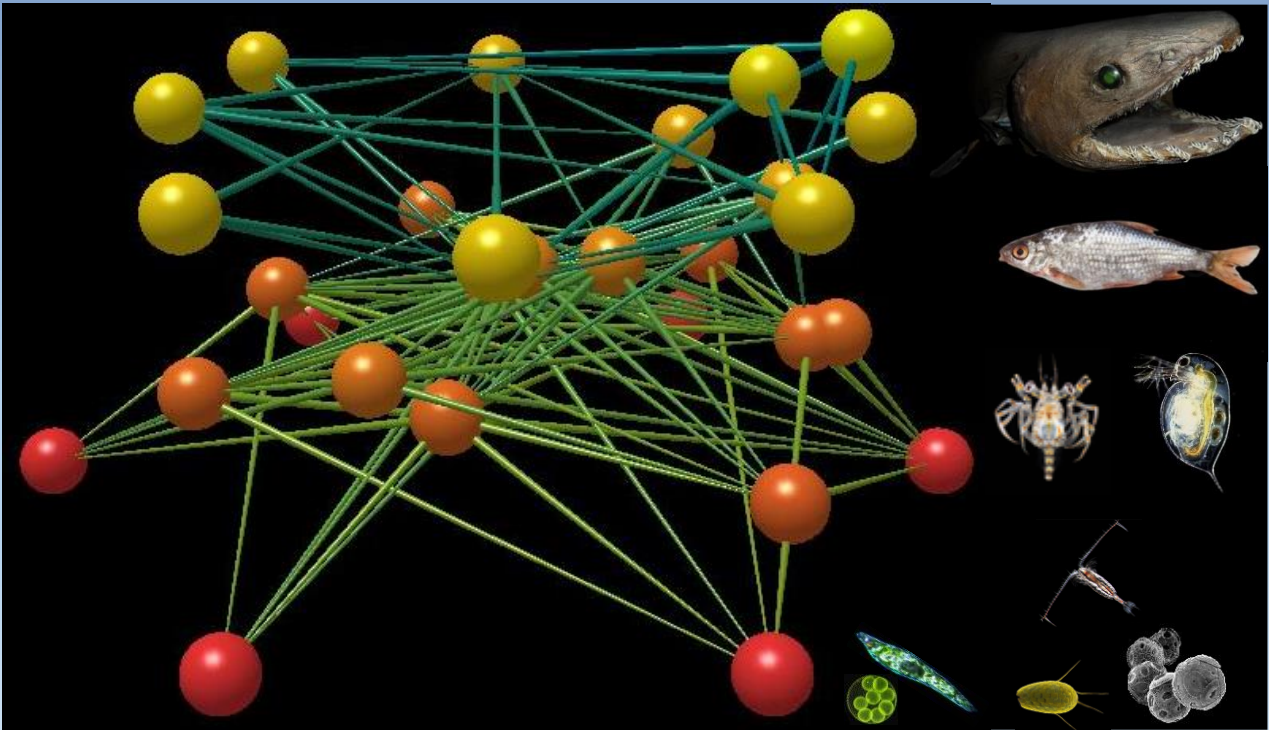
01 Genetic basis  
11 of phenotypes  
01  
00  
01



Phenotypic variability



Species split into life-history stages



Food web dynamics

Perälä et al. (in preparation)



Identify Possible Synergies with other projects

Modelling

Eco-evolutionary perspective

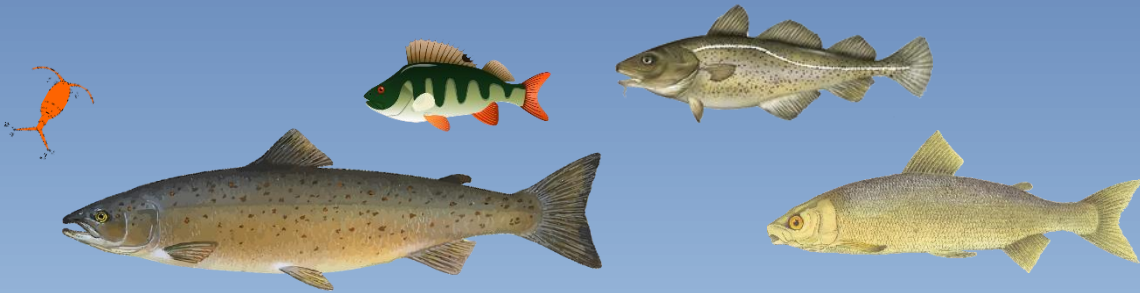
What would we would like to gain from today

Insights from other projects

See how my research would fit in to Water  
JPI network



THANK YOU!



**Group:** Tommi Perälä, Silva Uusi-Heikkilä, Etsuko Nonaka, Antti Eloranta, Maria Tirronen, Jouni Salonen, Sara Hocevar, Pauliina Ahti, Milko Vesterinen, Dunja Jusufovski

**Collaborators:** Jeff Hutchings, Esben Olsen, Fernanda Valdovinos, Doug Swain, Katrine Borgå



People. Discovery. Innovation.



EMIL AALTOSEN SÄÄTIÖ 