



Global VME processes

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Day 1, 11:45

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VME PROCESS

(generalised) the following is needed to establish VMEs

Convention

Regulation

Establish VME WG

Existing/new fishing areas

Habitat surveys

VME indicators

Encounter thresholds

Impact assessments

Exploratory fishing protocols

Defining & delineating "VME" areas

Identification guides

Discussed in more detail

VME
established

Review
procedures

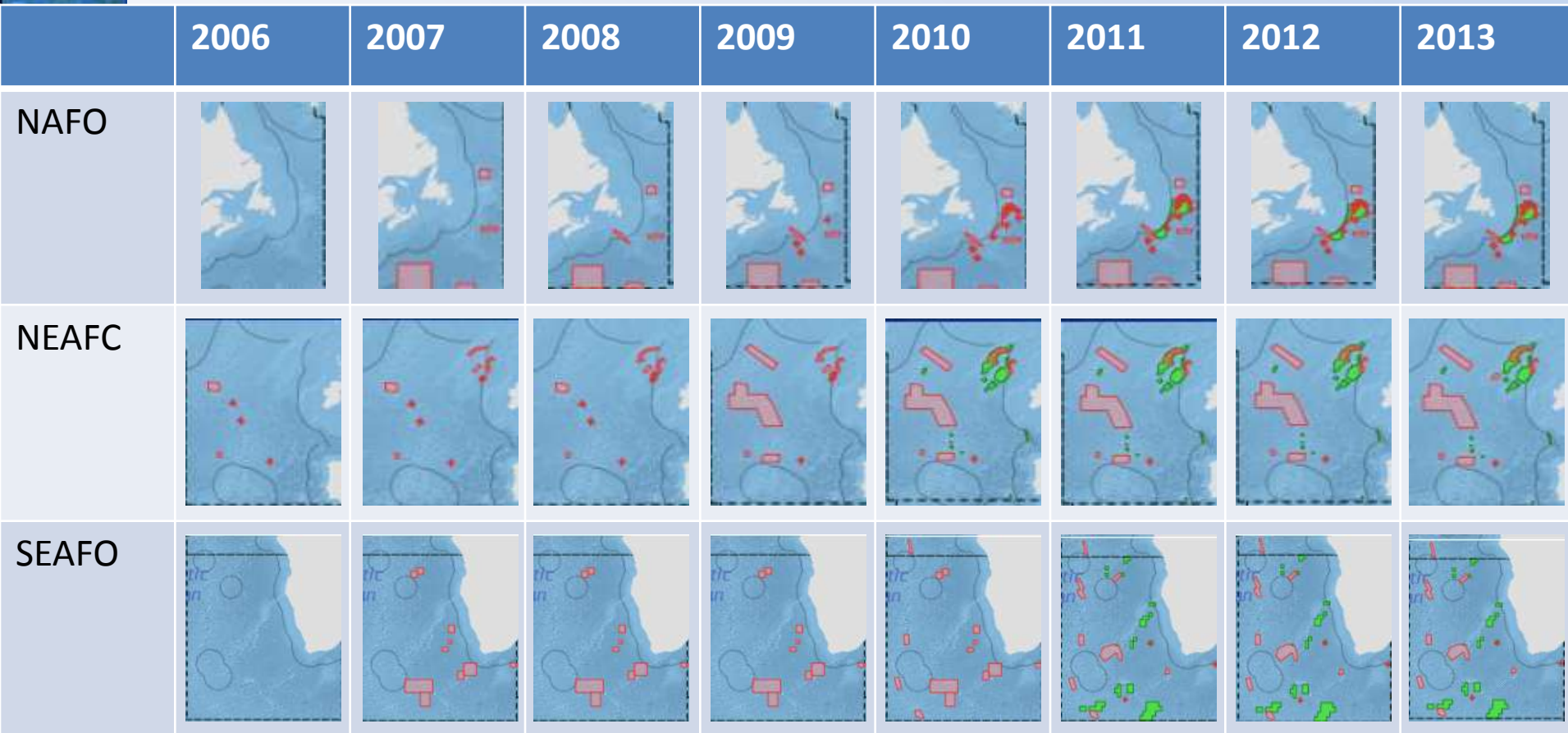
Note that there is no absolute requirement to do the above in order





The Atlantic

NAFO, NEAFC, SEAFO



= closed to (bottom) fishing



= existing bottom fishing area



NAFO “DSF” timeline

	2006	2007	2008	2009	2010	2011	2012	2013
Existing (fished) and new (unfished) areas			Request to CPs for mapping	→	→	Map produced	→	→
Exploratory fishing protocols			Started	Protocol in new areas	Protocols for outside and inside existing areas	→	→	→
Benthic habitat surveys and predictive modelling	Memorial Univ. presentation on corals in NW Atlantic from observers on Canadian vessels		Corals from commercial (Canadian) fishing vessels and fisheries research vessels, mainly Can and EU-Spain (RV)	Sponges from Can and EU-Spain RV.	NEREIDA survey results	→	→	→
Defining and delineating “VME” areas		4 precautionary closures	1 new closure added (5)	2 new closures added (7)	11 new closures added (18)	→	Boundary extension (NE Flemish Cap)	2 more boundary extensions and new closed area (19)



NAFO “DSF” timeline

Encounter protocols	2006	2007	2008	2009	2010	2011	2012	2013
a) VME indicators			Hard corals important	Corals, sponges, seapens	→	→	→	As before, but with list of VME indicator species and elements
b) thresholds		corals >0 kg	corals >0 kg	1000kg sponges; 100kg corals	800kg sponges; 60kg corals	→	Existing areas: 600kg sponges; 60kg corals New areas: 400kg sponges; 60kg corals	300kg sponges; 60kg corals; 7kg seapens
c) move on rule				2 nm	→	→	→	→
d) closures		Temp. closure in closed areas	Temp. closure in closed areas	Temp. 2nm radius closure in new fishing areas	→	→	→	→

^[1] antipatharians, gorgonians, cerianthid anemone fields, lophelia, and sea pen fields or other VME elements.



NAFO “DSF” timeline

	2006	2007	2008	2009	2010	2011	2012	2013
Identification guides	Coral key available (?)			Coral guide	Coral guide Sponge guide	→	→	→
Data reporting				Detailed observer report in new fishing areas	→	→	→	→
Impact assessments								
Working groups	SC requested CPs to send appropriate expertise to meetings	SC requested CPs to send appropriate expertise to meetings	WGEAFM (NAFO) established; joint WGDEC (ICES/NAFO)	→	→	→	→	WGEAF replaces WGEAFM; WGDEC (ICES/NAFO)



NPFC “DSF” timeline

	2006	2007	2008	2009	2010	2011	2012	2013
Existing (fished) and new (unfished) areas			<u>NW Pacific:</u> Fished seamounts identified (seamount tops with trawls and slopes with gillnets)	Measures: New fishing area is north of 45°N	Fished areas updated annually	→ <u>NE Pacific:</u> implies that whole area is a new fishing area	→ →	→ →
Exploratory fishing protocols				<u>NW Pacific:</u> in interim measures	→	<u>NW & NE Pacific:</u> interim measures	→	→
Defining and delineating “VME” areas				Korea, Japan, and Russia closed part of Koko seamount to protect possible VMEs. Also C-H closed (for stock rebuilding?)	Difficulties in defining VMEs from survey results (SWG9)			



NPFC “DSF” timeline - surveys

Late 60s – 2007	Russian surveys
1972-2007	Several bottom trawl surveys are conducted from 1972 by Japan (SWG1)
2002	<u>USA</u> NOAA 2002 expedition to Warwick seamount that highlighted the unique nature of the ecosystems in this area (SWG9).
2003	
2004	<u>Korea</u> reported that it conducted scientific surveys for fisheries resources in 2004 by three vessels, one research vessel, one bottom trawler and one bottom longliner in the High Seas areas of the northwestern Pacific Ocean (SWG1, 2). 235,085 kg was caught by three vessels and 46 species were identified. NWPBT/02/SWG-01
2005	
2006	<u>Japan</u> : ROV survey was conducted in 2006 to observe bottom environment by RV Kaiyo Maru Invertebrate benthos observed by the survey were identified to lowest possible taxonomic rank, and number of animals were counted. NWPBT/02/SWG-04
2007	<u>Japan</u> : - RV Kaiyo Maru survey in 2007 on the Emperor seamount chain for accurate topographical map by GPS and acoustic data NWPBT/03/SWG-07 and ROV survey NWPBT/03/SWG-08
2008	Japan: Remote Observations of the Bottom of Seamount by Japanese Research Vessel SWG4/WP8/J Russia: data on locations of Incidental Coral Captures SWG4/WP19/R Russia: data on locations of Net Loss or Hang-ups-SWG4/WP20/R USA: - Drop-Camera Photography over SE-NHR seamounts showed low density of Corallium spp. SWG4/WP21: ???: Species list of invertebrates observed by ROV in the North Pacific Seamounts group. SWG4/WP23 Japan: Location of Net Loss or Hang-up from Japanese Research Vessels SWG5/WP5/J: Russia: Vertical profile data associated with research surveys SWG5/WP11/R, SWG6/WP10/R? Korea: Location of Net-Loss or Hang-up SWG6/WP12/K
2009	<u>Korea</u> has not previously participated in coral studies, but will begin research this year. (SWG 6). Russia: Russian vessel Tiburon undertaking research survey. Report given in SWG9 as SWG9/WP8/R (SWG7) Japan: The preliminary results of the Japanese Scientific observer survey in the Northwest Seamounts area during 2005-2008 SWG7/WP6/J Japan: - Preliminary results of the bottom environmental survey of the Emperor Seamount chain Trawl fishing grounds in 2009 by the Fisheries Agency of Japan SWG9/WP4/J
2010	Japan: Surveys on Emperor Seamount Chain trawl fishing grounds 2010 SWG10/WP4/J: Japan: New Seamount Bathymetries of the Northwest Pacific Seamounts SWG8/WP3/J
2011	Japan: Surveys on Emperor Seamount Chain trawl fishing grounds 2011 SWG10/WP5/J Russia: Koko seamount in 2011? (SWG10/WP11/R) USA/Canada survey on Cobb Seamount (<2012) (SWG10) Korea on commercial vessels in Emperor Seamounts in 2010-2012 (0.3 – 2.5 kg corals per haul). (SWG10)
2012	Japan: Surveys on Emperor Seamount Chain trawl fishing grounds 2012 SWG11/WP3/J Russia: Result of Investigation of Bottom Sediment and Organisms SWG10/WP11/R



NPFC “DSF” timeline


	2006	2007	2008	2009	2010	2011	2012	2013
Encounter protocols (NW Pacific only) a) VME indicators				Cold water corals include: Alcyonacea, Antipatharia, Gorgonacea, and Scleractinia	→	→	→	→
b) thresholds							Korea & Japan: 50 kg bycatch	→
c) move on rule				Move away 5 nm and report encounter to iNPFC Sec.	→	→	→	→
d) closures				Not mentioned				



NPFC “DSF” timeline

	2006	2007	2008	2009	2010	2011	2012	2013
Identification guides			Japan and US presented 2 guides	Japan and US draft guide				
Data reporting				No Russian or US fisheries	<u>NW Pacific:</u> Korea and Japan (?): 100% observer coverage	<u>NE Pacific:</u> 100% observer coverage	→	→
Impact assessments				See webpages				
Working groups							inter-sessional WG to develop Encounter Protocols	





Summary - Challenges

1. Obtaining historical fisheries distribution
2. Parameters for existing fishing area (years, resolution)
3. Definition of VME? (surveys outside of fishing areas)
4. Size/delineation of VME area (consistent with MCS)
5. Encounter protocols (indicators, thresholds, closures)
6. Reporting of encounters
7. Use/sharing of VMS
8. Review procedures
9. Observer information and reporting
10. Getting benthic ecologists





Thank you

