

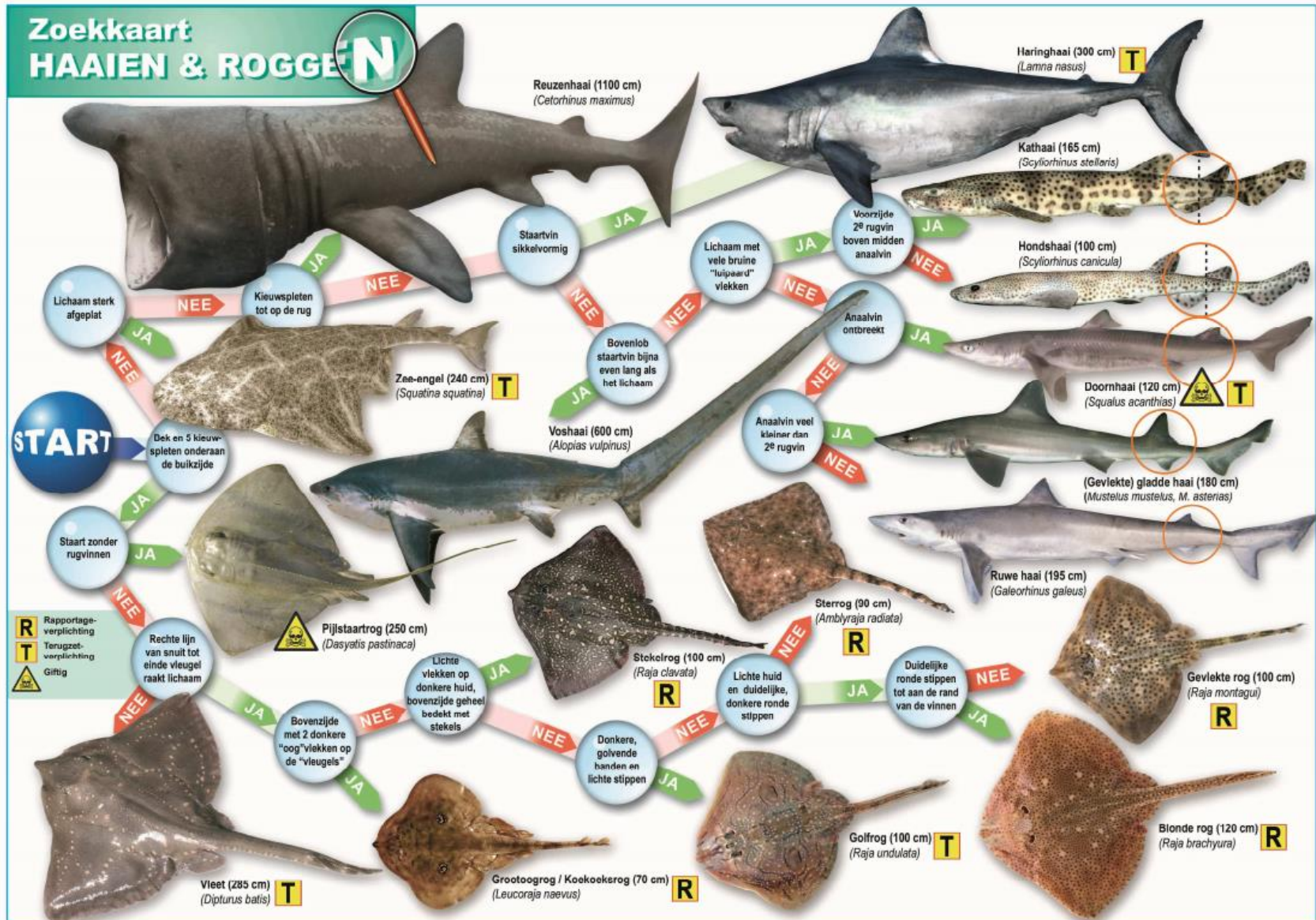
Bridging knowledge gaps for sharks and rays in the North Sea

Joint NWWAC/NSAC Focus Group Skates & Rays

04 March 2021














Background

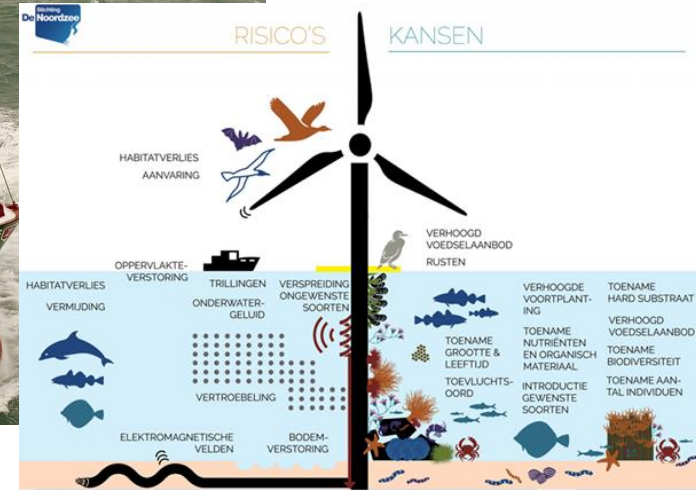


Status of stocks

- 2021 advice year North Sea stocks
- WSKSKATE

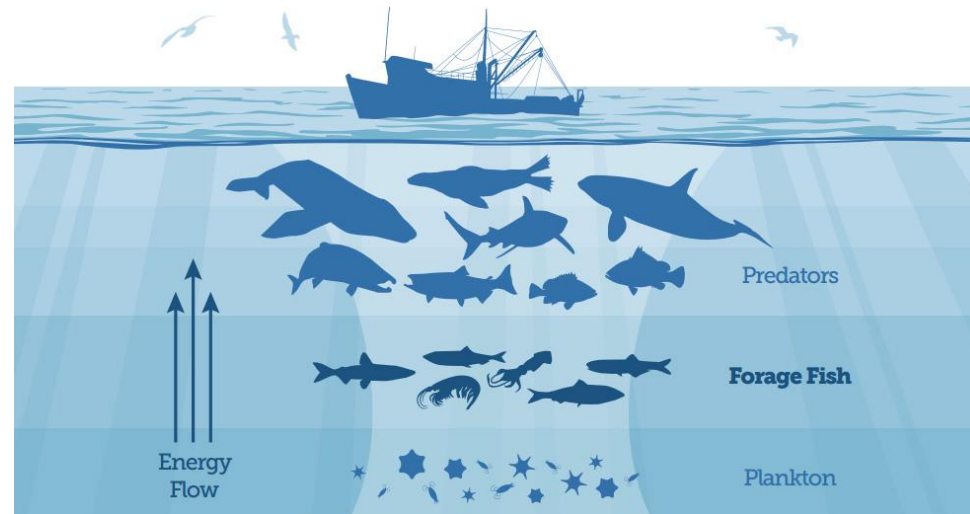
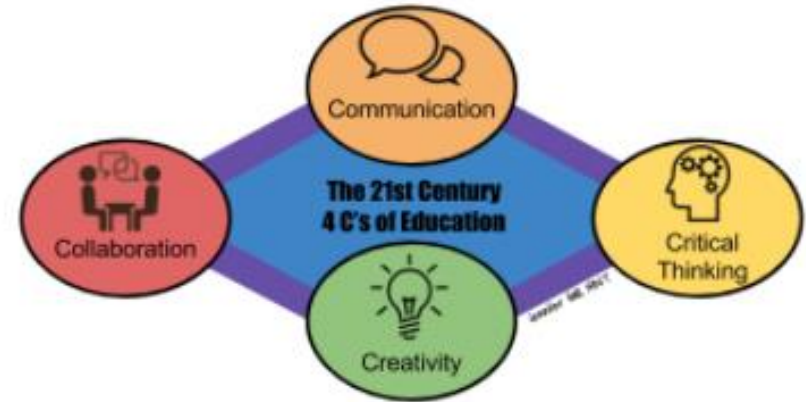
Species	ICES stock code	ICES category	Surveys used in assessment	Trend in biomass index
Blonde ray	RJH.27.4a6	5	None	
Blonde ray	RJH.27.4c7d	3	CGFS Q4	
Spotted ray	RJM.27.3a47d	3	NS-IBTS-Q1 NS-IBTS-Q3 UK(E&W)-BTS-Q3	
Cuckoo ray	RJN.27.3a4	3	NS-IBTS-Q1 NS-IBTS-Q3	
Thornback ray	RJC.27.3a47d	3	NS-IBTS-Q1 NS-IBTS-Q3 BTS-Eng-Q3 CGFS-Q4	
Starry ray	RJR.27.234	3	NS-IBTS-Q1 NS-IBTS-Q3	
Common skate	RJB.27.3a4	6	None	
Lesser spotted dogfish	SYC.27.3a47d	3	NS-IBTS-Q1 NS-IBTS-Q3 CGFS-Q4 UK(E&W)-BTS-Q3	
Smooth-hound	SDV.27.nea	3	NS-IBTS-Q1 NS-IBTS-Q3 EVHOE-WIBTS-Q4	
Tope	GAG.27.nea	5	None	
Porbeagle	POR.27.nea	6	None	

Pressures on elasmobranchs

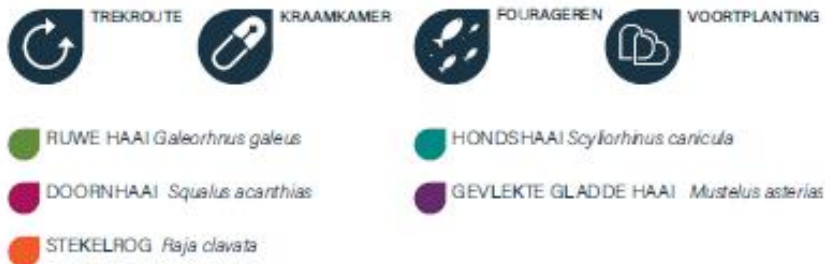


Policy objectives

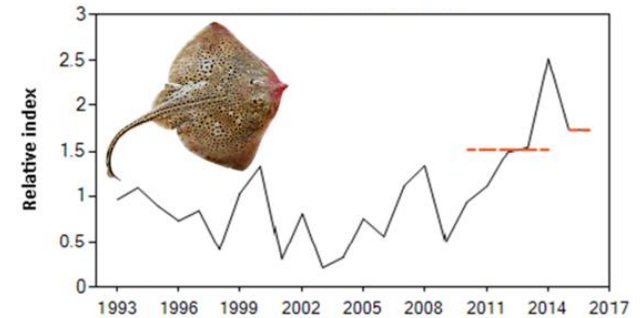
- Education and communication
- Reducing unwanted catches
- Scientific research
 - Fisheries
 - Survival
 - Selectivity
 - Ecosystem role



Knowledge gaps...



Population status

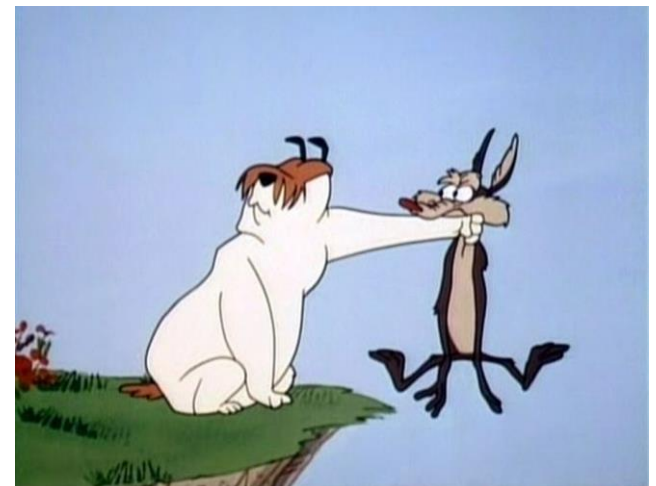


Stock and exploitation status

Table 1 Spotted ray in Subarea 4 and in divisions 3.a and 7.d. State of the stock and fishery relative to reference points.

	Fishing pressure			Stock size		
	2014	2015	2016	2014	2015	2016
Maximum sustainable yield	F _{MSY}	?	?	MSY	?	?
Precautionary approach	F _{PA}	?	?	B _{PA}	?	?
Management plan	F _{MSY}	-	-	B _{MSY}	-	-
Qualitative evaluation	-	?	?	-	?	?

Landing Obligation - Choke species



Project outline

- Time: 1 jan 2021 – 31 dec 2022
- Budget: €1.5 mio (EMFF)

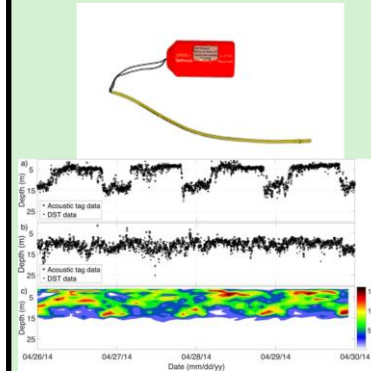
WP A Discard survival

Measure survivability of rays discarded by the main Dutch demersal fisheries



WP B Spatiotemporal distribution

Map the life cycle of demersal sharks and rays in the North Sea and explore the importance of the Dutch coastal zone



WP C Feedback to policy and management

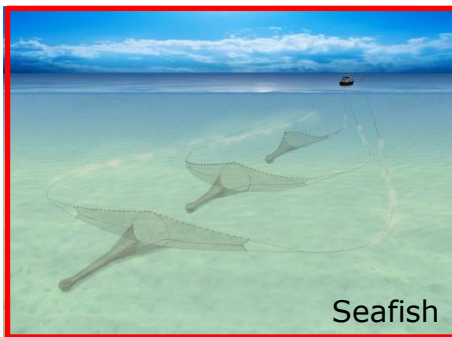
Information used to give substance to:

- The roadmap for skates and rays (CFP)
- Agreements in the shark and ray recovery action plan (MSFD)

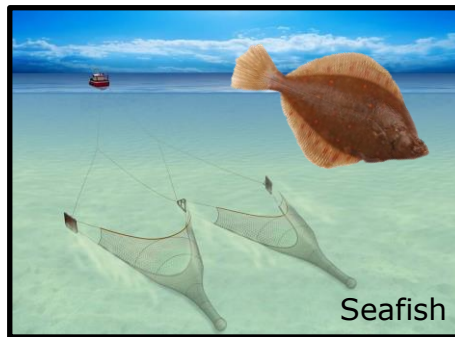
Discard survival - outline

- 2 phase approach
 - Phase 1: Exploration using vitality scoring

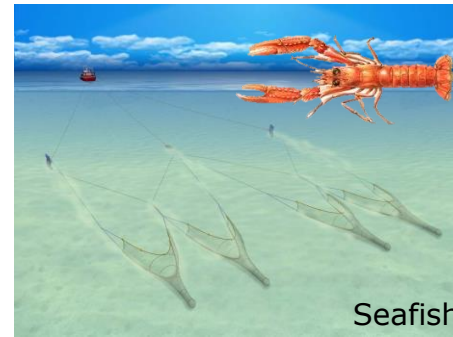
Flyshoot



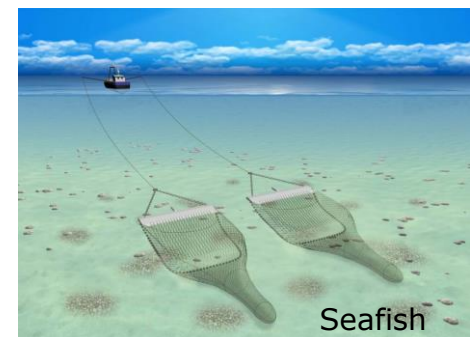
Twin-rig



Quad-rig

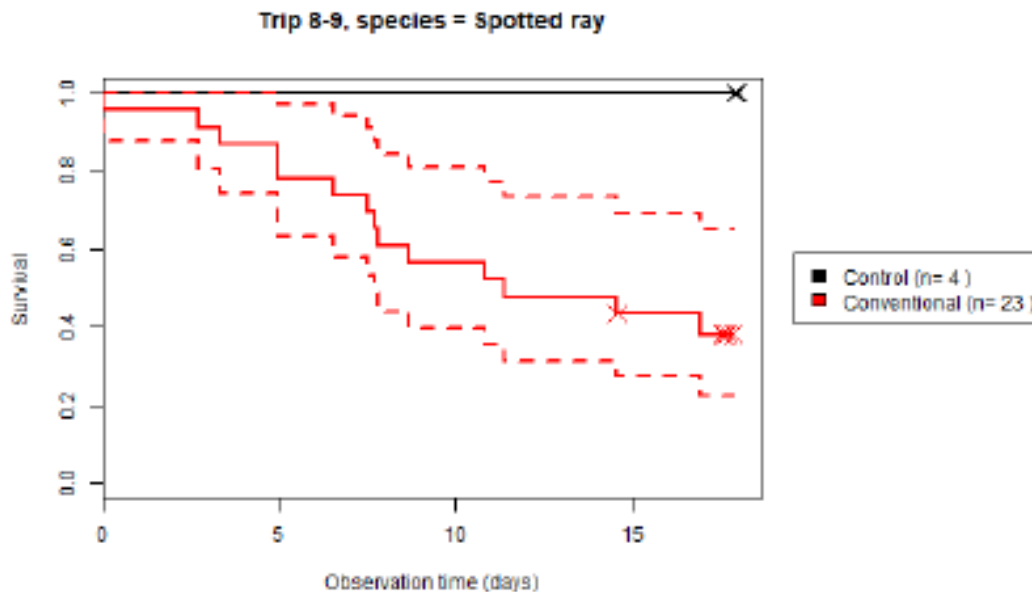


Beam trawl



Discard survival

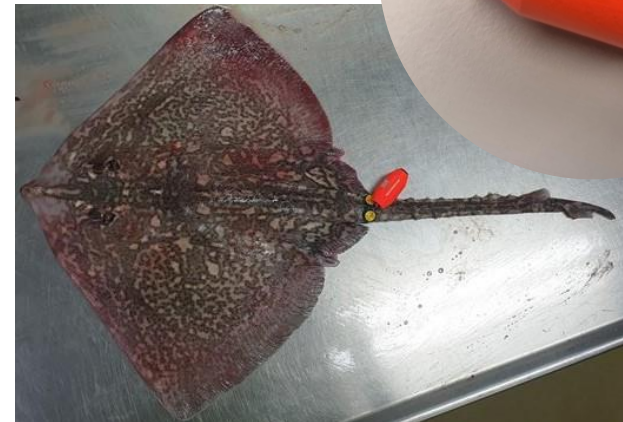
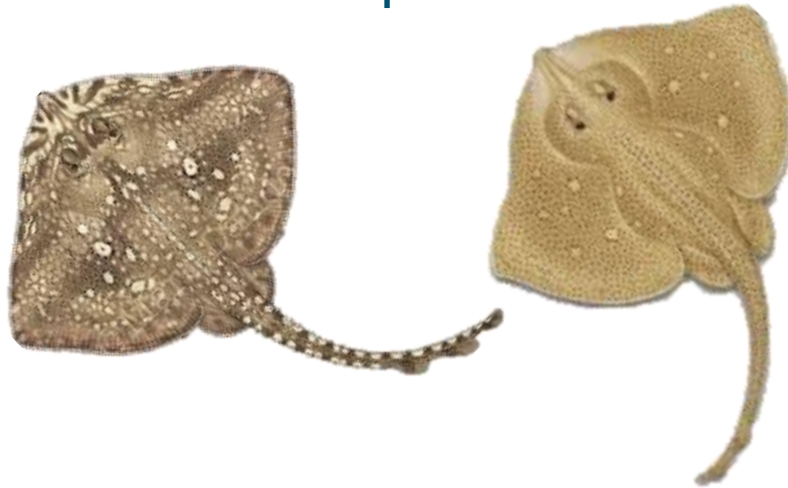
- Phase 2: Measure survival
 - Metier-species is based on vitality scoring
 - 9 trips planned
 - Monitoring in the lab (3 weeks)



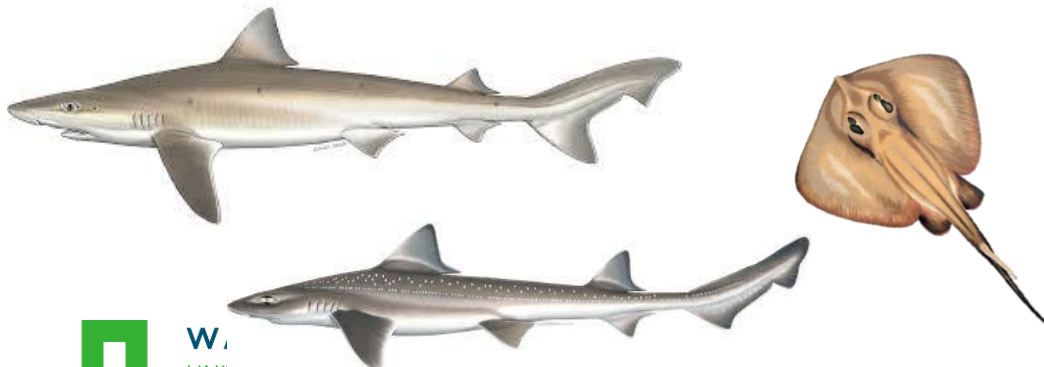
Spatial and temporal distribution

■ Tagging

- >200 Pop-off Data Storage Tags

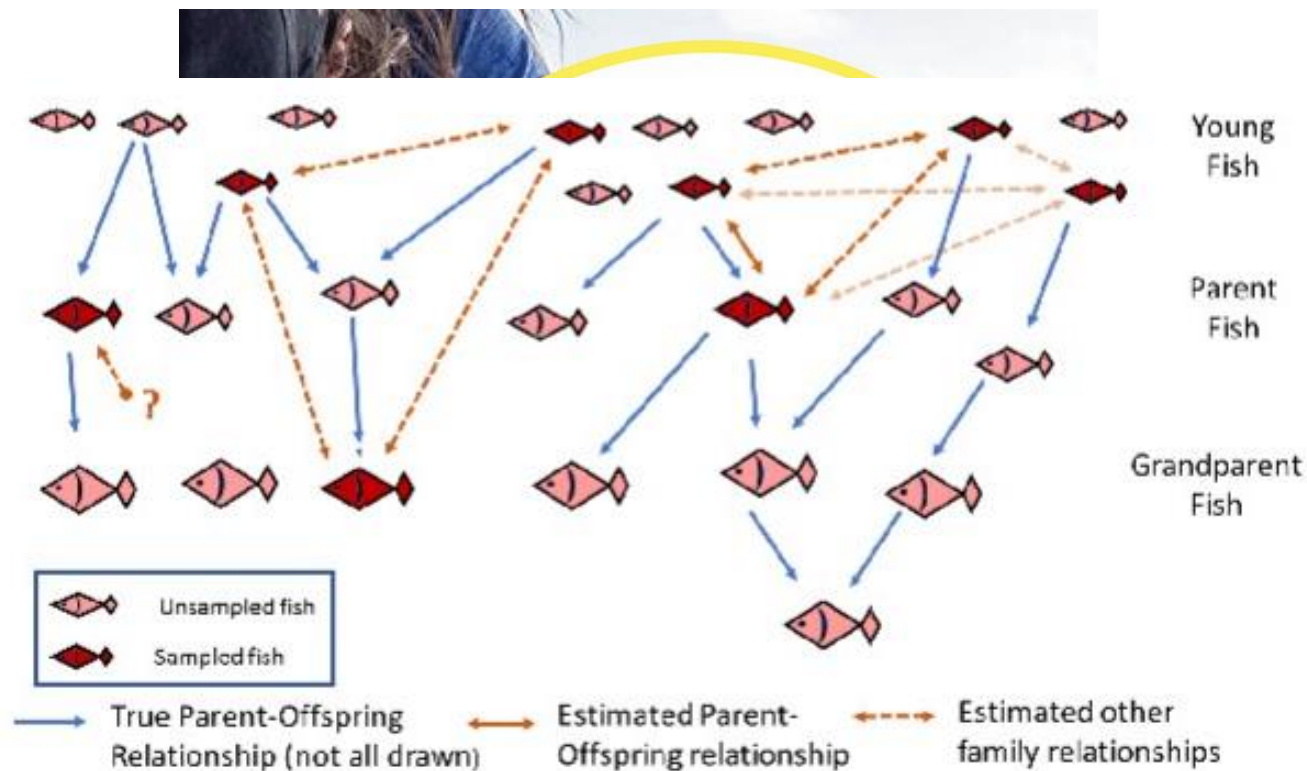


- ~ 20 Pop-off Satellite Data Storage Tags



Spatial and temporal distribution

- Population structure using genetic tools
 - Close-kin mark recapture



Feedback to policy and management

- Gathering all information
- Combining all information
- Share knowledge for an informed discussion



Thank you for your attention.

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European Union, European Maritime
and Fisheries Fund



Visserij-innovatiecentrum
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Nederlandse
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