

IEA in practice – Experiences from the Working Group on the Integrated Assessments of the Norwegian Sea (WGINOR)

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Integrating information at different scales
in the framework of EA implementation

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ICES IEA
groups

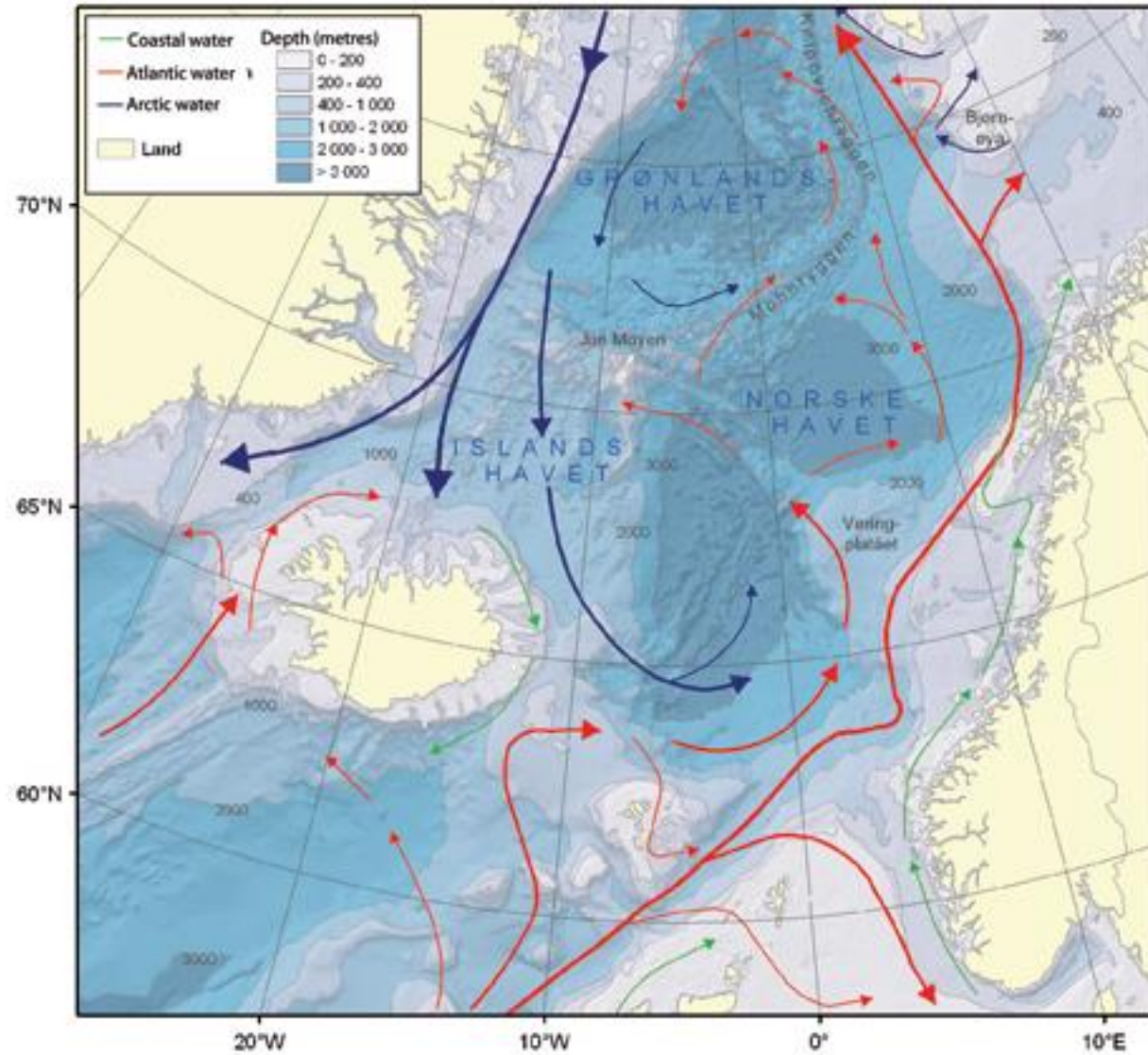
3y cycles

WGINOR: 3rd
cycle

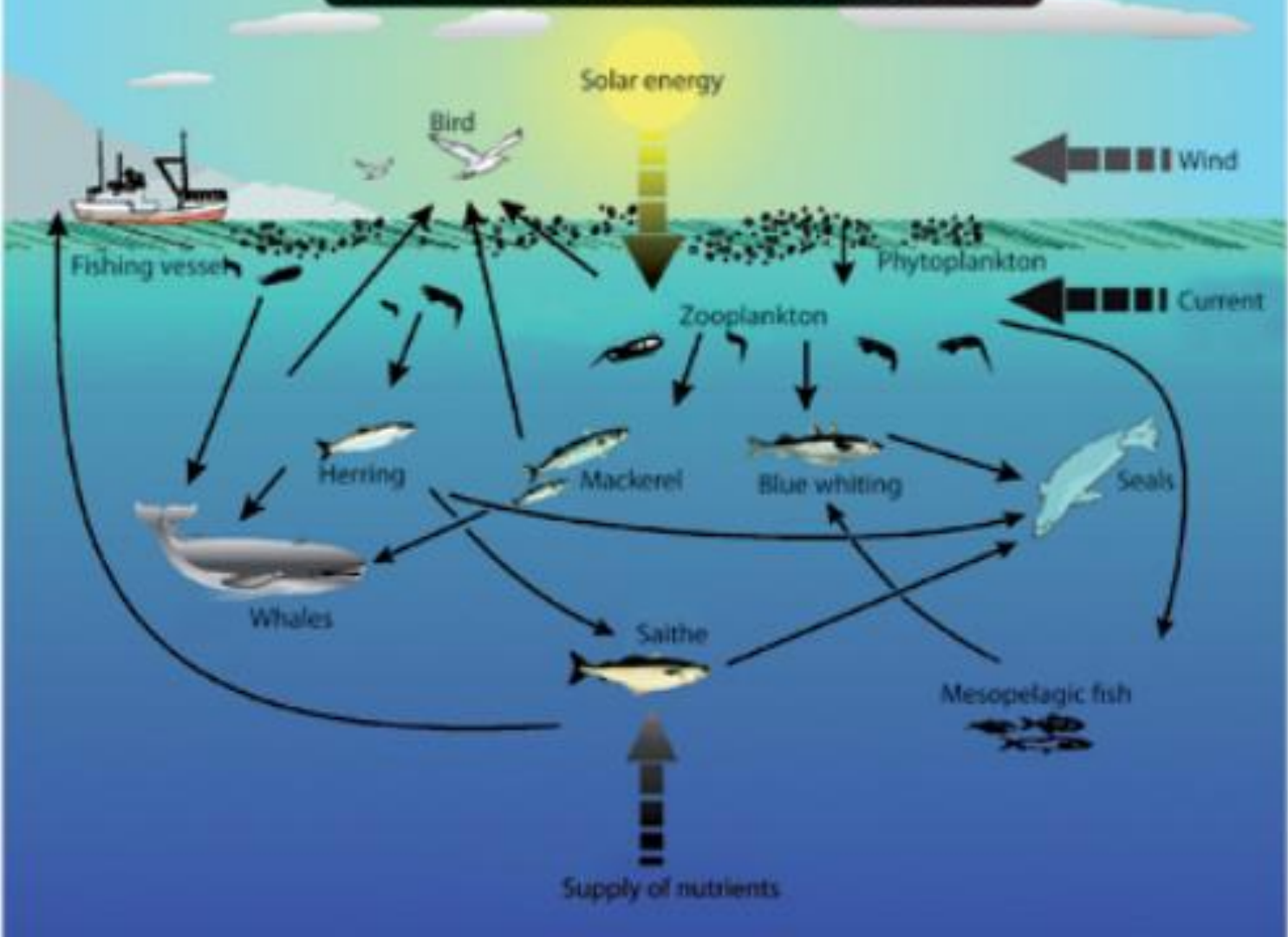


The Norwegian Sea





SIMPLIFIED FOOD WEB FOR THE NORWEGIAN SEA



ToR 2012: the birth of WGINOR

4 Terms of reference a)–f)

ToR	Description
a	Develop an operational approach to integrated assessment of the Norwegian Sea
b	Perform up to date integrated assessment for the Norwegian Sea ecosystem
c	Utilize multispecies and ecosystem models to investigate effects of single and multispecies harvest control rules on fishing yield and ecosystem state for the purpose of developing ecosystem based advice
d	Develop absolute abundance estimates of zooplankton and pelagic fish
e	Develop sampling requirements for integrated assessment of the Norwegian Sea
f	Consider the WKECOVER report and draft sections 1, 2 and 3 of an initial Ecosystem Overview for the Norwegian Sea



ToR 2015: childhood

2 Terms of Reference a) – c)

ToR descriptors for 2016–2019:

ToR	Description
A	Perform up to date integrated assessment for the Norwegian Sea ecosystem focusing on fisheries, but also considering other human pressures.
B	Utilize multispecies and ecosystem models to investigate effects of single and multispecies harvest control rules on fishing yield and ecosystem state for the purpose of developing ecosystem based advice.
C	Update the Ecosystem Overview for the Norwegian Sea.



ToR 2018: teenage

Terms of Reference a) – f):

ToR	Description	Background	Science Plan topics addressed	Duration	Expected Deliverables
A	Perform integrated assessment of the pelagic ecosystem in the Norwegian Sea and develop a framework for identifying warning signals for management.	Addresses needs in the science plan on developing understanding of ecosystems and their responses to human impact and other chance. In addition start developing a framework for ecosystem-based advice that can be used by WGWIDE, OSPAR and similar recipients	1,2,3	years 1-3	WG report to SCICOM and ACOM January following each year
b	Utilize multispecies and ecosystem models to investigate effects of single and multispecies harvest control rules on fishing yield and ecosystem state for the purpose of developing ecosystem-based advice.	Addresses needs for developing advise for sustainable use of marine ecosystems	3	years 2-3	WG report to SCICOM and ACOM January following year 2 and 3

c	Initiate development of forecast products (1-5 years) for key indices of ocean climate.	Aimes at providing links from an integrated ecosystem assessment to advise	1,3	years 1-3	WG report to SCICOM and ACOM January following each year
d	Develop a food-web assessment of the pelagic ecosystem in the Norwegian Sea, including hindcasts and conditional forecasts of the main species or trophic groups.	Aimes at providing links from an integrated ecosystem assessment to advise	1-3	years 1-3	WG report to SCICOM and ACOM January following each year
e	Establish a dialogue between WGINOR and relevant stakeholders and managers.	Aimes at steering the work of the group so that it addressess management needs	3	years 1-3	WG report to SCICOM and ACOM January following each year
f	Update the ecosystem overview based on the ICES guidelines.	Summarises key achivements in developing a understanding of the ecosystem and its responses to human impact and other chance.	1,2	year 3	WG report to SCICOM and ACOM January following year 3

New elements for IEA in WGINOR (2019)

1. Initiate development of a model based food web assessment – an ecosystem parallel to a stock assessment with hindcast and forecast (2-5 yrs) properties
2. Initiate development of a forecast system for the physical environment (1-2 yrs)
3. Initiate development of a framework for assessing whether there are warning signals in the ecosystem that are of relevance for management (drawing on 1&2)
4. Perform repeated scoping with managers and relevant stakeholders (addressing stakeholders in the country where the yearly meeting is held)



ToR 2021: adulthood?

- Engage stakeholders in scoping the objectives of the IEA
- Provide state-of-the-art reconstructions of past changes in the Norwegian Sea physical, biological and human changes
- Explore possible futures of the Norwegian Sea through structured modelling and scenario exercises
- ...more?

