

Jun 24th, 11:05 AM - 11:20 AM

## Session B7: Current Information Needs for Effective Fish Passage Management: Prioritization and Recent Developments

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Nagelkerke, Leo and Sturlaugsson, Jóhannes, "Session B7: Current Information Needs for Effective Fish Passage Management: Prioritization and Recent Developments" (2015). *International Conference on Engineering and Ecohydrology for Fish Passage*. 7.  
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# COST Action FA1304 FITFISH

Current information needs for effective fish passage management: prioritization and recent developments

*Leo Nagelkerke*

*Jóhannes Sturlaugsson*



WAGENINGEN UNIVERSITY  
WAGENINGEN **UR**



# Rationale of WG 2

- The strong **human influence** on many water bodies in Europe has had **detrimental effects** on populations of **migratory fish** species.
- **Measures to restore** migration have, until now, a strong **case-study** character.
- Need for a profound, **integrative scientific approach**, leading to a framework for analysing migration and the design of effective measures.
- Existing **knowledge** is often **scattered**, or **poorly accessible**, because it is not published as scientific peer-reviewed papers.

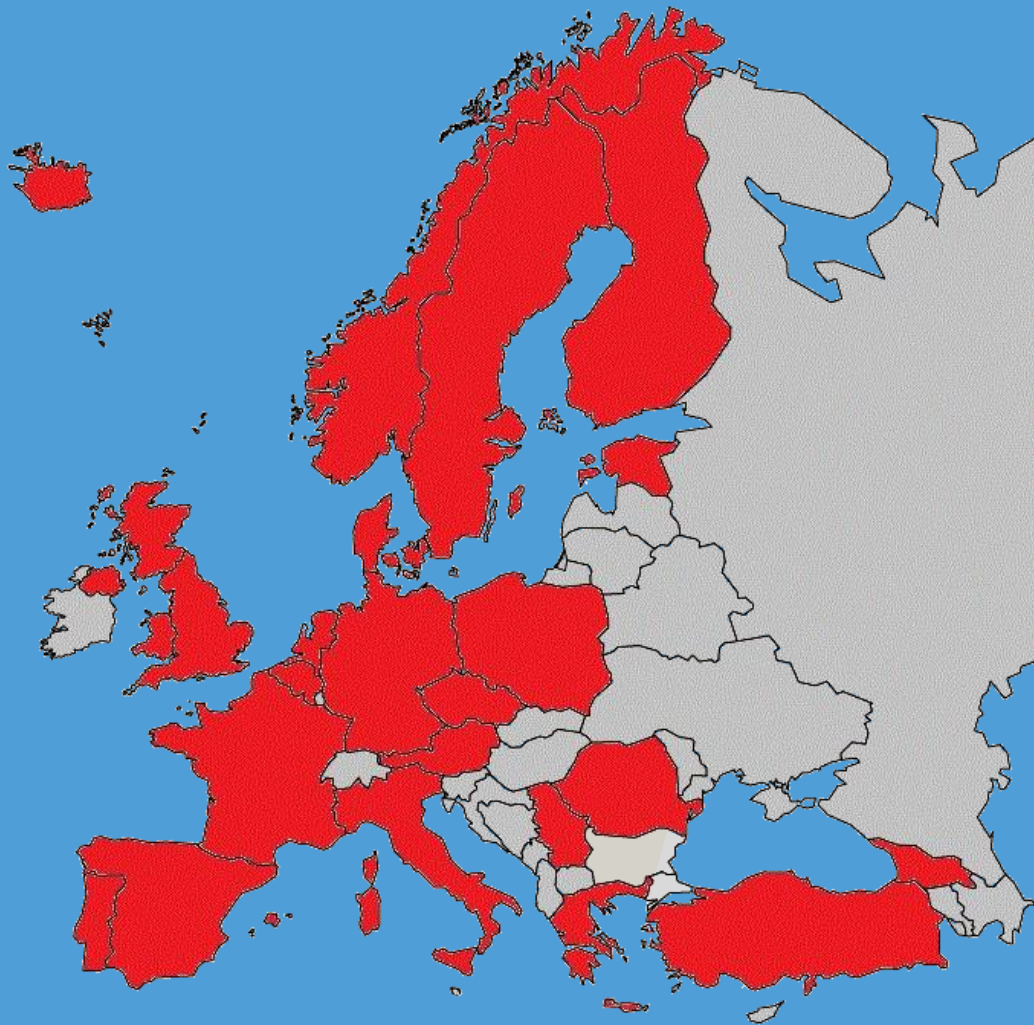
# Aim of WG 2

Exchange and integrate knowledge among scientists and experts involved in the field and to develop a research agenda aimed at generating new knowledge in the fields of:

1. monitoring fish behaviour in real-life situations, using a range of well-known and high-tech techniques;
2. experimental approaches in which the effect of disturbing cues on behaviour and physiology of individual fishes is investigated;
3. modelling the effects of mitigating measures on population dynamics.



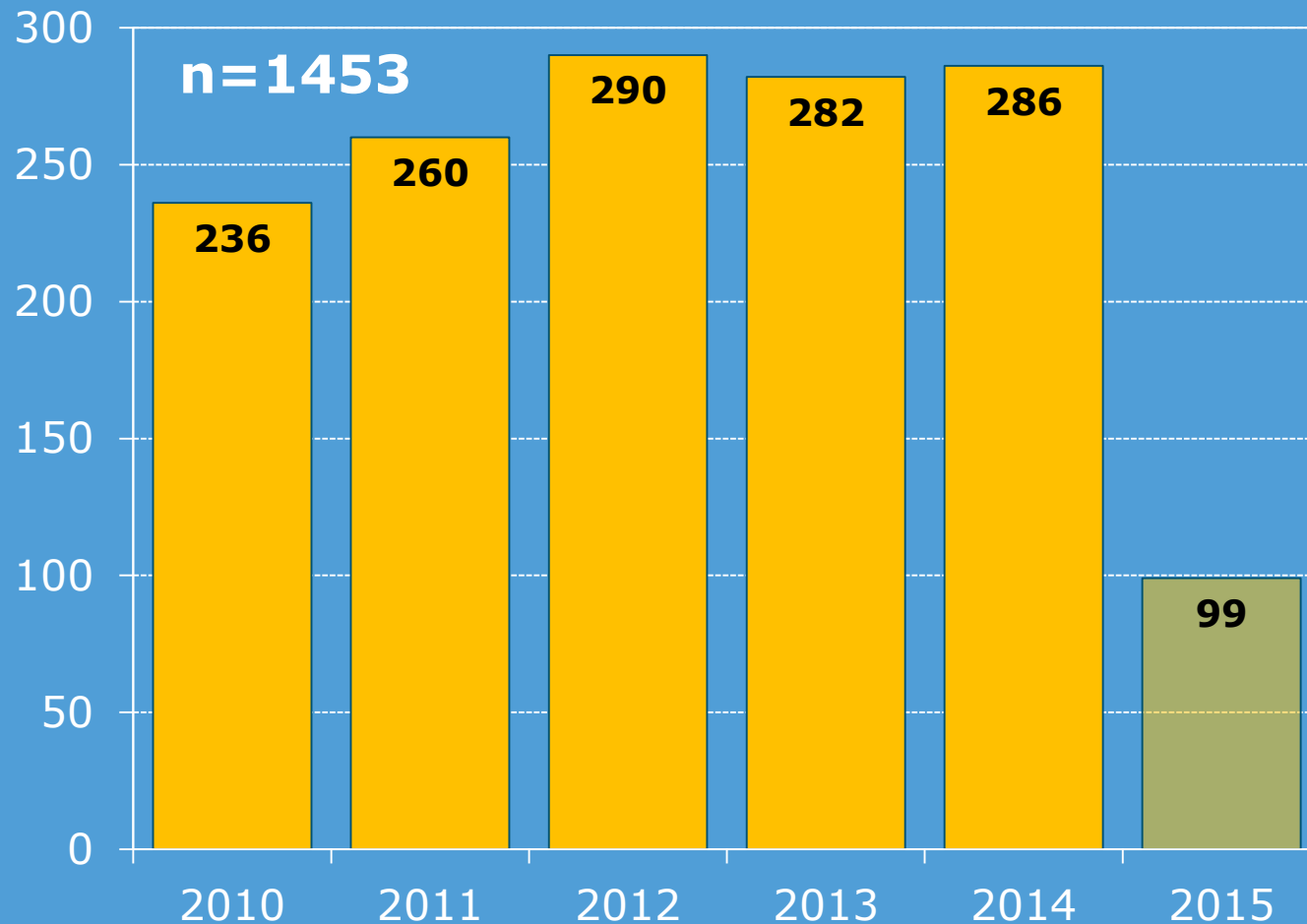
# Countries involved



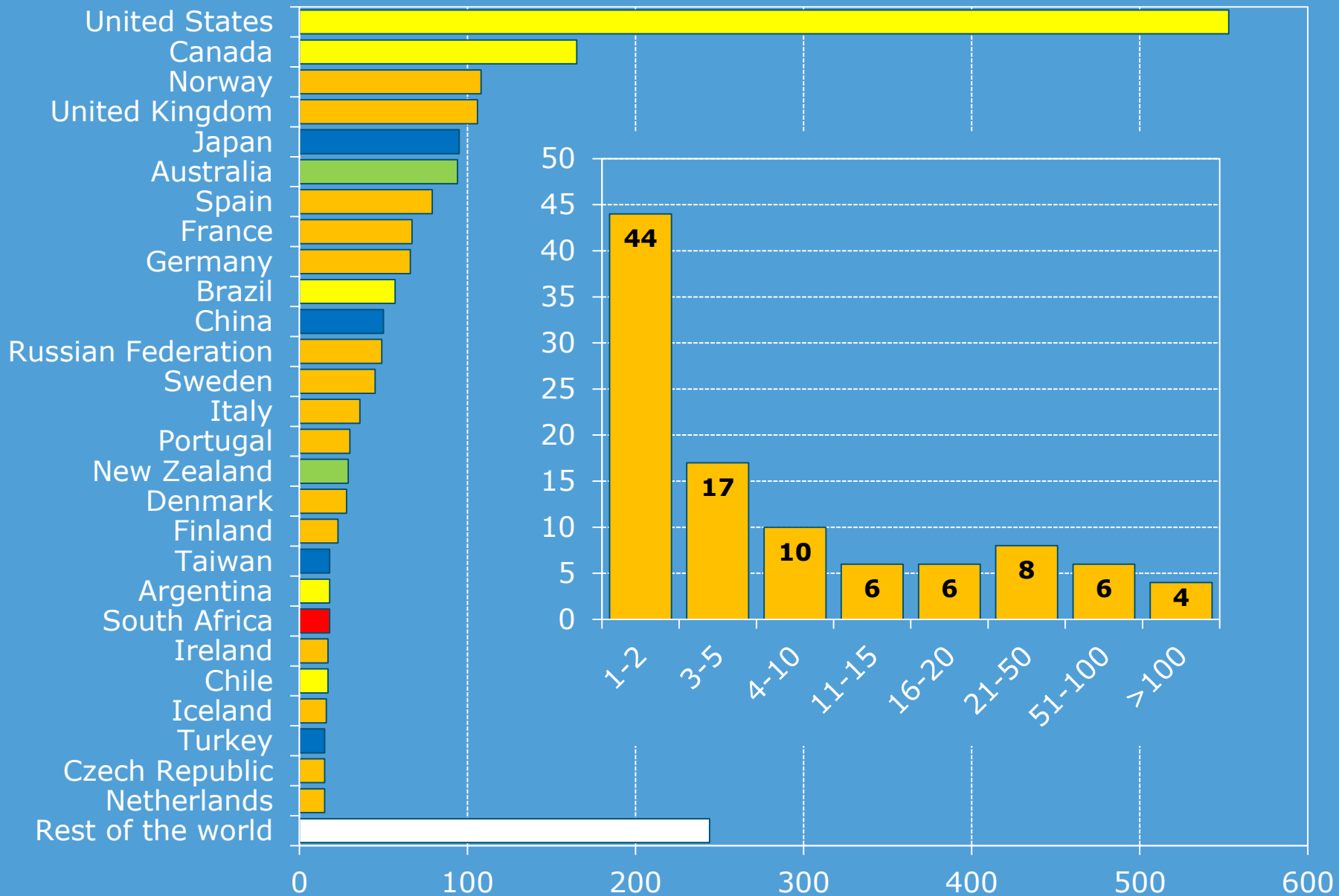
21 countries  
(24 June 2015)



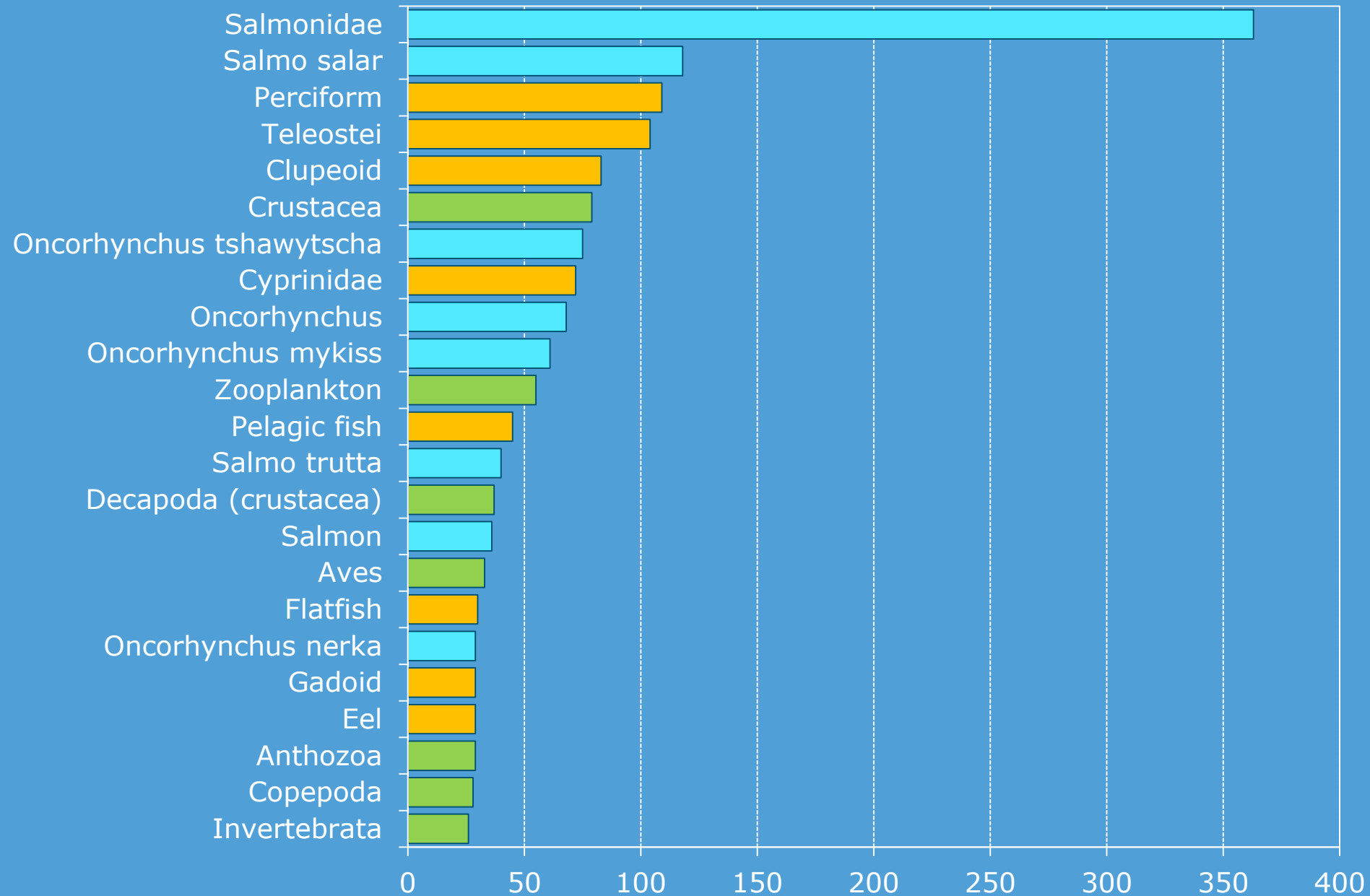
# Number of publications 2010-2015: “Fish migration” Scopus



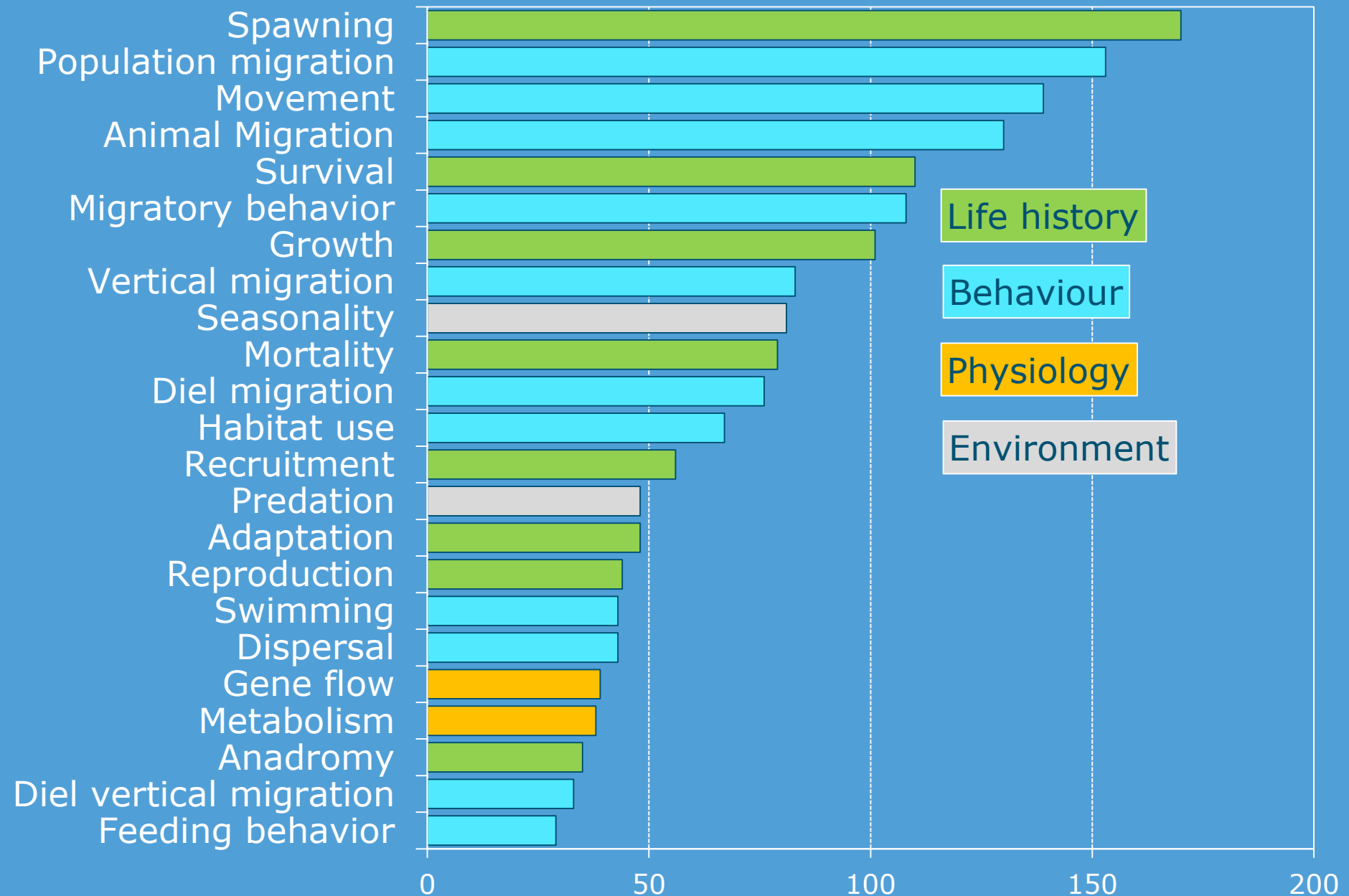
# Countries

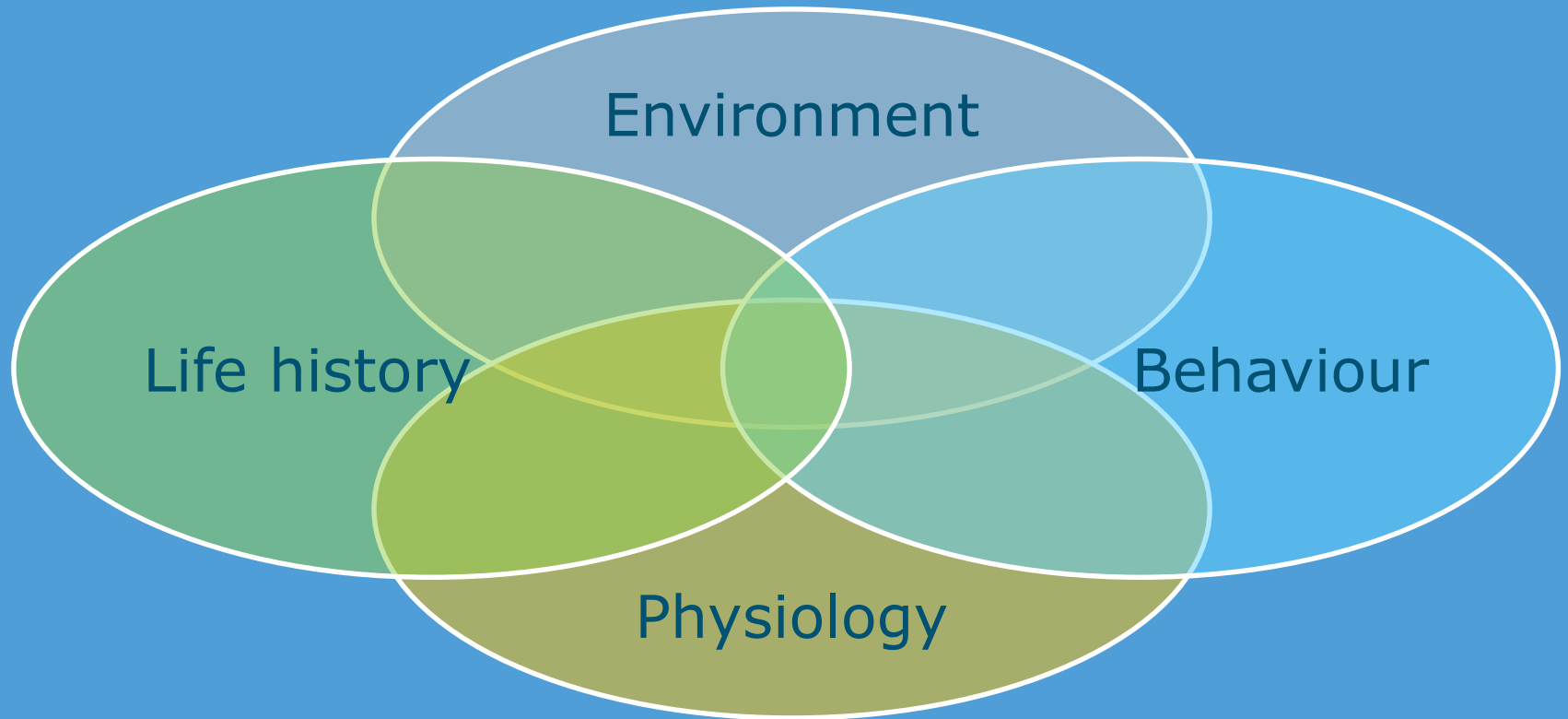


# Taxa

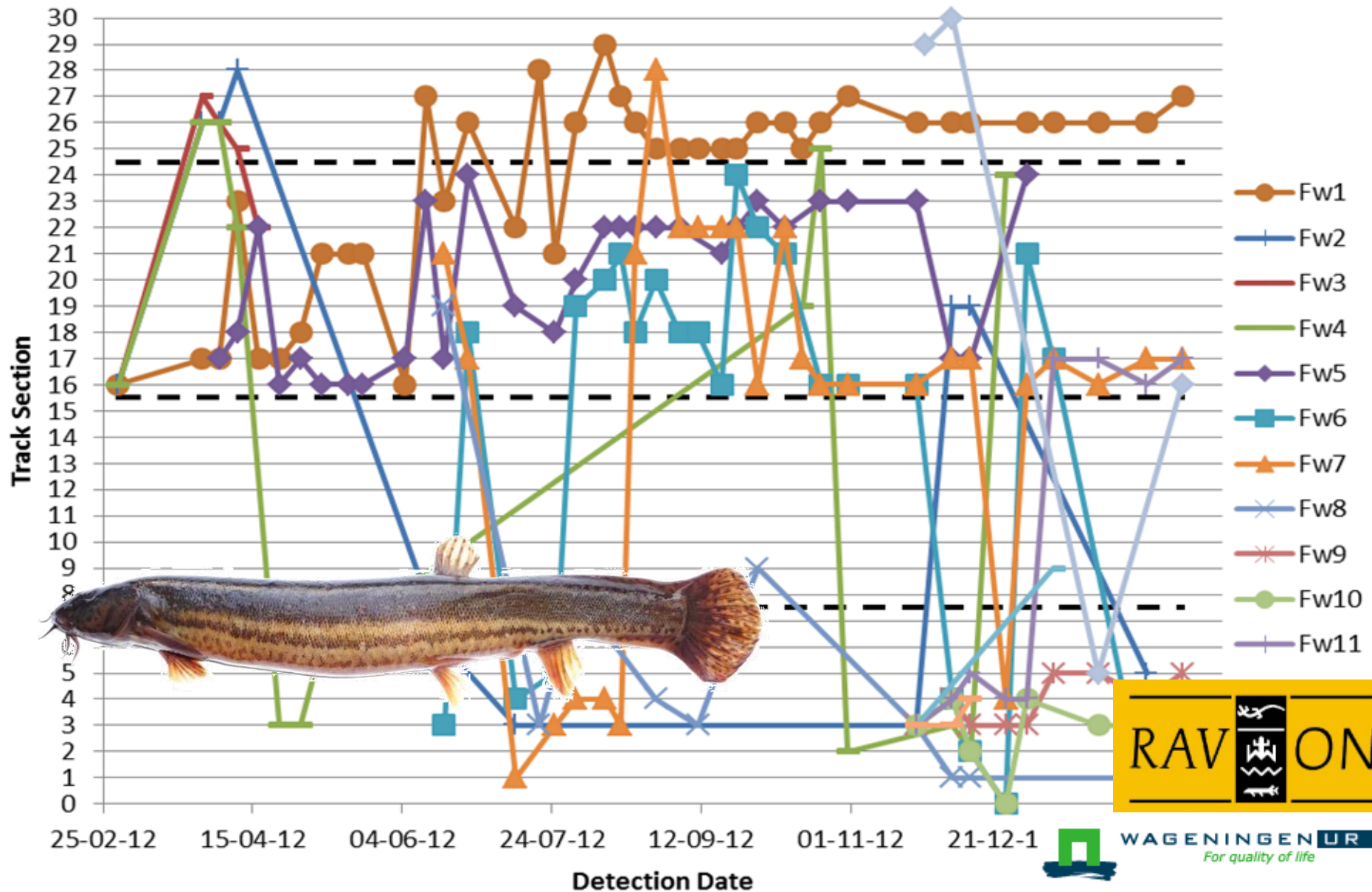


# Processes





# Individual variation in migratory behaviour



# Connectivity vs. invasions: round goby



# Some questions (a very biased selection)

- How large are **migration differences** between conspecific individuals, and what causes them?
- How do barriers and mitigation measures affect individuals with **different migratory traits**?
- Do barriers and mitigation measures lead to **human-induced selection** and does this lead to population-genetic changes?
- How do we deal with the **connectivity-invasion** controversy?
- How can the effectiveness of migration mitigation measures be tuned to **functional traits** of fish species?



# FITFISH Workshop: 13:30-17:30

- Evaluation of existing fish migration data, monitoring methodology for tracking migrant fish and bypass design, and the use of expertise within the platform to identify potential improvements
- The use of the established research network to search for collaborative project opportunities
- Transfer of knowledge between scientists, industry and policy makers

**Venue: Oude Boteringstraat 18: assemble at the registration desk at 13:00**