

**Proposals for benchmarks in 2014 - updated after ACOM discussion**

List of benchmarks for 2014: list 1 is clear-cut, list 2 still has some issues to resolve, list 3 is the 2013 list (FYI).

List 1	WG	Stock		Ass status	Latest bench mark	Comments
WKFLAT	WGBFAS	ple-2232	Plaice in Subdivisions 22 - 32	DLS	None	WKFLAT postponed, preparation by WKFLABA
	WGBFAS	dab-2232	Dab in Subdivisions 22 - 32	DLS	None	-,,-
	WGBFAS	tur-2232	Turbot in Subdivisions 22 - 32	DLS	None	-,,-
	WGBFAS	bll-2232	Brill in Subdivisions 22 - 32	DLS	None	-,,-
	WGBFAS	fle-2232	Flounder in Subdivisions 22 - 32	DLS	None	-,,-
WKCDCAP	AFWG	cod-arct	Cod in Subareas I and II (Northeast Arctic)	Analytical XSA, with cannibalism included	None	Several very strong generations passing through older part of the population. Such an event is unique and not observed in the time period covered by surveys. VPA model assumptions regarding form of relationship between N and Index needs to be verified. Harvest control rule to be evaluated in 2014/2015. Cod-arct and cod-coas are managed together so they should be benchmarked together.
	AFWG	cod-coas	Cod in Subareas I and II (Norwegian coastal waters)	survey trends supported by XSA	None	Otolith typing and stock mixing should be studied, and other assessment methods tried. Cod-arct and cod-coas are managed together so they should be benchmarked together
	NWWG	Cod-iceg	Cod in Division Va (Icelandic cod)	forward-based statistical catch-at-age model (ADMB)	?	Resulting from haddock MSE/benchmark.
	AFWG	cap-bars	Capelin in Subareas I and II, excluding Division IIa west of 5°W (Barents Sea capelin)	Semi-analytic	?	Added to cod benchmarks to be able to develop ecosystem model cod/capelin interactions Currently uses model estimating maturity, growth, and mortality (including predation by cod)
	NWWG	Cap-icel	Capelin in Subareas V, XIV and Division IIa west of 5°W (Iceland-East Greenland-Jan Mayen area)	Semi-analytic	?	Added to cod benchmarks to be able to develop ecosystem model cod/capelin interactions Currently uses biomass estimate based on acoustic surveys. VPA regression type forecast
WKSOUTH	WGHMM	mgb-8a9c	Four-spot megrim (Lepidorhombus boscii) in Divisions VIIIc and IXa	Analytical XSA	?	WKSTOCK postponed, include discards: Bayesian approach (wd06 WGHMM 2011)

List 1	WG	Stock		Ass status	Latest bench mark	Comments
	WGHMM	mgw-8a9c	Megrim ( <i>Lepidorhombus whiffiagonis</i> ) in Divisions VIIIc and IXa	Analytical XSA	?	WKSTOCK postponed, include discards: Bayesian approach (wd06 WGHMM 2011)
	WGHMM	Hke-nrth	Hake in Division IIIa, Subareas IV, VI, and VII, and Divisions VIIIa,b,d.	SS3	2010	Assessment method needs to be checked, Stock ID needs looking into (consider merging with soth?)
	WGHMM	Hke-soth	Hake in Divisions VIIIc and IXa.	GADGET	2010	Stock ID needs looking into (consider merging with nrth?)
WKKASK	WGNSSK	ple-skag	Plaice in Skagerrak	New	None	WKSTOCK postponed, Uncertainty in the catch-at-age information and inappropriate survey spatial coverage, discards data not included, assessment needs more analyses
	WGNSSK	ple-2123	Plaice in Kattegat, Belts and Sound	Sam explorations	None	WKSTOCK postponed, discards data not included, assessment needs more analyses
WKHAD	WGNSSK	had-34	Haddock in Subarea IV (North Sea) and Division IIIa West (Skagerrak)	FLXSA, exploratory SAM and SURBAR	2011	May require an inter-benchmark evaluation following updated work on XSA convergence issue, needs check with Via haddock stock (2013 benchmark)
	WGCSE	Had-scow	Haddock in Division VIa (West of Scotland)	TSA	?	Postponed from 2013 – to be able to check overlap with NS haddock.
WKCELT	WGCSE	Sol-celt	Sole in Divisions VIIf, g (Celtic Sea)	XSA	?	Use of a combined ALK. Belgian commercial tuning series BE-CBT. Conflicting signals commercial UK(E&W)-CBT fleet and the UK(E&W)-BTS-Q3 survey Inclusion of new Irish ground fish survey (IGFS-IBTS_Q4) ?
	WGCSE	Whg-7e-k	Whiting in Division VIIe-k	XSA	?	
	WGCSE	Nep-20-21	Nephrops in the FU 20 (Labadie, Baltimore and Galley), FU 21 (Jones and Cockburn)	DLS for Nephrops	?	Newly split off stock from FU 20-22.
	WGCSE	Nep-19	<i>Nephrops</i> off the southeastern and southwestern coasts of Ireland (FU 19)	UWTV since 2012	None	RG 2012 recommends benchmark – does not fit into WKNEP 2013.
WKPELA	WGWIDE	mac-nea	<i>Mackerel in the Northeast Atlantic (combined Southern, Western and North Sea spawning components)</i>	analytical ICA		New assessment method (state space model?) including tagging estimates of SSB and Z and uncertainty to improve our perception of the stock and of the unaccounted mortality.
	HAWG	her-irls	<i>Herring in Division VIIa South of 52° 30' N and VIIg,h,j,k (Celtic Sea and South of Ireland)</i>	Update	2008	Consider stock mixing withVIIaN

List 1	WG	Stock		Ass status	Latest bench mark	Comments
	WGHANSA	ane-pore	<i>Anchovy in IXa</i>	DLS.	none	New studies on genetic structure of anchovy populations suggest genetic differences between southern and western anchovies in Division IXa.

Benchmarks with issues/different options:

List 2	WG	Stock		Ass status	Latest bench mark	Comments
IBPIRIS	WGCSE	ple-iris	Plaice in Division VIIa (Irish Sea)	Trends based A&P	?	WKSTOCK postponed, discard data to be included – can be done in inter benchmark – or together with others in ecoregions full benchmark.
WKIRIS - Only if more stocks are added to the list – and if no clash with WKCELT	WGCSE		Sole, whiting -- etc			Full benchmark if there are more stocks that fit in.
	WGCSE	Cod-iris	Cod in Division VIIa	SAM	2012	Proposed for 2013 already, no stock annex, zero catch advice, needs methodology description and threshold calculations for changing to non-zero advice. Possibly a DLS / AGCREFA2 example – finding appropriate indicator(s) and threshold(s) that need to be met before giving new advice.
WKDEEP Concluding after Deepfishman project  Option a) ICES deep sea stocks Option b) ICES – CECAF benchmark black scabbardfish	WGDEEP		Blue ling Vb, VI, VII	No current benchmarked method	None	Proposed methods: MYCC, stock reduction.
	WGDEEP		Black scabbardfish in Vb, VI and VII	No current benchmarked method	None	Proposed methods: Trends based Reconsider stock ID, merging all into one stock (SIMWG recommendation)
	WGDEEP		Ling Va	No current benchmarked method	None	Proposed methods: GADGET (this may be best included in a workshop with other gadget based assessments)
	WGDEEP		Black scabbardfish in IXa	No current benchmarked method	None	Proposed methods: Bayesian state model Reconsider stock ID, merging all into one stock (SIMWG recommendation)
			CECAF list:	All (deep) fish stocks around IXa/X/Madeira. With for instance Blue jack mackerel		

## Benchmark list for 2013 - December 2012

Changes since last presentation:

WKROUND: + had-iceg + ang-ivvi – had-scow (postponed to join had-34 benchmark 2014)

WKNEPH: list finalised

List 3	Stock	ICES code	Comments	Current assessment	EG
WK BUT Autumn 2013	Greenland halibut in Subareas I and II	ghl-arct	two Greenland halibut stocks together	survey trends / exploratory XSA	AFWG
	Greenland halibut in Subareas V, VI, XII and XIV	ghl-grn	two Greenland halibut stocks together	Bayesian surplus production model	NWWG
WK PELA	Herring in Division IIIa and Subdivisions 22 - 24 (Western Baltic spring spawners)	her-3a22	Review current method, follow up on benchmark of NS herring 2012	Analytical FLICA	HAWG
	Anchovy in VIIIabd (Bay of Biscay)	ane-bisc	New survey data available, and revision of old DEPM data will affect mortality estimates and repoints.	Bayesian surplus production model	WGHANSA
	Sardine in Subarea VII and Divisions VIIIa,b,d	sar-78	new stock, under development at the group.	Trends based TASACS	WGHANSA
WK SPRAT	Sprat in Subarea IV (North Sea)	spr-nsea	9 years of acoustics then available	None	HAWG
	Sprat in Division IIIa (Skagerrak - Kattegat)	spr-IIIa	9 years of acoustics then available	None	HAWG
	Sprat in Divisions VIId	spr-ech	Stock identity mainly (surplus prod. model set up?)		
	Sprat in the Celtic Seas except VIId	spr-celt	Stock identity mainly (surplus prod. model set up?)		
WK BALT	Sprat in Subdivisions 22 - 32 (Baltic Sea)	spr-2232	Multi species benchmark (test implementation of SMS estimates of M2)	Analytical XSA	WGBFAS
	Cod in Subdivisions 22–24	cod-2224	Multi species benchmark (Discard data series improved, new tuning series)	Analytical SAM	WGBFAS
	Cod in Subdivisions 25–32	cod-2532	Multi species benchmark (SAM model applied, new tuning series)	Analytical XSA	WGBFAS
	Herring in Subdivisions 25–29 and 32 (excluding Gulf of Riga herring)	her-2532	Multi species benchmark (Not proposed for single species issues)	Analytic	
WK ROUND	Whiting Subarea IV (North Sea) & Division VIId (Eastern Channel)	whg-47d	Change in catchability of young fish in IBTS survey requires application of different method	Analytical XSA	WGNSK

List 3	Stock	ICES code	Comments	Current assessment	EG
	Haddock in Division VIIa (Irish Sea)	had-iris	improve catch@age, include discard information	survey trends	WGCSE
	Anglerfish (Lophius piscatorius and L. budegassa) in Division IIIa, and Subareas IV and VI	Ang-ivvi		Survey trends (3.2.0)	WGCSE
	Haddock in Division Va	Had-icel	New assessment method – preparatory to management plan evaluation request	Adapt	NWWG
WKNEPH	Nephrops in Division IIIa (Skagerak Kattegat, FU 3,4)	nep-3-4	Data analysis	Analytical UWTV	WGNSSK
	Nephrops in Division IVb (Farn Deep, FU 6)	nep-6	Data analysis	Analytical UWTV	WGNSSK
	Nephrops in Division VIa (North Minch, FU 11)	nep-11	Data analysis	Analytical UWTV	WGCSE
	Nephrops in Division VIIb,c,j,k (Porcupine Bank, FU 16)	nep-16	Data analysis	Analytical UWTV	WGCSE
	Nephrops in Division IVa (Norwegian Deep, FU 32)	nep-32	Data analysis	Analytical UWTV	WGNSSK
	Nephrops in Division IVb (Devil's Hole, FU 34)	nep-34	Data analysis	New	WGNSSK