

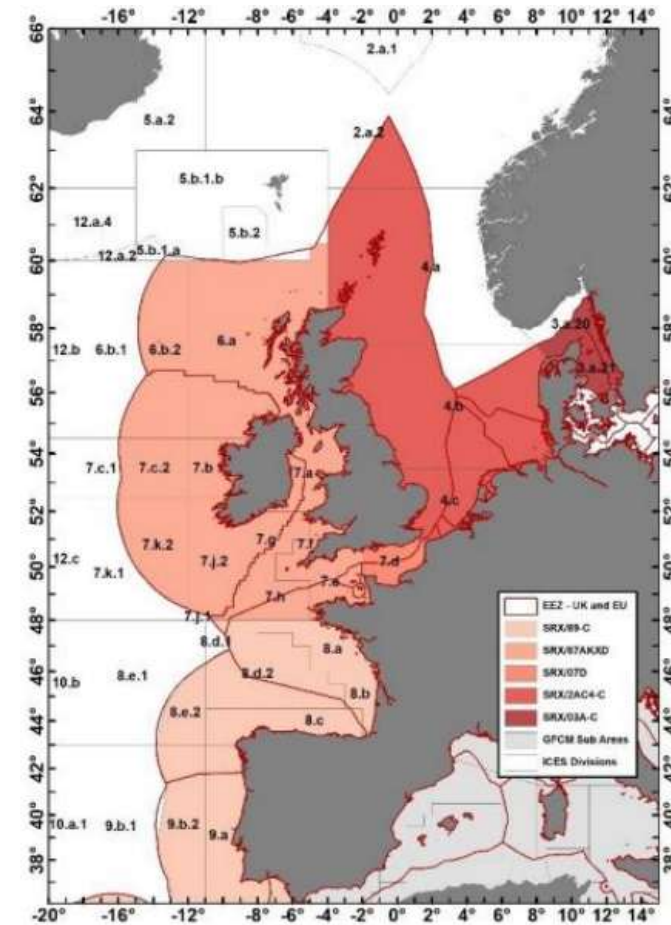


Managing skates and rays: Evaluating options beyond the current group - TAC

02-09-2025

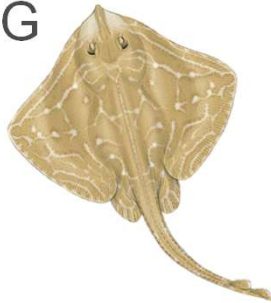
Group TAC

- Introduced in 1999 for North Sea
- Since 2009 five regions
 - Greater North Sea
 - Division 3.a (SRX/03A-C) (4 stocks)
 - Division 2.a and subarea 4 (SRX/2A4-C) (5 stocks)
 - Division 7.d (SRX/07D) (6 stocks)
 - Celtic Seas (SRX/67AKXD) (13 stocks)
 - Bay of Biscay and Iberian coast (SRX/89-C) (10 stocks)

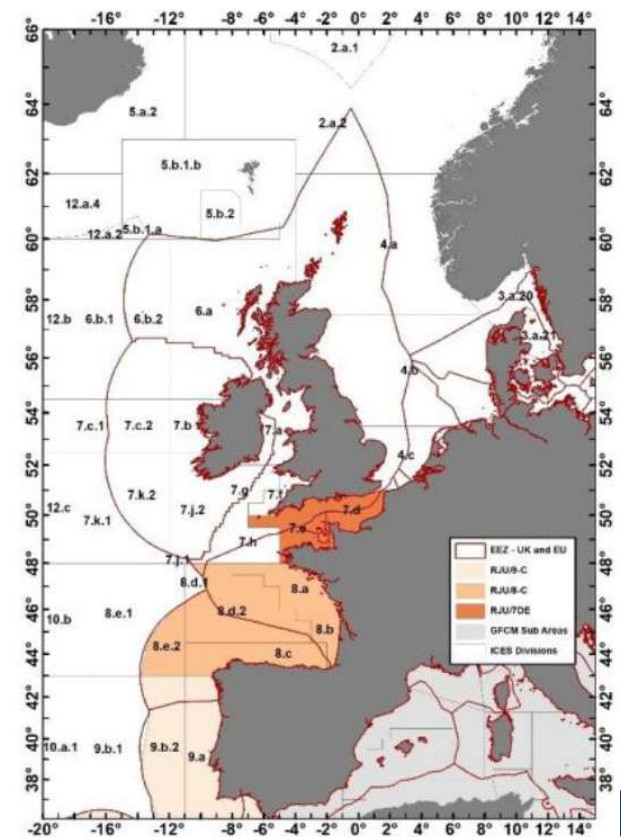
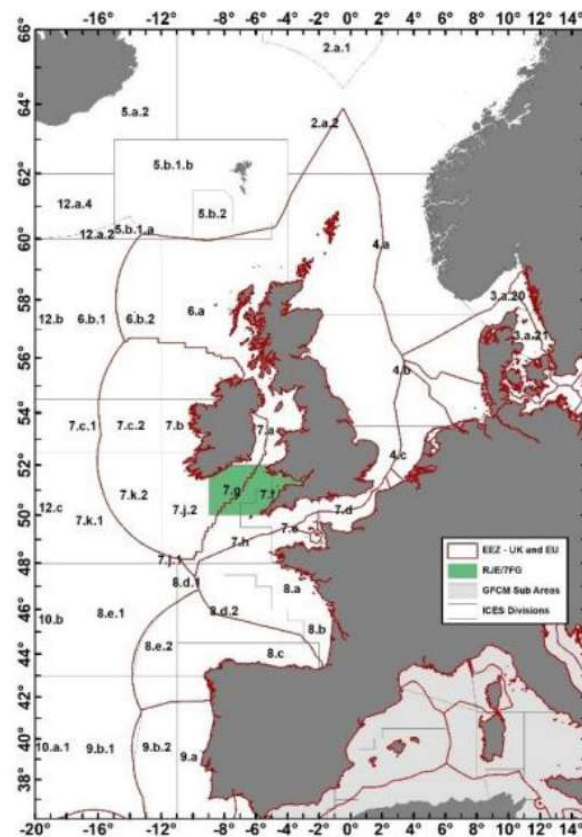


Four stock/species specific (sub) TACs

- RJE/7FG



- RJU/7DE
- RJU/8-C
- RJU/9-C



Commission work for 2016 negotiations

- Concerns about the TAC-setting
 - Several proposals presented to Member States
 - Using average % increase/decrease across all ICES stocks equally
 - More influence to abundantly caught stocks (weighted average)
 - Vulnerable stocks in footnote with max tonnage
 - Vulnerable stocks in prohibited species list
 - Separate TAC for commercially important stocks
 - Sub-TACs for vulnerable stocks (e.g. as done for RJU.27.7de)

Moving to sub-TAC until...

Sub-TAC



Averaging % change

Positives	Negatives
Conservative, treating all species equal	Not a popular approach, can lead to large cuts for main commercial species that may have positive advice
Provides greater protection to vulnerable species compared to weighted mean approach	Still not ideal for vulnerable species either when large increase in advice commercial stocks
Clear, mathematical approach	

STECF 2017 review

- Several types of TAC based management measures

Management Measures	Information needed as a basis for implementation	Data availability and limits	Control Fishing Mortality		Control and Enforcement		Potential issues related to compliance	Choke	Sources of uncertainty	Potential performance indicator
			Pro	Con	Pro	Con				
Skates and rays generalised TAC	ICES catch advice	ICES is currently landings advice so estimates of dead discard needed. Improvement in species-specific catch estimates Better stock identification	Limited	Limited control at stock level	Easy as species is not required for monitoring quota uptake		Low incentive for misreporting except for prohibited species	Potential for choke effects, depending on potential exemptions	Quantification of survival per species and métier Species identification	Ideally F and SSB or proxies for all species Reference points defined
Generalised TAC with sub-TAC for particular stocks	ICES catch advice	ICES is currently landings advice so estimates of dead discard needed. Improvement in species-specific catch estimates Better stock identification	For the sub-TAC stocks and partially for the others	Restrictive sub-TAC may result in an increase in F on the other generalised stocks Limited control of F for the species not in the sub-TAC	Potentially easy to control subject to species identification	Increase in resources for monitoring species specific data for Sub-TAC	Species identification and misreporting Non-transparent criteria for selecting Sub-TAC stocks	High potential for choke effects, depending on potential exemptions	Quantification of survival per species and métier. Transparent selection of stocks under sub-TAC. Species identification	Ideally F and SSB or proxies for all species Reference points defined
TACs by Genus	ICES catch advice	ICES is currently landings advice so estimates of dead discard needed. Improvement in species-specific catch estimates Better stock identification	Partly	Control F at genus level, not at stock level	Potentially easy to control subject to genus identification	Increase in resources for monitoring species specific data for the genera	Species identification and (low potential) for misreporting	Potential for choke effects, depending on potential exemptions	Quantification of survival per species and métier Species identifications	Ideally F and SSB or proxies for all species. Reference points defined
TAC by stock (ICES advice)	ICES catch advice	ICES is currently landings advice so estimates of dead discard needed. Improvement in species-specific catch estimates Better stock identification	Potential to control F at the stock level		Potentially easy to control subject to species identification	Increase in resources for monitoring species specific data	Species identification and misreporting	High potential for choke effects, depending on potential exemptions	Quantification of survival per species and métier Species identifications	Ideally F and SSB or proxies for all species. Reference points defined

Change in methods for 2023 TAC

- From using average % increase/decrease across all ICES stocks equally to summing the ICES advice.
 - STECF 2022 review
 - Follow more closely the ICES advice

Species	Stock code(s)	Proportion of stock in area	ICES Advised Landings 2025	ICES Advised Catch 2025	Landings (% of L+DD; ICES report)	Implied landings
Blonde ray	rjh.27.4a6	0.1	7			0.7
Blonde ray	rjh.27.4bc7d	1		1209	0.724	875
Thornback ray	rjc.27.3a47d	1		5307	0.809	4293.363
Small-eyed ray	rje.27.7de	0.5	32			16
Spotted ray	rjm.27.3a47d	1		1415	0.383	541.945
Sandy ray	rji.27.67	0	27			0
Shagreen ray	rjf.27.67	0	134			0
Cuckoo ray	rjn.27.3a4	1	79			79
Rajidae	raj.27.3a47d	1				137.1333333
Common skate	rjb.27.3a4	1	0	0		0
Starry ray	rjr.27.23a4	1	0	0		0
Total						5943.141333

Skates and rays

2024

- Discuss how to proceed with group TAC
- Potential candidates to have single TAC



- Third benchmark Div. 27.9a
- Joint request to ICES to provide split in landings and (dead) discards.

2022

- STECF report on Skates and rays management (STECF-22-08)
- First benchmarks and use new assessment methods ICES

2025 - ...

Alternatives to group TACs

2023

- Joint UK-EU paper - **Indicative roadmap to develop alternatives to group TACs**
- Second benchmark and applying new assessment methods ICES
- Joint methodology developed to determine TACs 2024

Expert meeting in London (2024)

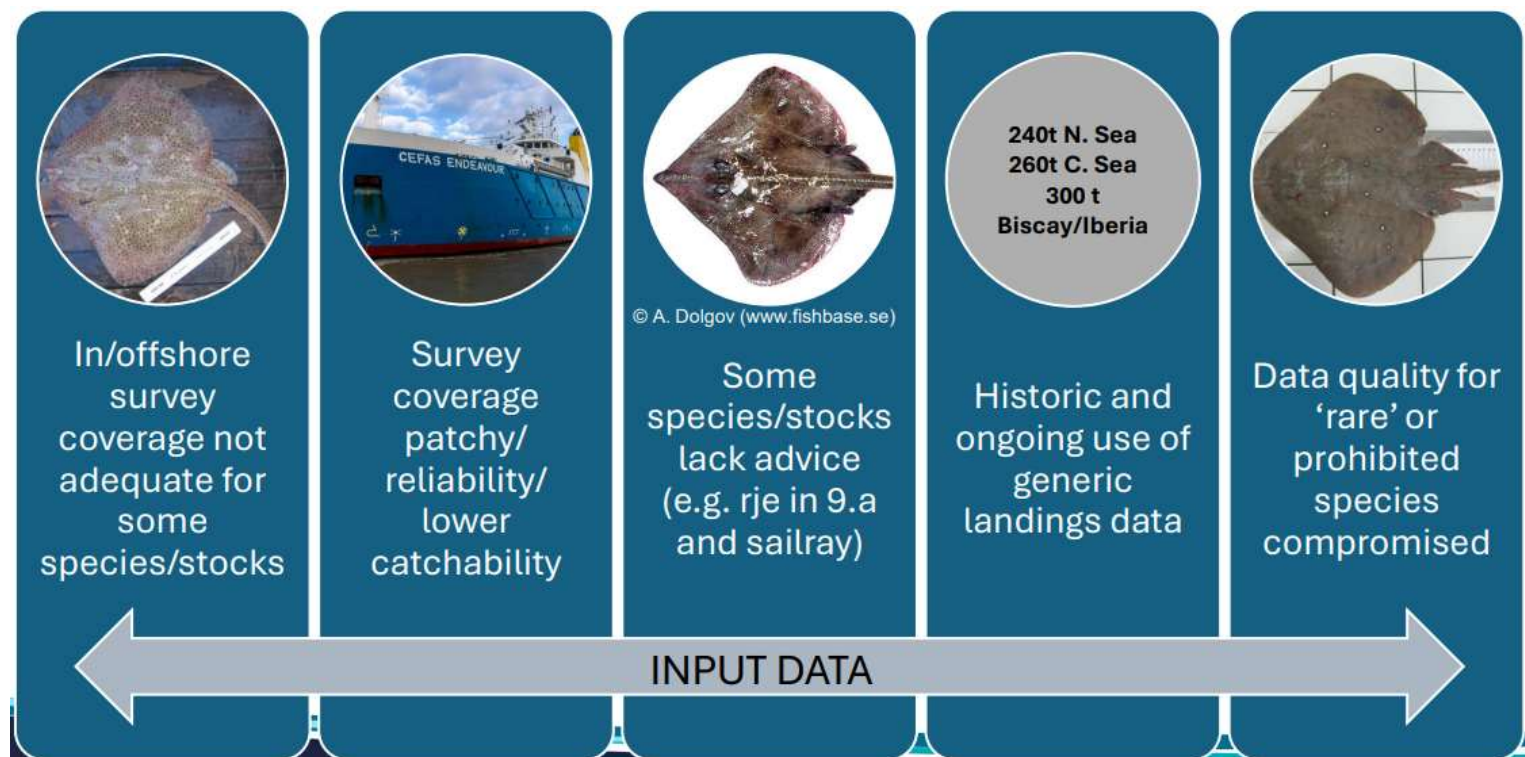
1. The problem

- Current skate and ray fisheries management:
 - What is working and what isn't working?
 - What are the stocks/species of greatest sustainability concern?

2. The options

- What are the main options and the associated pros, cons and barriers including knowledge gaps?
 - Changes to the group TAC structure, including species-specific TACs, genus-based TACs and other potential approaches

The problem – input data



The problem – management

ICES stocks North Sea	3a	4	7d
Blonde ray (4a6)			
Blonde ray (4bc7d)			
Spotted ray			
Thornback ray			
Cuckoo ray			
Small-eyed ray (7d)			
Unidentified rays			



SRX/03A-C	SRX/2AC4-C	SRX/07D
1.46%	53.31%	45.23%



Apply TCA distribution

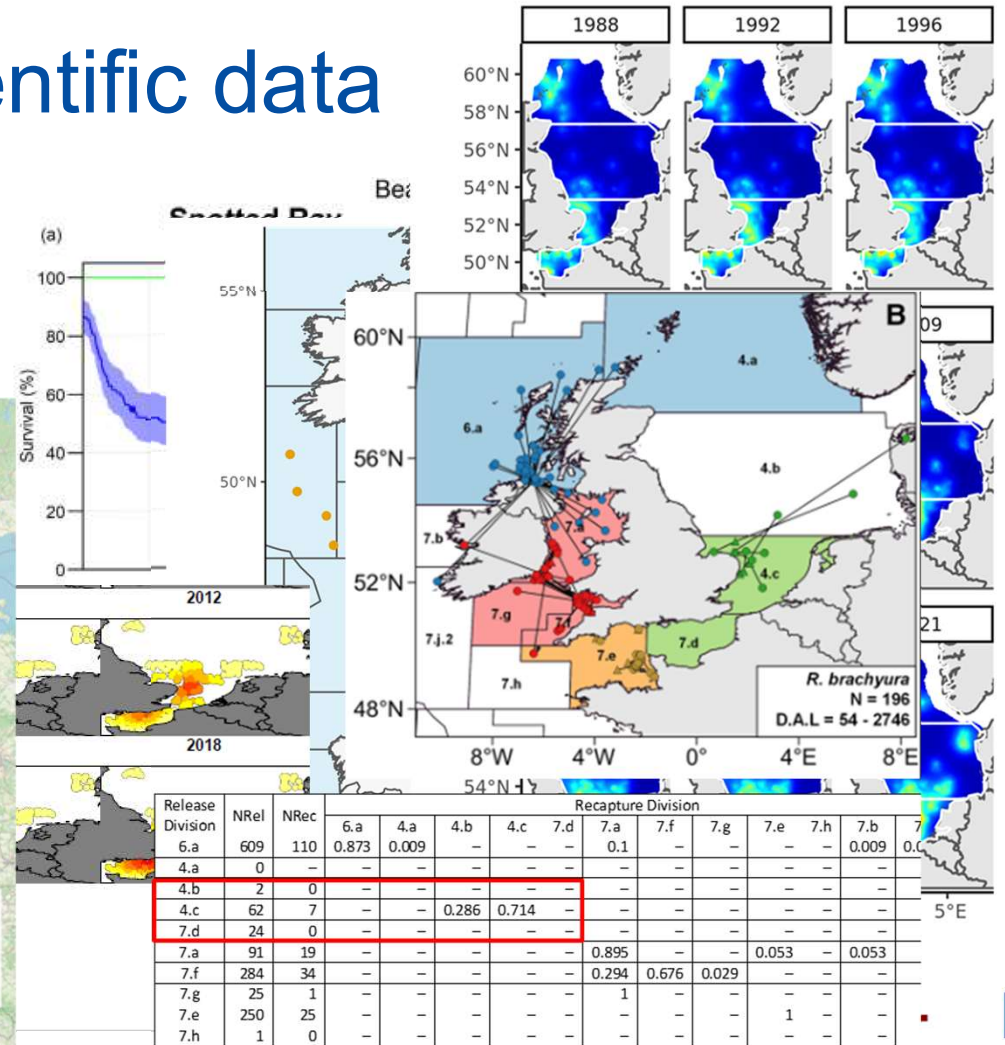
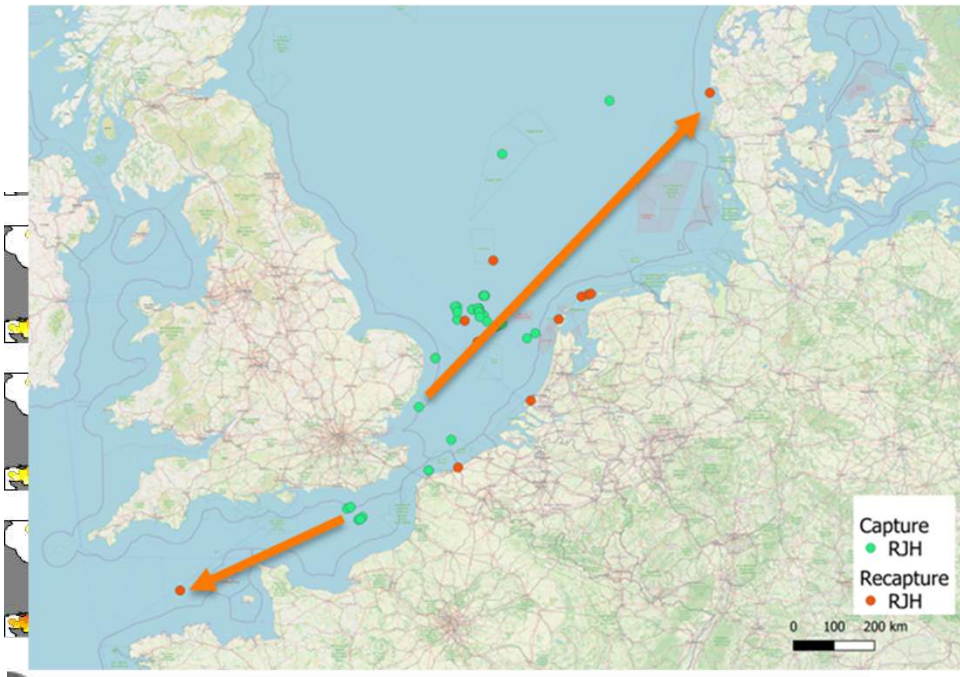
SRX/03A-C	SRX/2AC4-C	SRX/07D
		
100%	0%	31%
		69%
		84.21%
		15.79%

TCA distribution from 2026 onwards

- Single species advice and stock distribution may not necessarily be consistent with the combined TAC areas (straddling stocks).
- Assumption that stocks covered by the TAC can sustain similar fishing mortality.
- Overshooting or undershooting the advice

Advancements – Scientific data

- Dedicated studies
 - Tagging



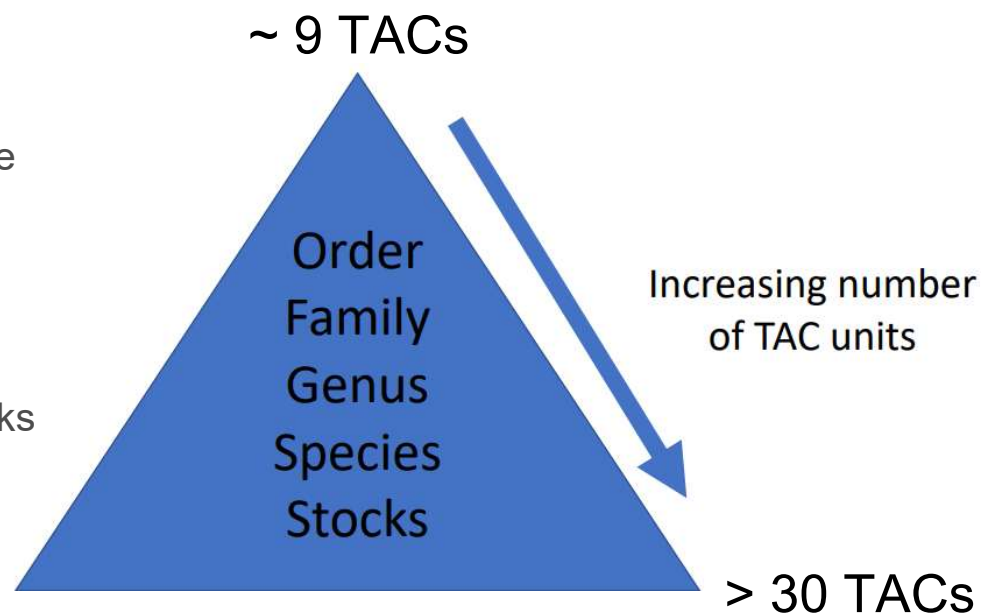
Advancements – assessments

- Changes in the ICES advice
 - 20 stocks assessed relative to (proxy) reference points
 - 5 were subject to fishing pressure above FMSY (proxy)
 - 1 had a stock size below (proxy) ref. point

Species	Stock	Fishing Pressure	Stock size
<i>Raja clavata</i>	Rjc.27.3a47d	✓ (below)	✓ (above)
	Rjc.27.6	×	✓
	Rjc.27.7afg	✓	✓
	Rjc.27.8abd	×	✓
	Rjc.27.8c	✓	? (undefined)
	Rjc.27.9a	×	✓
<i>Raja montagui</i>	Rjm.27.3a47d	✓	✓
	Rjm.27.67bj	✓	✓
	Rjm.27.7ae-h	✓	✓
	Rjm.27.8	✓	✓
<i>Leucoraja naevus</i>	Rjn.27.3a4	✓	✓
	Rjn.27.678abd	✓	✓
	Rjn.27.8c	✓	✓
	Rjn.27.9a	✓	✓
<i>Raja brachyura</i>	Rjh.27.9a	✓	✓
	Rjh.27.4bc7d	✓	✓
<i>Raja microocellata</i>	Rje.27.7fg	?	✓
<i>Amblyraja radiata</i>	Rjr.27.23a4	×	×
<i>Raja undulata</i>	Rju.27.7de	✓	✓
<i>Rajidae spp.</i>	Raj.27.1012	×	✓

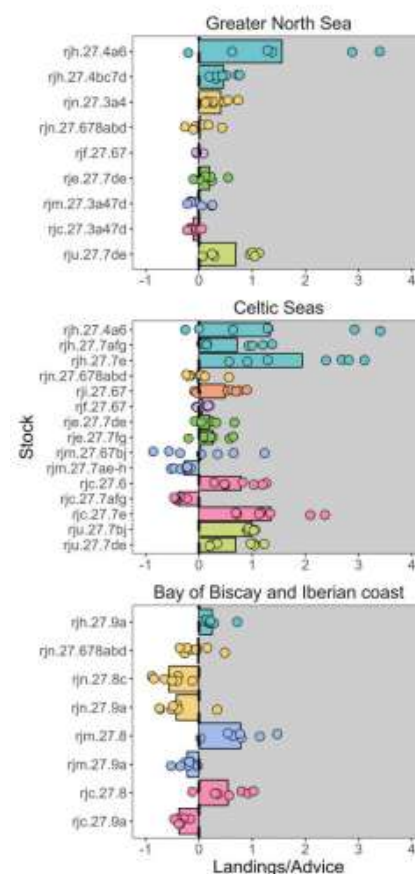
Options

- Several proposals can be explored:
 - Vulnerable stocks in footnote with max tonnage
 - Vulnerable stocks on prohibited species list
 - A hybrid option: Genus-based approach
 - Separate TAC for commercially important stocks
 - Sub-TACs for vulnerable stocks
 - Individual TAC for all stocks



Current group TAC

CURRENT GROUP TAC	ADVANTAGES	DISADVANTAGES
	System is already in place, with quota shares agreed between relevant nations	Current approach to converting ICES' advice for multiple skate species to TAC units may be impacted by new ICES assessments (SPiCT) and resulting advice
	Fewer TACs may provide flexibility for quota allocation and monitoring uptake	How to address straddling stocks?
	The current system (and allied measures) seems to have regulated landings	Annual changes to the TAC do not necessarily result in re-direction of fishing pressure (landings) to 'healthier' stocks or reduced fishing pressure (effort or landings) on stocks of concern.
	More resilient against any future changes in skate taxonomy or stock definition	The reported landings of some stocks can exceed what is advised by ICES, and thus may not be viewed as either 'precautionary' or 'in line with scientific advice'
	Accounts for all skates and rays in the Order <u>Rajiformes</u> that may be reported	
	Low incentive for fishers to deliberately misreport different skate species/stocks	
	Fishers have a degree of flexibility as to which species they harvest and in what relative quantities	

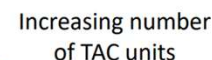


Species:

- Blonde ray (*Raja brachyura*)
- Cuckoo ray (*Leucoraja naevus*)
- Sandy ray (*Raja circularis*)
- Shagreen ray (*Leucoraja fullonica*)
- Small-eyed ray (*Raja microocellata*)
- Spotted ray (*Raja montagui*)
- Thornback ray (*Raja clavata*)
- Undulate ray (*Raja undulata*)

15

Skate species can co-occur, and so potential increase in discarding (or misreporting) may occur for species with more limited TACs if caught in fisheries with species with larger TACs



TAC	Sub-TAC
SRX/03A-C	
SRX/2AC4-C	
SRX/67AKXD)	
	RJE/7FG
SRX/07D	
RJU/7DE	
SRX/89-C	
	RJU/8-C
	RJU/9-C

rjm.27.4a6	rjm.27.7de	rjm.27.3a4	rjm.27.3a4
rjm.27.4bc7d	rjm.27.7f	rjm.27.678abd	rjm.27.67a-ce
rjm.27.7afg	rjm.27.7b	rjm.27.8c	rjm.27.89a
rjm.27.7a	rjm.27.7b3	rjm.27.9a	
rjm.27.3a47d	rjm.27.7de		raj.27.3a47d
	rjm.27.8ab	rjf.27.67	raj.27.67a-ce
rjm.27.6	rjm.27.8c		raj.27.89a
rjm.27.7afg	rjm.27.9a	rjm.27.67	raj.27.1012
rjm.27.7e			rjm.27.23a4
rjm.27.8ab			
rjm.27.8c			raja.27.9ea
rjm.27.9a			
rjm.27.3a47d			
rjm.27.67b3			
rjm.27.7ae-h			
rjm.27.8			
rjm.27.9a			

Genus-based TACs: A 'hybrid' option?

Skates and rays in European waters



Dipturus



Raja



Leucoraja

Genus-based TACs: A 'hybrid' option?

Ca. 20

- Somewhat of a compromise between previous approaches
- Advantages/disadvantages still exist...
- Coastal Raja spp. (*Raja microocellata*, *Raja undulata*) with stock-specific TACs
- Main Raja spp. (*Raja brachyura*, *Raja clavata*, *Raja montagui*) could have a combined TAC over certain areas (footnotes for coastal Raja when outside current units)
- Leucoraja spp. – larger scale TAC units for these offshore species with footnote(s) for extra restrictions for sandy and shagreen ray (e.g. max size, trip limits)
- Dipturus spp.- relevant TAC units for the larger-bodied species (long-nosed skate an important commercial species in Iberian waters, possible future unit for common blue skate)

Key considerations

- Legal obligation to manage fish stocks at MSY levels
- Legally required to adhere to the TCA with the UK
 - We can not define new TACs, thus potential of using “of which” clause?
- No approach is ‘perfect’, but...
 - Potential for TACs to be more closely aligned with ICES' advice for specific fish stocks.
 - TACs could be set to match the defined fish stock areas/adjusted to fishing patterns.
 - Address the issue of over- and underutilization of quota
- More thorough evaluation of various choices or strategies, based on scientific evidence and analysis, is needed.

Thank you



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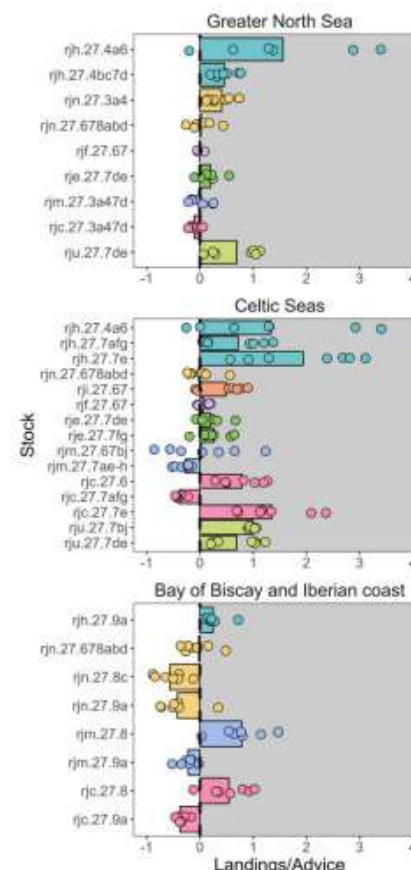
Options – North Sea TAC



ICES stock	Proportion in area	Advised landings	Advised catches	Landings ratio	Implied landings	ICES cat
rjh.27.4a6	10%	7			0.7	5
rjh.27.4c7d	100%		1209	0.724	875	2
rjc.27.3a47d	100%		5307	0.809	4293	2
rje.27.7de	50%	32			16	5
rjm.27.3a47d	100%		1415	0.383	542	2
rji.27.67	0%	27			0	5
rjf.27.67	0%	134			0	5
rjn.27.3a4	100%	79			79	3
rjn.27.678abd	0%	7799			0	2
raj.27.3a47d	100%				137	6
rjb.27.3a4	100%	0			0	6
rjr.27.23a4	100%	0			0	3

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- Undulate ray (*Raja undulata*)

Overshooting or undershooting

- Single-stock advice
- Effect by life-history traits
- By ICES assessment cate
 - Cat 5-6 stocks: -20%?

