ICES Strategic Plan 2014-2018

Midway report and Vision document

ICES Strategic Plan 2014 –2018 Midway Report and Vision Document

The current ICES Strategic Plan (ISP) runs until 2018. 2016 presents an opportunity to take stock and consider progress and gaps in reaching the goals laid out in the plan. This report has been developed by the Coordination Group, reviewed by Bureau, and now submitted to Council. This report will help to inform a discussion on the renewal of ICES Strategic Plan.

The Midway Report and Vision Document discusses progress in developing integrated ecosystem assessments, the key challenge of the ISP, and provides examples from each of the four pillars. The "gut-feeling" reports provided in Section 6 give a detailed review of progress for each of the pillars.

The focus of the Midway Report and Vision Document is, however, on the challenges for the remaining part of the current strategic plan. The report discusses the priorities for 2016 – 2018.

Given the timeline of Council meetings, this review also highlights the need for a well-planned renewal process for the next strategic planning cycle.

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1 Challenges

With the adoption of the ICES Strategic Plan, 2014-2018 ICES decided to build its foundation of science around one key challenge; integrated ecosystem assessments, in order to ensure science, data and advisory products to support the objectives and goals of marine policies and legal instruments. Notably, more integrated policies, such as the application of the ecosystem approach.

This includes work to support the evolution and eventual shift from single sectoral issues towards more integrated foci. An integration that focuses on linkages across sectors, and on identifying and evaluating cumulative pressures from various human activities on marine ecosystems. Two more specific choices were also made, to give priority to aquaculture and the Arctic.

With resources already being stretched within the ICES community, and the secretariat, a major challenge is to coordinate, rationalise and prioritise the use of the available resources. Part of which will take place through cooperation with partners. It also involves a better integration, and coordination within ICES across areas of science, data, and advice.

2 Implementation

The ICES Strategic Plan 2014-2018 is built around the four pillars of the organization: Science, Advice, Data & Information, and the Secretariat. Strong pillars are the foundation of our work, and the implementation of the ISP has been centred around pillar specific plans. Examples from the implementation of the Implementation Plans are provided below, and a gut feeling status of the implementation for each pillar is given in section 6.

Cooperation and integration between the pillars has proven to be vital to the success of the strategic plan. Specific actions and investments have facilitated the integration of ICES pillars.

2.1   Leadership

2.1.1   The Coordination Group

A Coordination Group has been established to coordinate work at an operational level across science, data, advice and the secretariat. The Group is chaired by the General Secretary, and with the participation of the ACOM and SCICOM Chairs, the Heads of Science and Advisory Support, the Head of Data and Information, the Ecosystem Approach Coordinator, and the Coordinating Secretary. The Coordination Group reports to Bureau. The establishment of the Coordination Group has had a very positive effect on the cooperation and coordination between pillars.

2.1.2   Restructuring of the Advisory leadership (ACOM and the Secretariat)

The change from a 50% ACOM chair to a 100 % honorarium financed ACOM chair, located in the Secretariat, but independent and reporting to ACOM/Council has proven effective in centralizing strategic work by the chair and the ACOM leadership. The Head of Advisory Support is now focused on providing support to the ACOM chair and handling the resource and financial issues related to the advisory processes. The clearer division of roles and tasks, has led to more prioritised and focussed work, easing the cooperation with the other pillars. With the Chair located in-house the opportunity for daily meetings, informal contacts, and resolution of cross-pillar issues, that would otherwise had required longer time and more resources.

2.2   Examples of progress from each pillar

2.2.1   Secretariat
- **C**ontent **A**dministration for **R**eports and **A**dvice (**CARA**), making available data /information services and products, as well as ensuring accessibility, and reproducibility of ICES products. Work will continue to develop and fine-tune CARA.
- **R**esource **C**oordination **T**ool (**RCT**), facilitating both a focused and transparent use of national institutes resources, and creating a unified work and resource planning system. Work will continue to develop and fine-tune RCT.
- Outreach activities, ranging from press releases, bi-monthly newsletter, coverage of symposia, annual report, early career scientist activities, and other popularization of ICES products, mainly through the webpage, and social media, and to a lesser extent via printed material.

2.2.2   Science
- Production of integrated ecosystem assessment in regional seas, covering eight (8) ecoregions (the Baltic Sea, the North Sea, the Western European Shelf Sea, the North-west Atlantic Regional Sea, the Mediterranean Sea, the Barents Sea, the Norwegian Sea, and the Central Artic Ocean).

- Cooperation with partners, including the North Pacific Marine Science Organization (PICES) and the Arctic Monitoring and Assessment Programme (AMAP, one out of six Working Groups under the Arctic Council), arranging joint workshops/symposia.
- Further development and improvement of the Annual Science Conference (ASC).

2.2.3   Advice

- Streamlining of the advisory products, with clear deliverables on fishing opportunities, fisheries overviews, and ecosystem overviews.
- Launch of four (4) ecosystem overviews beginning 2016 (the Barents Sea, the Celtic Sea, the North Sea, the Bay of Biscay and Iberian Sea), the remaining ecosystem overviews in the pipeline, and the production of fisheries overviews for launch end 2016.
- Futher development of the framework for advice of stocks with knowledge / data limitation (category 3-6 stocks).

2.2.4   Data and Information

- New databases and portals (e.g., **V**ulnerable **M**arine **E**cosystems (**VME**) data portal, Biodiversity database, Impulsive Noise Events Registry, Acoustic Database, Marine Litter data).
- Operational oceanographic products (OOPS), Regional indicator products (Impulsive underwater noise – pulse block days)
- Assessment automation (e.g., eutrophication and hazardous substances assessment tools).
- A structured and coordinated process across the ICES pillars to official calls for data needed for ICES advisory and science work.

3   Outstanding issues

Based on the gut-feeling reports in Chapter 6 the following issues have been identified as lacking implementation.

3.1   Secretariat

- Training; reaching out and engaging with academia, and testing on-line accessibility

3.2   Science

- Ensure availability of experts in ICES Science community including aquaculture, bluewater and other oceanographers – identify and fill gaps

- Continue to build an operative platform for social sciences in support of IEA.

- Develop online training facilities.

- In cooperation with data and advice, advance the data flow from producer to end user.

3.3 Advice

-Capacity for provision of advice for emerging human activities in the Arctic.

-Consider the social and economic analysis needs of users of advice in an ICES Dialogue meeting.

-Prepare methodologies and examples of impact assessments of management measures that accounts for environmental viability and social and economic trade offs.

3.4 Data and Information

- Aquaculture data needs and operational systems.

- Speedier progress on data support to Arctic activities via ICES EGs and partner organizations.

- Quality control and documentation of control processes needs more integrative work and focus.

- Data availability; increase efforts to ensure a better connectivity between the national data assets and the versions provided to ICES for advice and science.

4 Priorities 2016–2018

On the basis of the above summaries on the status of implementation of the ICES Strategic Plan, and the Implemetnation Plans of the four pillars, the below priorities are suggested.

4.1 Implementation of new Science Leadership (SCICOM and the Secretariat)

End 2016/beginning 2017, respectively, a Head of Science Support, and 100% honorarium paid (earlier 42%) SCICOM Chair will take up their positions, both located in the Secretariat. In addition, the SCICOM leadership has been strengthened with an annual allocation from the core budget of DKK 550.000,-, with a request for a work plan, and administrative rules to be developed for the use of the money.

Further work:

The aims of the new science leadership are equal to the new advice leadership; to focus strategic considerations, including cooperation with new/existing partners, align priorities with other parts of the organization, and ensure cooperation among SCICOM leadership, and with Secretariat.

4.2 Integrated science and advice for the implementation of the ecosystem approach, based on data and knowledge products

The work towards more integrated science and advice encompasses; freeing up resources by facilitating and, where possible, automating resource heavy working procedures, investigating the use of existing and new datastreams in support of integrated science and advice for implementing the ecosystem approach, and initiating a dialogue with existing/new stakeholders to identify knowledge/products needed.

4.2.1 Integrated products, and dialogue with clients and stakeholders

Further work:

Data needs in support of an ecosystem approach to fisheries and environmental management

- Data Collection; streamlining the data collection, capitalizing on ICES position as end-user, ensuring both the use of collected data across ecosystem components and the identification of data gaps considering the data needs to support an ecosystem approach to fisheries management. Investigating the possibility of integration of ecosystem related monitoring activities in survey plans.
- Data Collection; investigating how the ICES coordinated trawl, acoustic and plankton survey data can contribute to the developing ocean observing network/capacity.
- Data processing, further development and use of the Regional Database and DATRAS, with pilot tests in 2016, and wider use for the assessment work and data quality evaluation in 2017. The development of these products will have a key role both for Member States to improve their sampling programmes at a regional level and ICES, to assess the quality of the input data used for advice and science.

ICES as provider of data, science and advisory products for the ecosystem approach

- Identify, in dialogue with clients and stakeholders (meetings with clients, stakeholders, observers, and dialogue meetings; 2018 Dialogue meeting on ICES and EBM), ICES role as provider of science, data, and advisory products in support of the ecosystem approach to management.
- Develop demonstration advice.
- Identify existing and needed new datastreams, and knowledge products, and demonstrate ICES ability to contribute to these (e.g., Arctic, aquaculture, maritime spatial planning, and integrated management of maritime activities).

4.2.2 More cost-efficient use of resources

Further work:

Automated overviews of recurrent ICES products

- Ensure processes and tools are in place to annually provide automated updates of the ecosystem and fisheries overviews.

- Investigate and develop additional automated overviews, ensuring that ICES provides both underlying data, and maps, as well as scientific analyses (e.g., for aquaculture, maritime spatial planning, and integrated management of maritime activities).

- Continue work to establish a Transparent Assessment Framework (TAF) to allow appropriate documentation, future replication and re-run of ICES assessments, by building up a system with tools to conduct the update and peer reviewed fish stock assessment and archive data, methods, and results used in an ICES assessment. Ensure that TAF will link up to relevant databases hosted by ICES, such as the Regional Database (RDB), the survey database (DATRAS), the acoustic database, and ICES output products, such as the Stock Assessment Graph.

- Based on ICES knowledge base for Ecosystem Based Fisheries Management (EBFM) and Ecosystem Based Management (EBM), establish a formalised approach to ICES Ecosystem Based Advice, equivalent to the ICES MSY approach, being used for ICES Fisheries Based Advice.

- Following on from the above, investigate the expansion of TAF to support Ecosystem Based Advice, and Integrated Advice.

A new benchmark system/process embedded in the Expert Groups

- Developing a new benchmark system, that actively involves all relevant Expert Groups, includes transparent processes to identify benchmarks involving stakeholders, and ensures that the resources required are allocated before a benchmark is initiated.

4.3   Aquaculture and the Arctic

Specifically for the Arctic and aquaculture there is a need for ICES to cooperate with partners, and in the light of work already carried out by ICES, identify added-value work for ICES/and in cooperation with others.

Further work:

Arctic

- Investigate the establishment of a data needs-planning group; surveys/data collection and data processing.

- Investigate the expansion of data services with special emphasis on the Arctic Ocean.

- Demonstation Advice; in cooperation with partners investigate pertinent issues of interest for clients and stakeholders.

<u>Aquaculture</u>

- Identify data needs for a science based information on aquaculture impact on the ecosystem.

- to further develop (with partners) the necessary data steam infrastructure to facilitate the science analyses and aquaculture overviews.

- Investigate and develop automated aquacultures overviews, ensuring that ICES provides both underlying data, and maps, as well as scientific analyses without duplication of aquaculture information developed by other organization such as FAO and EU.

4.4 Training

The operational training group, has been instrumental to the success of the Training Programme, however, given the annual meeting schedule, experience of course cancellations, and difficulties in developing on-line courses, more dedicated support for the Training Programme may be helpful to ensure efficient working procedures and continued success for ICES in this training role.

Further work:
- Develop new courses related with emerging science, and advice topics.
- Develop new courses related with ICES data products and services.
- Support expert group chairs with information and guidance through updated communication tools, and annual meetings of Chairs, both for science and advice.
- Evaluate and develop a strategy for the ICES Training Programme, including assessment of training needs, on-line training courses, considerations of alternative training initiatives (courses arranged by Ph.D/Post.doc), and exploring options for accreditation of the ICES Training Programme.

4.5 Work across departments in the Secretariat

Following changes to the leadership structures, and the reassignment of tasks and responsibilities, further changes to the established working procedures will be explored in order to make best use of Secretariat resources and further support integration and coordination of ICES work.

Further work needed:

<u>Using the Line Managers Meeting & Coordination Group</u>
- Organize work in the Secretariat thematically ensuring contribution and coordination of input by science, data, and advice (themes such as surveys/integrated surveys, aquaculture/aquaculture overviews, arctic, ecosystem products, data needs and collection for ecosystem based management). This will be dealt with also in the light of the need for a balanced budget.

- Consider how existing and developing tools (i.e. The Resource Coordination Tool (RCT) and SharePoint) can be used to support the organizational theme based proposal;
- Develop annual joint working programme, to be reviewed throughout the year, to ensure an high degree of cooperation between, and adaptiveness of all pillars.
- Proactively consider participation of ICES in projects, including Coordination and Support Action (CSA) projects, and establishment of partnerships/activities, as a means to implement the ICES Strategic Plan across the organization.
- Ensure continued communication and outreach about ICES activities and products/deliverables.

5   ICES Strategic Plan, 2019–2023, and onwards

Based on the experience of annual joint working programmes, it could be considered to develop a Joint Implementation Plan as a five-year plan. The first plan to be adopted in 2018 would cover the period 2019 to 2023. This plan will be reviewed and updated in 2019 to cover 2020 – 2024 etc.

The Joint Implementation Plan should be the basis for reports to Bureau, and an annual evaluation should be prepared for the Council meetings, as the foundations for discussions and reviews. This would ensure a more "living" implementation plan, with Council ownership, and which could tie together the work of the various pillars in the organization.

6 Updated "gut-feeling" reports

6.1 Science

The section includes expert evaluations of the SCICOM Steering Group Chairs:

- Graham Pierce, SSG Ecosystem Processes and Dynamics (SSGEPD)
- Henn Ojaveer, SSG Ecosystem Pressures and Impacts (SSGEPI)
- Dave Reid, SSG Integrated Assessments of Ecosystems (SSGIEA) – not available but will be filled in shortly
- Nils Olav Handegaard, SSG Integrated Monitoring and Observation (SSGIEOM)

Summary

The gut feeling exercise was introduced in 2014 to give a brief overview of the status of the implementation of the Science Priorities under the Science Implementation Plan that support ICES Strategic Plan (2014-2018)

The revisited evaluation 2016 is to show the midways status of implementation.

The scale of scoring the implementation was established as follows.

1	Not Started
2	Just Started
3	Some Progress
4	Good Progress
5	Doing Well

The results of the evaluation is shown in the table below. The expert evaluation of 24 priority areas (the 7 priority areas of SSGIEA are not evaluated yet) shows increased scores in 12 areas (marked in green in the table below). Priorities areas scoring some progress to doing well (3-5) are 18 (24) and 10 (24) areas are scoring 4-5.

The evaluation is considered to be conservative and the progress is in fact more extensive. This is due to that the priority areas are assigned to a specific SSG. A more extensive mapping of the implementation started in 2015 by initiative of SCICOM is to be updated and in this evaluation the crosscutting effects which will be clearer and give a fuller picture of the implementation of the Priority Areas.

SSGEPD	Priority area	2014	2016	Comments

Describe and quantify the state of North Atlantic Ocean regional systems	1. Assess the physical, chemical and biological state of regional seas and investigate the predominant climatic, hydrological and biological features and processes that characterise regional ecosystems	3	4	In general I think we are making good progress, especially through groups like WGBIODIV and BEWG. Topics like climate change and indicators are well covered.
	2. Quantify the nature and degree of connectivity and separation between regional ecosystems	1	1	Arguably some relevant information is collected but I don't see anyone focusing on it
Understand and forecast the impact of climate variability and change on marine ecosystems	3. Quantify the different effects of climate change on regional ecosystems and develop species and habitat vulnerability assessments for key species	3	4	
	4. Understand the influence of climate impacts across a range of temporal and spatial scales, from local to global and from seasonal to multidecadal and identify indicators of climate driven biotic responses and forecast trajectories of change	3	4	
Resolve and quantify ecological processes in marine ecosystems, including modelling the dynamics of food webs and their responses to environmental change	5. Quantify the role of structural and functional diversity in marine ecosystems in providing stability and resilience	1	3	For some of the more basic knowledge on structure and function coverage is more patchy but arguably significant. This is also true of work on ecosystem services although only one group focuses on ES
	6. Investigate linear and nonlinear ecological responses to change, the impacts of these changes on ecosystem structure and function and their role in causing recruitment and stock variability, depletion and recovery.	3	3	
	7. Develop end to end modelling capability to fully integrate natural and	1	2	I am not sure anyone is doing true end-to-end models but many components are modelled

	anthropogenic forcing factors affecting ecosystem functioning		
Quantify the relationship between habitat condition, ecological processes and the provision of ecosystem goods and services	8. Define and quantify north Atlantic Ecosystem Goods and Services, model their dependence on ecosystem processes and habitat condition and their social, economic and cultural value.	1	2
	9. Identify indicators of ecosystem state and function for use in the assessment and management of ecosystem goods and services	2	3

SSGEPI	Priority area	2014	2016	Comments
Estimate long term trends of human	10. Develop historic baseline of population and community structure and production to be used as a basis for population and system level reference points.	2	3	WGHIST has identified useful datasets. Support for storage in ICES data center is needed. Next step is baseline development. The next 3 yr of this group should be related specifically to this TOR and perhaps be named something like WG Historical baselines
Understand, quantify and mitigate	11. Develop methods to quantify multiple direct and indirect impacts from fisheries as well as from mineral extraction, energy generation, aquaculture and other anthropogenic activities and estimate the vulnerability of ecosystems to such impacts.	3	3	Strong development of modelling of impacts from fisheries. Contaminant impacts has started to developed threshholds and is progressing steady and well.
	12. Develop approaches to mitigate impacts from these activities, particularly reduction of non target mortalities and enhancement/restoration of habitat and assess the effects of these mitigations on marine populations	2	2	Development is made in ICES but not particularly in EPI groups. Work has been done in relation to discards. WGSAM investigates impacts of bycatch on other target species through F. WGVHES has worked on the role of coastal habitats on exploited populations. We may get something related to essential fish habitat from that group. Score would be higher if other activities were evaluated. Remove priority from SSGEPI?
	13. Develop indicators of pressure on populations and ecosystems from human activities such as eutrophication, contaminants and litter release, introduction of alien species and generation of underwater noise.	3	4	With the recent movement of ITMO and BOSV into EPI this work will progress faster in the steering group. Aquaculture groups are progressing in terms of that particular type of eutrophication
Provide evidence in support of sustainable management of ecosystem goods and services	14. Evaluate ecological, economic and social trade-offs between ecosystem protection and sustainable use to advise on management of human activity in marine ecosystems	1	1	SGSA which looks and social dimension of aquaculture but it is in developing. WGMARS moved to IEA. Reevaluate the SSG TORs
	15. Develop tactical and strategic models to support short and long term fisheries management and governance advice and increasingly incorporate spatial components in such models to allow for finer scale management of marine habitats and populations	5	5	Tactical fisheries models both single and multispecies are well covered. Good work associating coastal habitats with exploited population dynamics. Spatial aspects are well considered in SIMWG and some nations (e.g. Iceland) has strong spatial aspects to their stock assessment which can make appearances in WGSAM. Support for WGMG to make sure it continues to be important and it is key to this SSG TOR.

	17. Develop science in support of advisory needs in marine aquaculture systems, minimizing environmental impacts and integrating other marine sectors.	3	4	Primarily in WGAQUA, potential expansion but WGAQUA is actually spinning off TORS and workshops related to these areas. I do not see a strong need to change in this area, it is coming along as long as we continue to support the group.

SSGIEA	Priority area	2014	2016	Comments
Develop a scoping process to identify objectives to guide IEA's in ICES regional Seas	18. Identify objectives for IEA's that address ecosystem stability and health, taking cognizance of ecological, social and economic sustainability goals as well as multi scale issues.	4		
	19. Identify issue based ecosystem questions relevant to science and management

needs that can be addressed by developing IEA's | 2 | | |
| | 20. Provide priorities and specifications for data collection frameworks supporting IEA's. | 3 | | |
| Advance IEA methodologies and

approaches in the ICES context | 21. Conduct pilot studies in data rich areas for alternative IEA approaches, linking quantitative and qualitative methods at appropriate spatial and temporal scales. | 1 | | |
Develop approaches that allow forecasting within an IEA and evaluation of the effectiveness of tradeoffs of different management options	22. Determine and demonstrate what modelling and analytical approaches will allow projections of ecosystem states in IEA's	3		
	23. Use IEA's to informing management about the effects of cumulative pressure and additive and non additive impacts, and which provide risk evaluations and analyses of tradeoffs between sectoral objectives.	1		
	24. Compare IEA and single issue approaches regarding their efficacy in providing management and governance advice on sectoral and multi sectoral use of the oceans.	2		

SSGIEOM	Priority area	2014	2016	Comments
Identify and prioritize ICES monitoring and data collection needs	25. Identify monitoring requirements for science and advisory needsin collaboration with data product users, including a description of variable and data products, spatial and temporal resolution needs, and the desired quality of data and estimates	3	3	
	26. Develop a cost benefit framework to evaluate and optimize monitoring strategies in the context of the capabilities of, and reqests from ICES Member Countries and clients.	2	4	
Develop further the methodology for the observation and monitoring of marine ecosystems in the ICES area.	27. Identify knowledge and methodological monitoring gaps and develop strategies to fill these gaps	2	2	
	28. Promote new technologies and opportunities for observation and monitoring and assess their capabilities in the ICES context	4	4	
	29. Promote the development and testing of new fishing gear technology and methods for selective reduction of by-catch and discards and for mitigation of other environmental impacts of fishing	4	4	
Implement integrated monitoring in the ICES area	30. Allocate and coordinate observation and monitoring requests to appropriate expert groups on fishery dependent surveys and sampling and monitor the quality and delivery of data products.	3	4	
	31. Ensure the development of best practice through establishment of guidelines and quality standards for (a) surveys and other sampling and data collection systems; (b) external peer reviews of data collection programmes and © training and capacity building opportunities for monitoring activities	3	3	

6.2 Advice

OVERVIEW

2014

SCORE	*Deliver relevant timely and credible advice* SA 1 and 2	*Foster efficient use of resources and quality assurance* SA 1, 2, 3 ,4	*Improve data collection and use* SA 1, 2, 3, 4	*Develop Scope of Advice* Sa 1, 2, 3, 4	*Develop process and Communications* SA 4
1				3	
2		2	1	2	
3		1	1	7	2
4	1	2	2	2	2
5					
	N = 1 Action	N = 5 Actions	N = 4 Actions	N = 14 Actions	N = 4 Actions

2015

SCORE	*Deliver relevant timely and credible advice* SA 1 and 2	*Foster efficient use of resources and quality assurance* SA 1, 2, 3 ,4	*Improve data collection and use* SA 1, 2, 3, 4	*Develop Scope of Advice* Sa 1, 2, 3, 4	*Develop process and Communications* SA 4
1				2	
2		1	1	3	
3		4	1	5	1
4			2	2	3
5	1			2	
	N = 1 Action	N = 5 Actions	N = 4 Actions	N = 14 Actions	N = 4 Actions

2016

SCORE	*Deliver relevant timely and credible advice* SA 1 and 2	*Foster efficient use of resources and quality assurance* SA 1, 2, 3 ,4	*Improve data collection and use* SA 1, 2, 3, 4	*Develop Scope of Advice* Sa 1, 2, 3, 4	*Develop process and Communications* SA 4

1				2	
2			1	3	
3		3	1	3	2
4		2	2	3	1
5	1			3	1
	N = 1 Action	N = 5 Actions	N = 4 Actions	N = 14 Actions	N = 4 Actions

MoU

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat					
ACOM	ACOM Category	ACOM - Action	2014	2015	2016
Evaluater and advise for the sustainable use and protection of marine ecosystems (Goal 3)	1. Deliver relevant, timely and credible advice	Implement MOU's with advice recipient	4	5	5

Quality

ACOM	ACOM Category	ACOM - Actions	2014	2015	2016
Evaluater and advise for the sustainable use and protection of marine ecosystems (Goal 3)	2. Foster efficient use of resources and quality assurance	Implement RCT and priotitiuse resource use	4	3	3
		Further excplore and implement, where appropriate multiannual evaluations of management measures (the state of the stock) for the provision of annual advice	2	3	3
		Enhance substantive support by ICES Scretaariat to the advisory process	4	3	4
		Implement the CARA system ; Automate the process of transferring assessment results from the assessment software to the advisory sheets, including standard graphs	2	2	3
		Conduct internal audits of data. Input and assessment results for all advice providing expert groups	3	3	4

Data

ACOM	ACOM Category	ACOM - Actions	Gut Feeling		
Evaluater and advise for the sustainable use and protection of marine ecosystems (Goal 3)	3. Improve data collection and use	Coordinate and integrate surveys	2	2	2
		Develop guidelines for best practice in design and aimplementation od statistically sound catch sampling schemes	4	4	4
		Identify the data required to provide advice on fisheries and environmental issues and communicate the requirements to those responsible for the collection of data	4	3	3
		Promote efficient and effective data storage through integration of data in regional databases, including making data available for experts through intercatch	3	4	4

Scope

ACOM	ACOM Category	ACOM - Actions	2014	2015	2016
Evaluater and advise for the sustainable use and protection of marine ecosystems (Goal 3)	4. Develop scope of advice	Provide advice in relation to the changing policy environment . Facilitate transition of a new regime, new data, ecosysterm impacts and fisheries opportunities.	3	4	4
		Further develop/implement methodologies, which entails establishment of indicators and targets for all stocks, including data limited stocks (DLS)	4	5	5
		Provide advice taking into account technical interactions in each mixed fishery, as well as biological interactions between stocks, such as predation and competition in each ecoregion, per an established schedule, including a link with social and economic aspects when possible.	3	3	4
		Further develop capacity for provision of advice for emerging human activities in the Arctic - taking into account ecosystem considerations; monitor stock distributions into the Arctic region; data requirements and monitoring needs in the Arctic	1	3	3
		Advisory needs for aquaculture and its environmental aspects	3	5	5
		Integrate considerations fo by catch in the advice for fisheries (including elasmobranchs, mammals and seabirds)	3	3	4
		Integrate considerations of impacts of sensitive habitats in the advice fort fisheries	3	3	3
		Prepare methodologies and examples of impact assessments of management measures that account for environmental variability and social and economic trade offs	2	2	2
		Include discussion on social and economic analysis needs of users of advice in an ICES Dialogue meeting	1	1	1
		Facilitate transition from single stock benchmarks to regional benchmarks	2	2	2
		Further develop ecosystem overviews on a regional scale	4	4	5
		Provide advice on Marine Spatial Planning	1	1	1
		Develop mechanisms for promoting IEU as a basis for ICES advice	3	3	3
		In cooperation with Member Countries and regional seas organisations, develop IEA for the Baltic, North Sea and Barent Sea for use in advice provide exampoles of how IEA can be used in advice	3	2	2

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Communication

ACOM	ACOM Category	ACOM - Actions	Gut Feeling	Gut Feeling	Gut Feeling
Evaluater and advise for the sustainable use and protection of marine ecosystems (Goal 3)	5. Develop process and communication	Further develop the capacity of the ICES community and the stakeholders/policy developers to facilitate their interaction and dialogue as well as involvement in the advisory process	3	4	4
		Communicate advisory products to the public	4	4	3
		Communicate the advice through meetings with competent authorities and stakeholders	4	4	5
		Suport existing expert Groups chairs and potential future chairs to ensure they have the necessary skills (e.g. Training etc.)	3	3	3

6.3 Data

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

OVERVIEW - % of Actions in each Score Category

						SCORE	
						1	Not Started

Score	Score label	Regional products (8)	Interoperability (2)	Knowledge and Training (3)	Data stewardship and Management (6)
1	Not Started	11%			
2	Just Started	11%		33%	
3	Some Progress	11%	50%		
4	Good Progress	44%	50%	33%	40%
5	Doing Well	22%		33%	60%

GOAL 4 - Promote the advancement of data and information services for science and advice needs

GOAL 5 - Catalyse best practice in marine data management and promote the ICES data nodes as a global resource

Supporting Activities (SA) of Data and Information Services to achieve Goals 4 and 5

1. Promoting the advancement of data and information services for science and advice needs at both regional and sub regional level such as providing operational products for marine spatial planning, the Data Collection Framework and for the Marine Strategy Framework Directive.

2. Gearing up for new areas of dataset collections, such as new datasets for integrated ecosystem, monitoring, including marine litter and anthropogenic moise in the marine environment.

3. Ensuring the use of international standards/interoperability to enable the use and application of ICES datasets, products and services to an expanded international user base, and to provide tools and knowledge to facilitate that use.

Regional Facilitation

DIS	Headline Action	Detail of Headline Action	Supporting Activity	Gut Feeling	PI			
Regional Facilitation	Regional operational	MSFD workflow: Collaboration between ICES Data Center and Regional Sea Conventions				1	Not Started	
	products for MSFD and	/ other organisations with respect to MSFD (WISE-Marine Production Process).	1	5		2	Just Started	
	the DCF	This assumes a good flow of data data harvesting into the data center and this and this				3	Some Progress	
		can imply more resources in certain data types where data are not readily provided.				4	Good Progress	
		Leading to a joint MSFD data flow vision paper. Also depends on WISE-Marine.	1	4		5	Doing Well	
		Secretariat Plan					%	
		New processes/products from existing data within Advisory and Science Groups with	1	4		1		11%
		respect to MSFD: calculations for indicators. Needed: data selections, algorithms,				2		11%
		calculation examples. Challenge: Who is going to decide on the final calculations and				3		11%
		selections? Workshop on MSFD related DC-MAP indicators Refer to table (MSFD				4		44%
		table of ICES data/EG's and their operational product linkage).				5		22%
		Data requirements with regard to multispecies assessments (input for assessments).	1	4		N = 8 Detailed Actions		
		Currently ispecies assessments are applied ine.g. the Baltic but insufficient spatial data						
		products are available. Bal;tic, other areas (Action Plan to be created). Needed: clear						
		data request (unless no data are available)						
		Data requirements for e.g. one species from all fish surveys (WGEF, WGNEW); search f	1	5				
	End to End Workflow	CARA linking to data outputs from Expert Groups (connecting the scientific reports	1	4				
	for Scientific Advice	to the advice production)						
	Production	CARA linking to data outputs from RDB - Fish Frame.	1	2				
	Mobilizing Aquaculture	Aquaculture Database: exact description to be decided. Related to WGAQUA.	1	1				
	Specfic Data							
	Mobilizing Arctic	In co-operation with AMAP, getting data from small Arctic research institutes.	1	3				
	Specific Data	Implementing data formatting tool.						

GOAL 4 - Promote the advancement of data and information services for science and advice needs

GOAL 5 - Catalyse best practice in marine data management and promote the ICES data nodes as a global resource

Supporting Activities (SA) of Data and Information Services to achieve Goals 4 and 5

1. Promoting the advancement of data and information services for science and advice needs at both regional and sub regional level such as providing operational products for marine spatial planning, the Data Collection Framework and for the Marine Strategy Framework Directive.

2. Gearing up for new areas of dataset collections, such as new datasets for integrated ecosystem, monitoring, including marine litter and anthropogenic moise in the marine environment.

3. Ensuring the use of international standards/interoperability to enable the use and application of ICES datasets, products and servicesto an expanded international user base, and to provide tools and knowledge to facilitate that use.

International standards and interoperability

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

The Data and Information Services Picture

DIS	Headline Action	Detail of Headline Action	Supporting Activity	Gut Feeling	PI
International Standards and Interoperability	Ensuring INSPIRE readiness for ICES managed datasets / data services	Describe and make available all ICES / ICES Expert Group managed datasets, data products or services through ISO/INSPIRE standards to allow their discovery and reuse by other expert groups, processes and member country activities.	1, 3	4	
	Encouraging the broader use of ICES datasets by implemen- ting IODE quality flaggig schema	Building on the quality control database that is in the process of being populated and then exposing to online users in a digestible way to make the linkage between type of data type(s) of QC performed and the QC flags applied to the data.	1, 3	3	

SCORE

SCORE		
1	Not Started	
2	Just Started	
3	Some Progress	
4	Good Progress	
5	Doing Well	

	%
1	0%
2	0%
3	50%
4	50%
5	0%

N = 2 Detailed Actions

GOAL 4 - Promote the advancement of data and information services for science and advice needs

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Knowledge transfer and professional development

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

The Data and Information Services Picture

DIS	Headline Action	Detail of Headline Action	Supporting Activity	Gut Feeling	PI	SCORE	
						1	Not Started
Knowledge Transfer	Input to Key Data	Data theme sessions (ASC, IMDIS, etc.); Annual theme sessions proposal ASC by DIG	3	4		2	Just Started
and Professional	Symposia and Science					3	Some Progress
Development	Meetings					4	Good Progress
						5	Doing Well
	Training and Reference	ICES training courses: " Making the most of ICES Data " modular, Webinars ?	3	2			%
	Guides for Scientists					1	0%
	and Data Managers	Online materials and guidance: WKIDG in 2014	3	5		2	33%
						3	0%
						4	33%
						5	33%

N = 3 Detailed Actions

GOAL 4 - Promote the advancement of data and information services for science and advice needs

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Supporting Activities (SA) of Data and Information Services to achieve Goals 4 and 5

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Data stewardship and data management

DIS	Headline Action	Detail of Headline Action	Supporting Activity	Gut Feeling	PI			
Data Stewardship	Data mining and data	Benthic historical data recovery. Plan ready. No time frame. Connected to BEWG,	3	5		1	Not Started	
and Data	recovery; identifying	DGMARE (DC-MAP) related, perhaps EMODnet biology?				2	Just Started	
Management	and making available	Legacy data: data that are in other systems, but not available to the wider world. Linking	3	4		3	Some Progress	
	data ses that are	to other data archives i.e. through metadata				4	Good Progress	
	relevant to the marine	Other historical data	3	N/A		5	Doing Well	
	community						%	
	Ensduring ICES data	Digital data citation and publication: ensuring ICES data are citable in the digital age and	3	4		1		0%
	are citable in the digital	ensuring contributing data sources are duly credited, as well as guiding the ICES Member				2		0%
	age and therefore	Countries on how to approach digital citation.				3		0%
	making the datasets					4		40%
	easier to discover					5		60%
	Maintaining the user	Data Policy - facilitation of rights issues	3	5			**N = 6 Detailed Actions**	
	rights, security and							
	integrity of the data	Data security and implications if data portfoliochanges in nature (i.e. VMS, VME etc).	3	5				
	sources to ICES							
	managed datasets							

GOAL 4 - Promote the advancement of data and information services for science and advice needs

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6.4 Secretariat

Overview

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

The Secretariat Picture after 9 months - A first look at Performance - A Qualitative Approach

OVERVIEW - % in each Score Category

SCORE		
1	Not Started	
2	Just Started	
3	Some Progress	
4	Good Progress	
5	Doing Well	

2014

	Goal 6 Foster the science, advisory Data and Information Services	Goal 7 Efficient and Effective Organisation
1		1
2		1
3	2	2
4	2	4
5		1
	N = 4 Actions	N = 9 Actions

2015

	Goal 6 Foster the science, advisory Data and Information Services	Goal 7 Efficient and Effective Organisation
1		
2		2
3	2	1
4	2	5
5		1
	N = 4 Actions	N = 9 Actions

2016

	Goal 6 Foster the science, advisory Data and Information Services	Goal 7 Efficient and Effective Organisation
1		
2		2
3		1
4	3	4
5	1	2
	N = 4 Actions	N = 9 Actions

Goal 6

The ICES Strategic Plan (2014-2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

The Secretariat Picture after 9 months - A first look at Performance - A Qualitative Approach

Secretariat	Secretariat Plan - Action	Gut Feeling 2014	Gut Feeling 2015	Gut Feeling 2016	Performance Indicators		SCORE	
Foster the science , the advisory and the data information services through the work of the Secretariat (Goal 6)	Strategic support to the Council, Bureau, and the committees by provision of inputs regarding foresight of needs and options for development of science, scientific advice, and data.	4	4	5	Provision of timely & relevant inputs re. emerging science and advice		1	Not Started
							2	Just Started
	Interact with external networks and communicate scientific priorities	3	4	4	Identification of new partners Reflected by new MoUs, LoAs, and strategic projects		3	Some Progress
	Increase the level of professional support across the ICES work plan to provide data compilation, and initial analysis for consideration to ensure best use of expert resources, inter alia, by strengthening the ecosystem profile in the Secretariat to support priority working areas identified in the ICES Strategic Plan.	4	4	4	Data & analysis made available to meetings Identification of an appropriate process where SEC support useful Meeting prep tasks re-assignment amongst SEC staff to ensure effcient use of resources		4	Good Progress
	Projects - interface with scientific groups and organisations and identify and facilitate participation in strategic work that supports the aims of the ICES Strategic Plan. Seek to link project work with participants from academia.	3	4	4	ICES represented in project consortia Ext. projects support work of ICES		5	Doing Well
								%
Supporting Activity for Secretartiat to achieve Goals 6 and 7							1	
1 . Securing the needed resources for the ICES Secretariat to support ICES science, advisory services, data processes and products and for publications and communications;							2	
2. Implement effective tools and efficient process flow to streamine work processes and enhance the delivery of products;							3	
3. Organising and supporting the resource planning and coordination of network activities;							4	
4. Fostering cooperation and communications with Member Countries, partner organisations, stakeholders and society.							5	
								N = 4 Actions

Goal 7

The ICES Strategic Plan (2014 2018) - Implementation - Linking Science, Advice, Data and Information and Secretariat

The Secretariat Picture after 24 months - A look at Performance - A Qualitative Approach

Secretariat	Secretariat Plan - Action	Gut Feeling 2014	Gut Feeling 2015	Gut Feeling 2016	Performance Indicators
Ensure an efficient and effective organisation (Goal 7)	Facilitate effective and focused use of expert and infrastructure resources by making ongoing resource requirements transparent to national institute rersource managers using the Resource Co-ordination Tool (RCT)	4	4	4	Tool developed for use internally and externally
	Facilitate common access to ICES processes by developing work that draw on external resources readily available including the tasks, processes and meetings	3	4	4	Accessibility to common access tool that facilitates external access and stremlines procedures
	Develop and Improve the Training Programme and facilitate and test the online accessibility of the ICES Training Programme	1 or 2?	2	2	A training course accessible via online participation
	Develop and improve the Training Programme: reach out and engage with academia to widen target audience.	1 or 2?	2	2	More joint training courses available
	Publications - facilitate the electronic dissemination, availability and visibility of the products of ICES processes including technical reports, scientific publications and advice	5	5	5	Move towards electronic publications dissemination ICES docs with permanent digital traceable identities
	Further develop and implement the Content Administration for Reports and Advice (CARA)	3	3	3	Uptake of CARA in exp groups Full use in Adv process
	Maintain and develop high quality meeting facilities at ICES headquarters, embracing new technologies	4	4	4	One meeting room developed with best tech, with eventual spread to other rooms
	Create communications that focus on prioritised areas as defined by the Strategic Plan - promote the work of the ICES community and its relevance to society - make available various tools (ICES website, social media) for the community to communicate their work	4	4	5	Outreach material linked to ICES deliverables and outcomes (ICES video) Social media presence & increased community use/discussion
	Ensure that the Secretariat is able to respond to emerging science, advisory and data needs with relevant professional competence, reviewed by Secretariat management	4	4	4	Ready to respond to emerging needs

SCORE

SCORE	
1	Not Started
2	Just Started
3	Some Progress
4	Good Progress
5	Doing Well

%

1	
2	
3	
4	
5	

N = 9 Actions

Supporting Activity for Secretartiat to achieve Goals 6 and 7

1 . Securing the needed resources for the ICES Secretariat to support ICES science, advisory services, data processes and products and for publications and communications;

2. Implement effective tools and efficient process flow to streamine work processes and enhance the delivery of products;

3. Organising and supporting the resource planning and coordination of network activities;

4. Fostering cooperation and communications with Member Countries, partner organisations, stakeholders and society.