Raywatch

**Laura Lemey, Noémi Van Bogaert,
Loes Vandecasteele en Klaas Sys**

ILVO
Institute for Agricultural and Fisheries Research

smartfish

Vlaanderen
is landbouw & visserij

Motivation

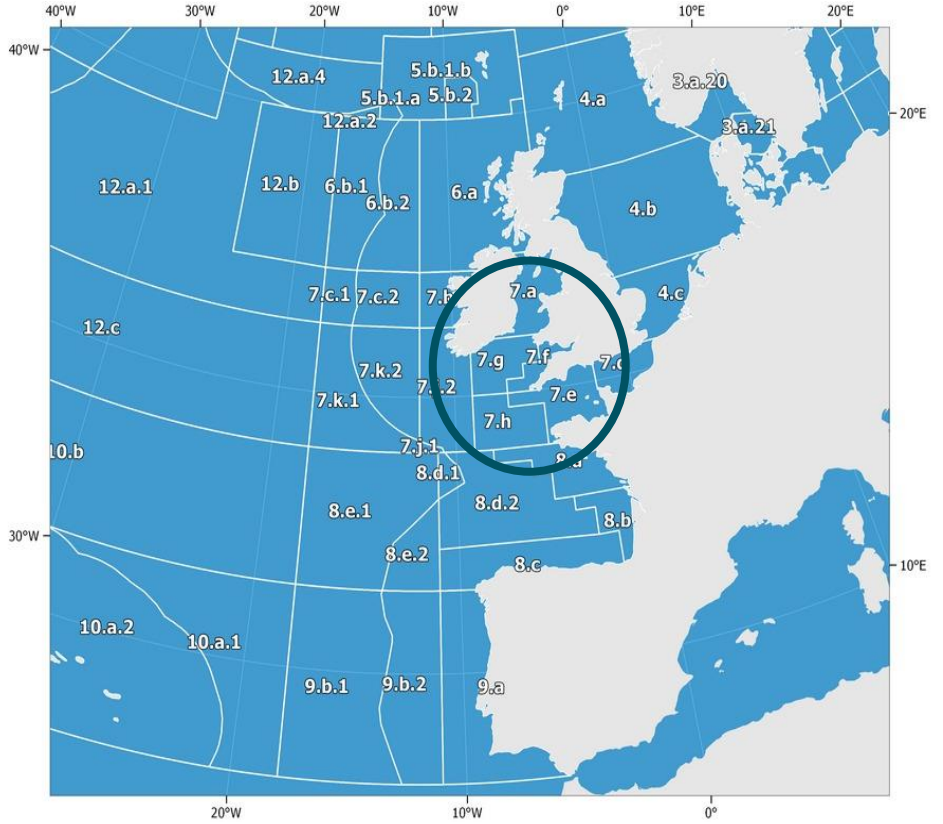
- Landing Obligation
- Choke species
- Exemption

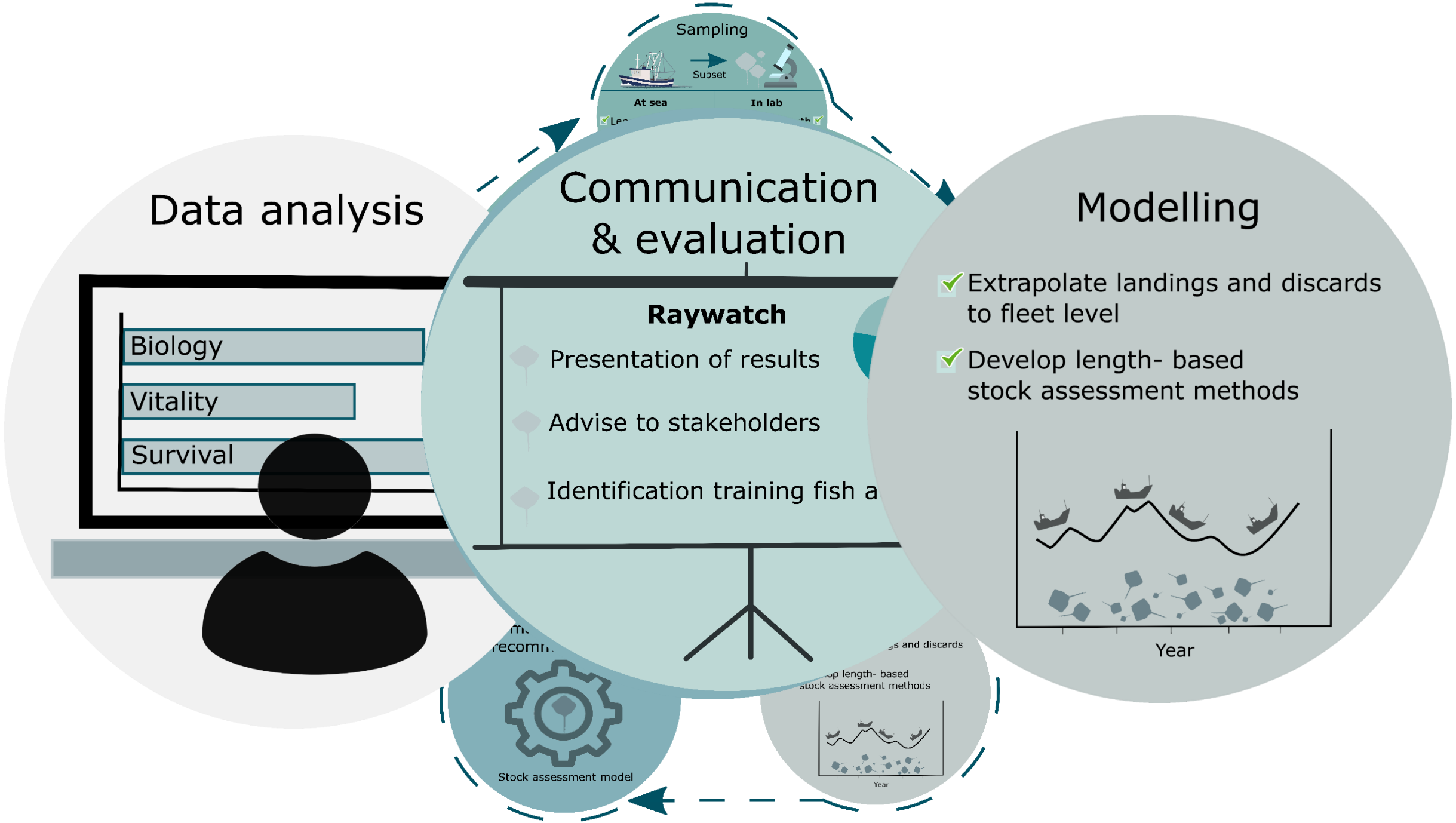
→ **Requirement: more data needs to be collected for rays**

- Roadmap for rays and skates
- Interreg-2-seas SUMARiS

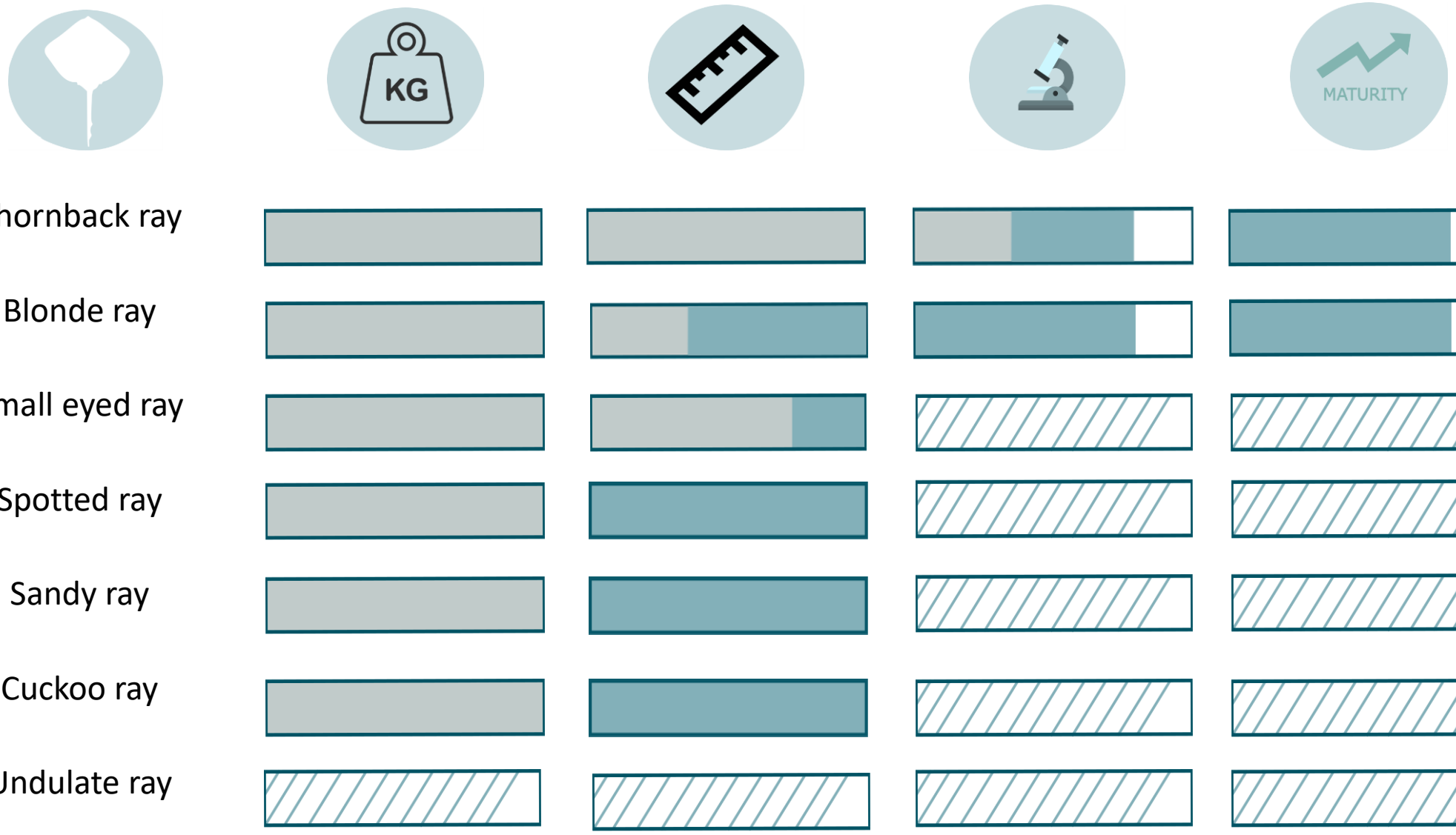
Goal

- Two year EMFF funded project
- Integrate skate data collection in NDGP
- More species specific biological, catch and vitality data
  - 7 different species
  - Western waters and English Channel

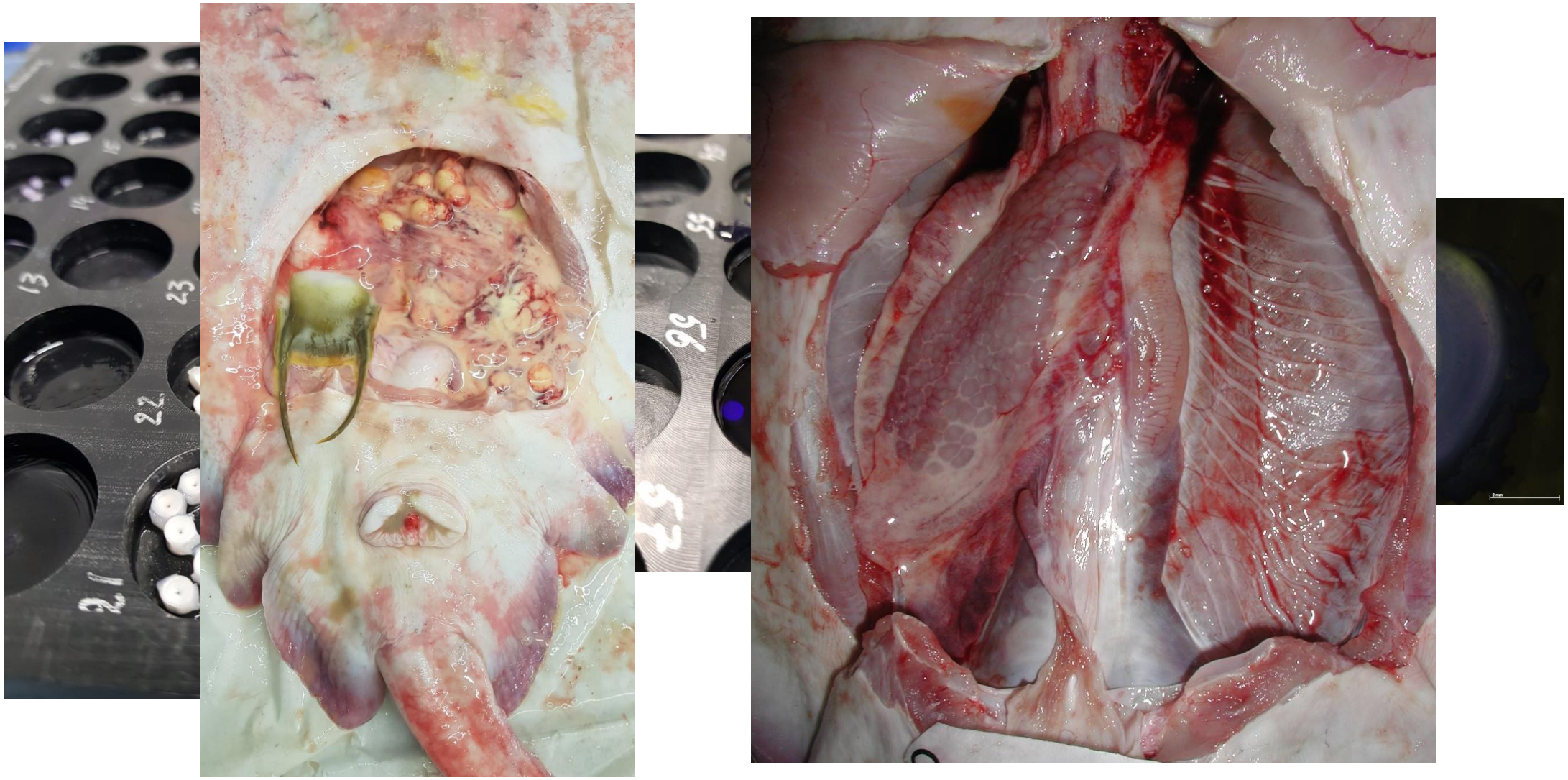



Sampling
Subset
At sea
In lab
Data analysis
Biology
Vitality
Survival
Communication & evaluation
Raywatch
Presentation of results
Advise to stakeholders
Identification training fish a
Modelling
Extrapolate landings and discards to fleet level
Develop length- based stock assessment methods
Year
Stock assessment model
Year

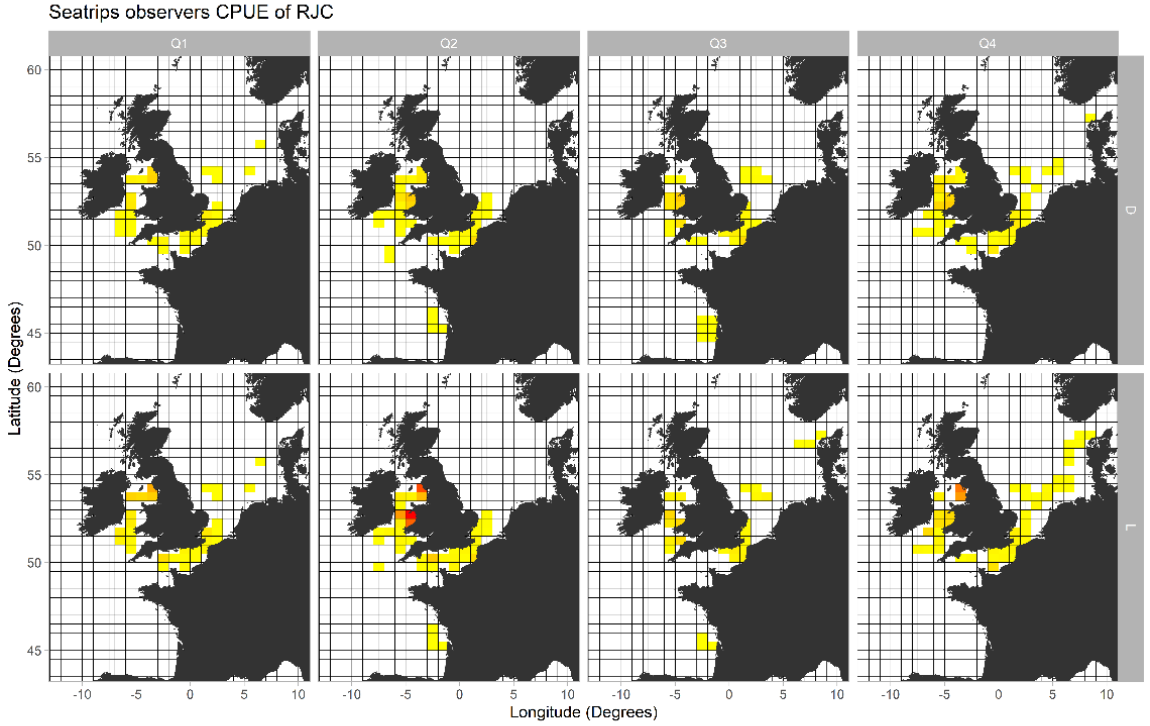
Thornback ray				
Blonde ray				
Small eyed ray				
Spotted ray				
Sandy ray				
Cuckoo ray				
Undulate ray				

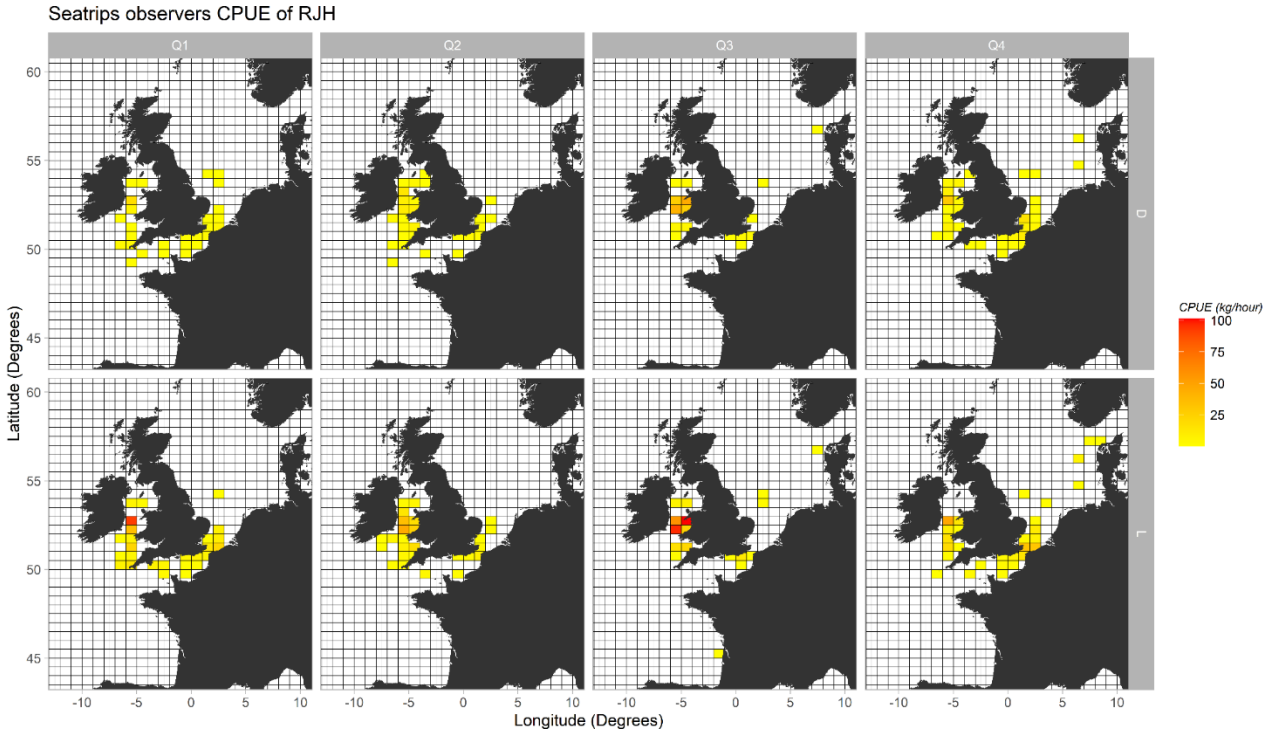

KG
MATURITY
Thornback ray
Blonde ray
Small eyed ray
Spotted ray
Sandy ray
Cuckoo ray
Undulate ray

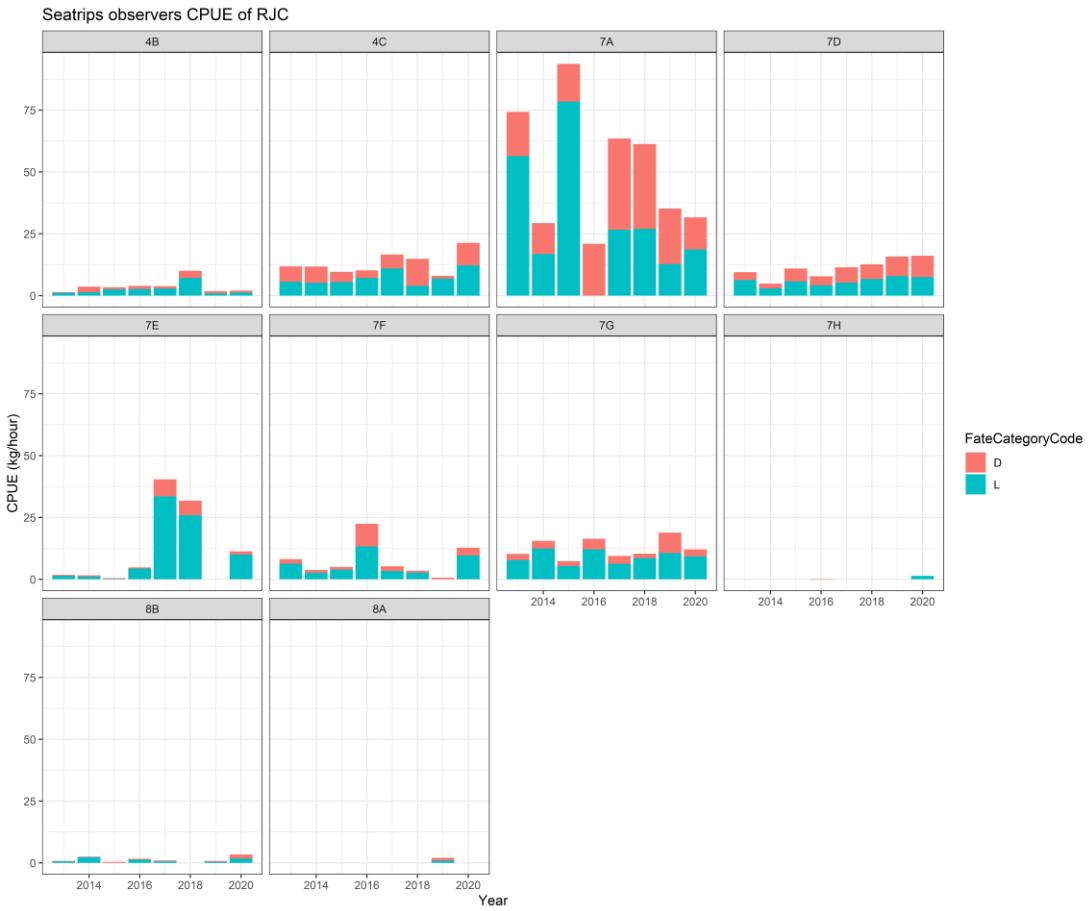
Age reading - maturity staging

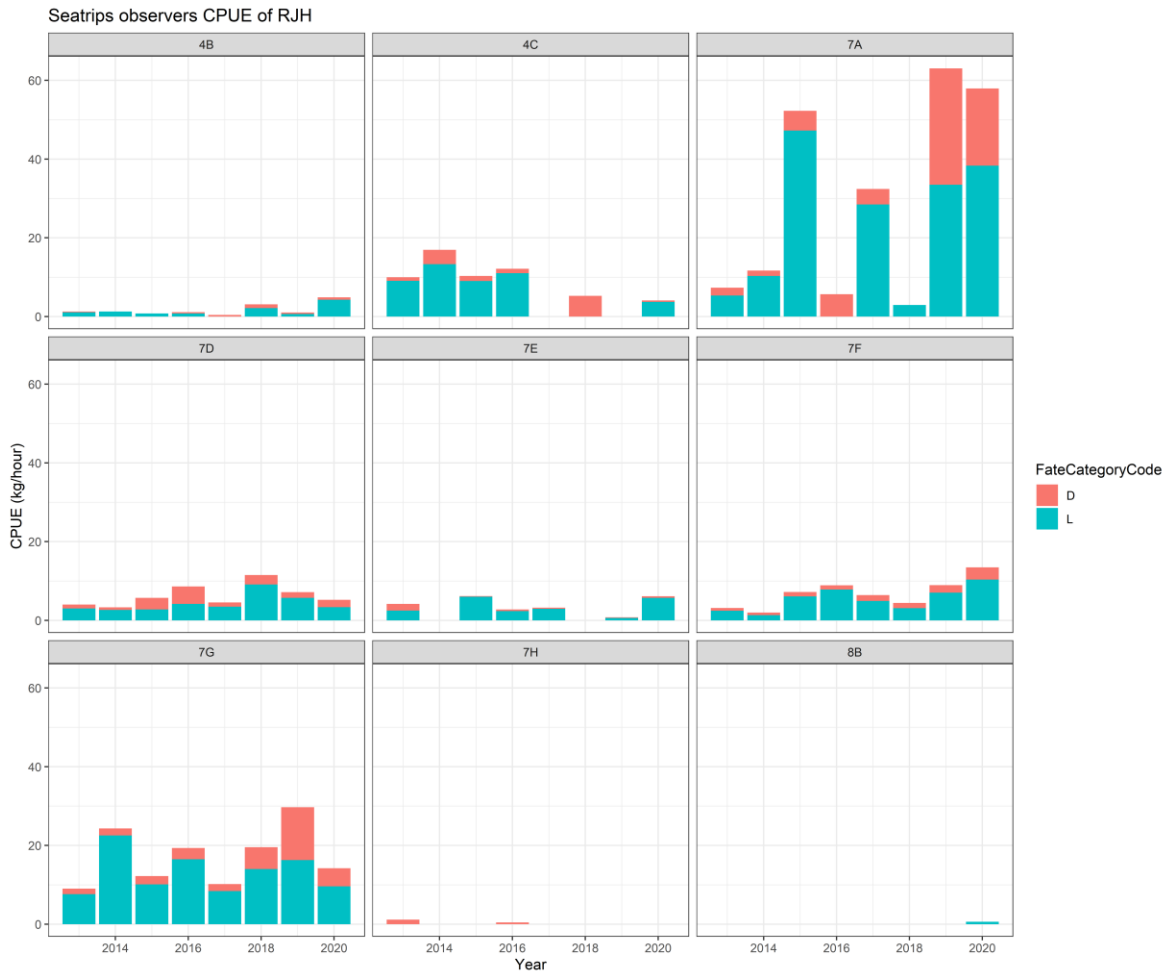


Preliminary results






Seatrips observers CPUE of RJC
4B
4C
7A
7D
7E
7F
7G
7H
8B
8A
CPUE (kg/hour)
Year
FateCategoryCode
D
L

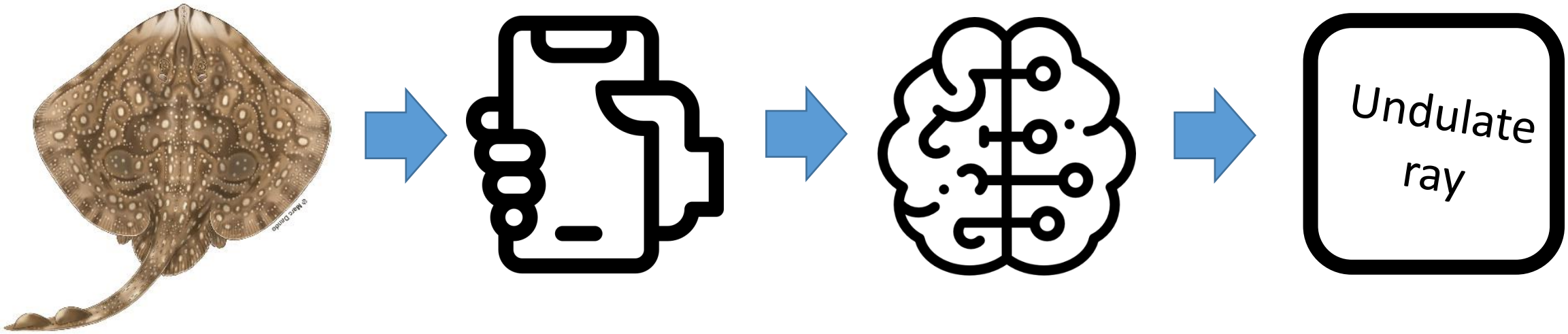

Seatrips observers CPUE of RJH
4B
4C
7A
7D
7E
7F
7G
7H
8B
CPUE (kg/hour)
Year
FateCategoryCode
D
L

Maturity

Species	Maturity stage	Male	Female	Total
Blonde ray	Immature	10	10	20
	Developing	9	8	17
	Capable to reproduce	0	3	3
	Active	2	1	3
	Spent	0	NA	0
	Post-laying	NA	2	2
	Regenerating	NA	5	5
	Total	**21**	**29**	**50**
Thornback ray	Immature	17	19	36
	Developing	2	3	5
	Capable to reproduce	4	0	4
	Active	3	0	3
	Spent	0	NA	0
	Post-laying	NA	0	0
	Regenerating	NA	0	0
	Total	**23**	**22**	**45**

RayScan

A ray and skate identifying app

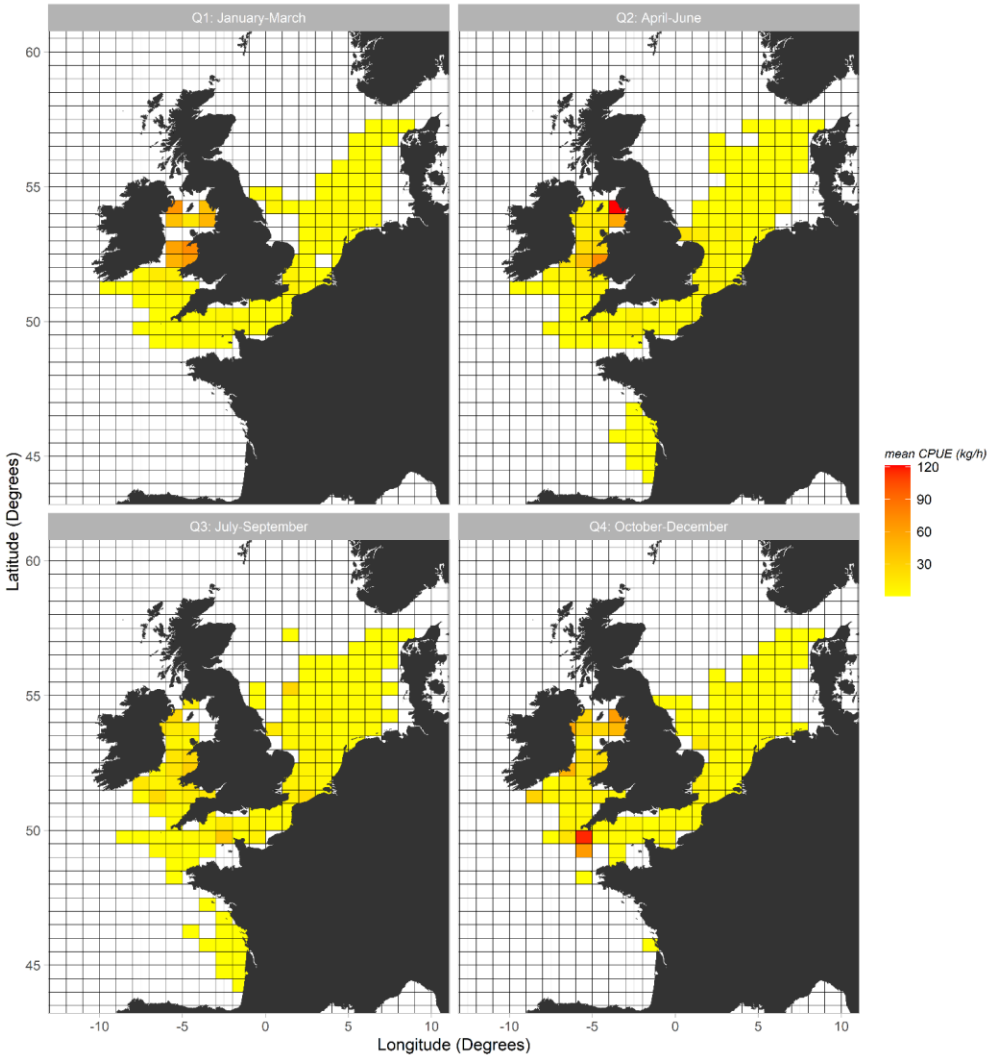


ILVO

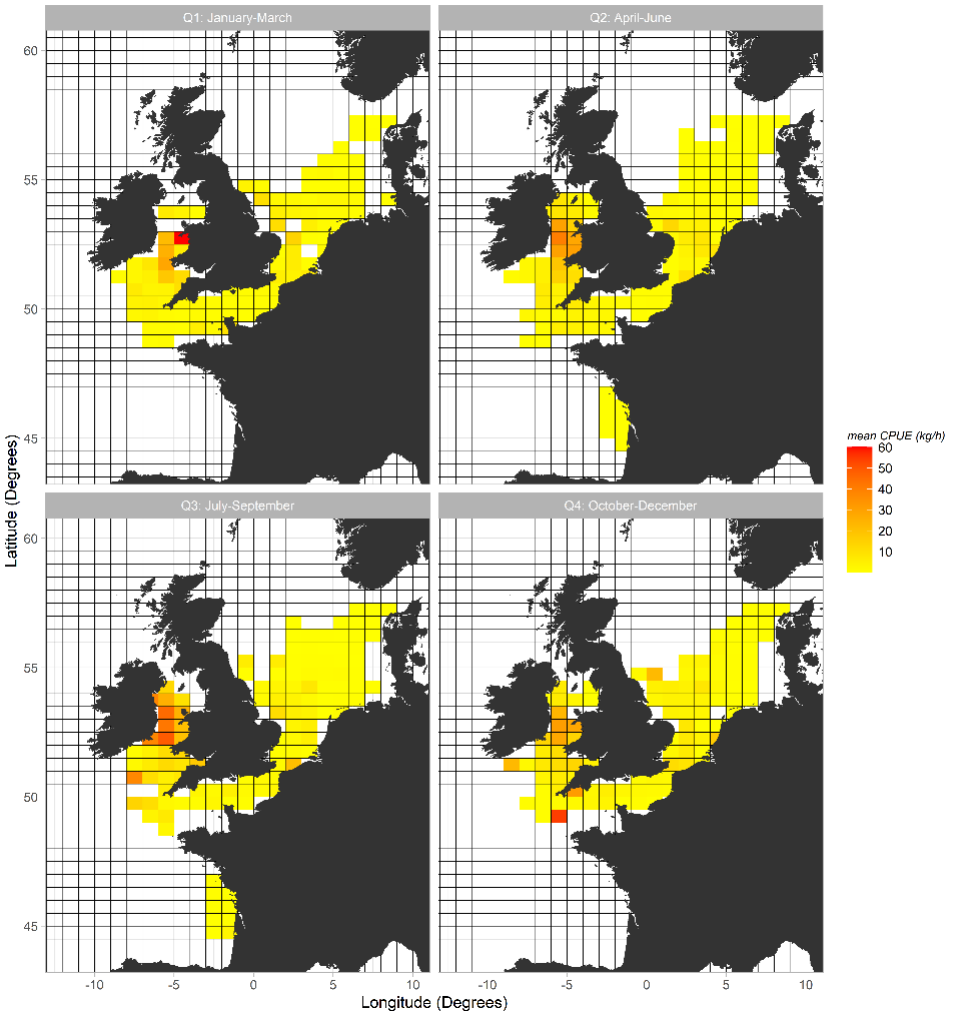
Thank you!

laura.lemey@ilvo.vlaanderen.be

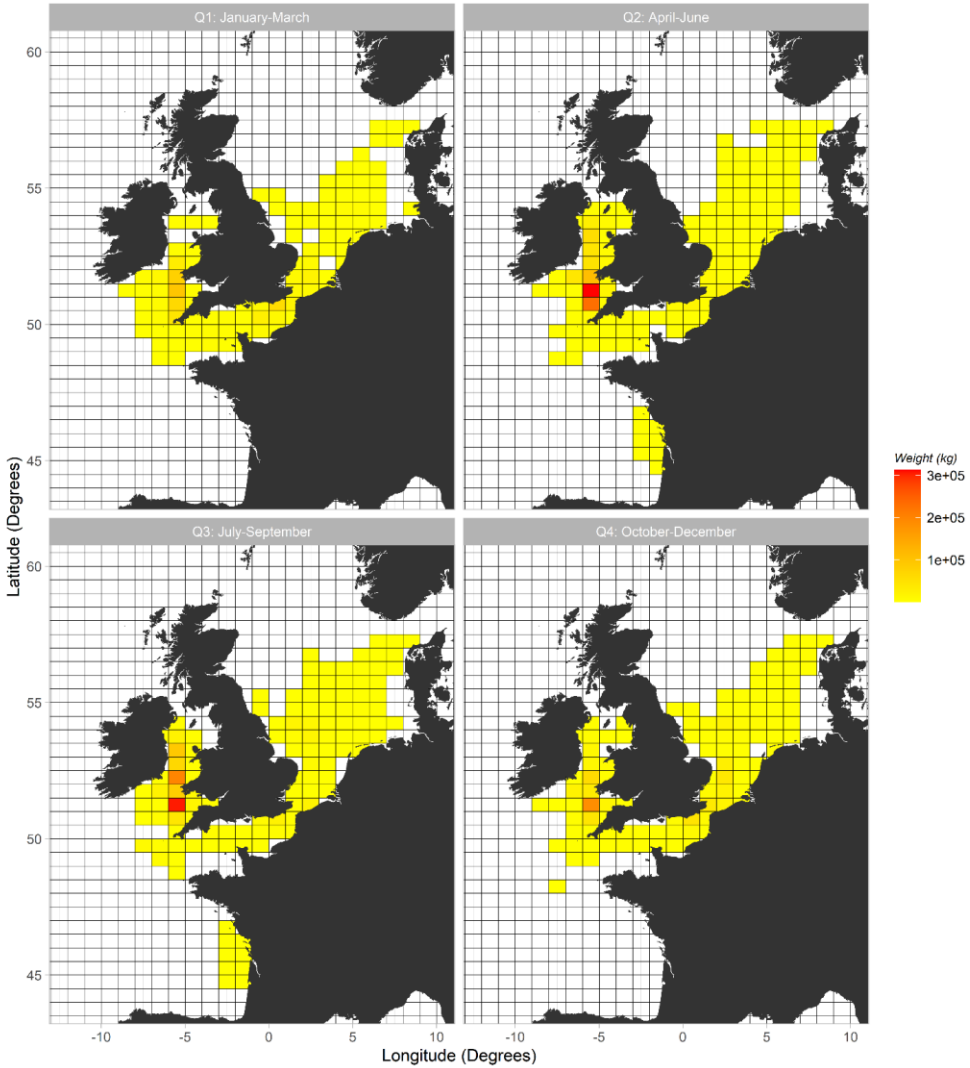
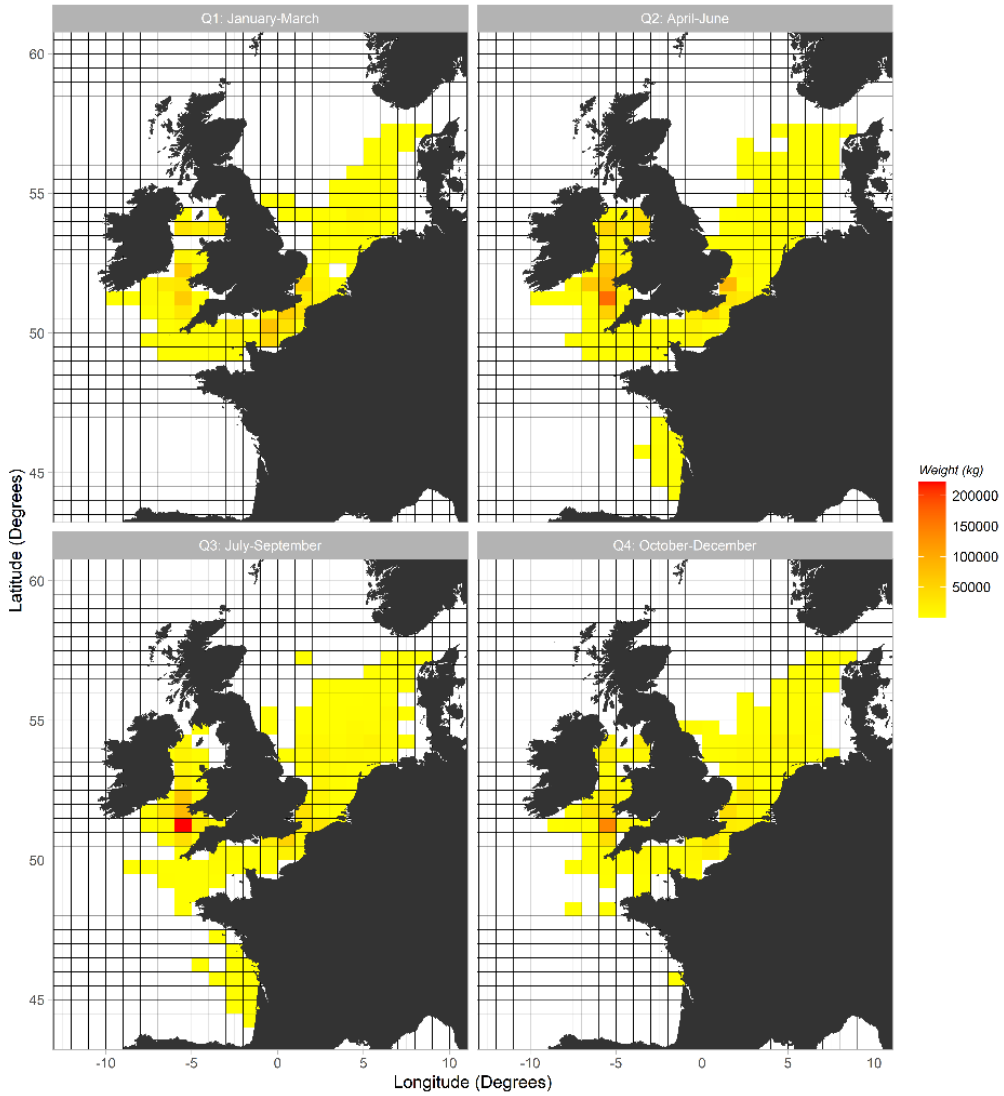
Fleet 2013-2019: CPUE of RJC



Fleet 2013-2019: CPUE of RJH



Fleet 2013-2019: Landings of RJH



Fleet 2013-2019: Landings of RJC