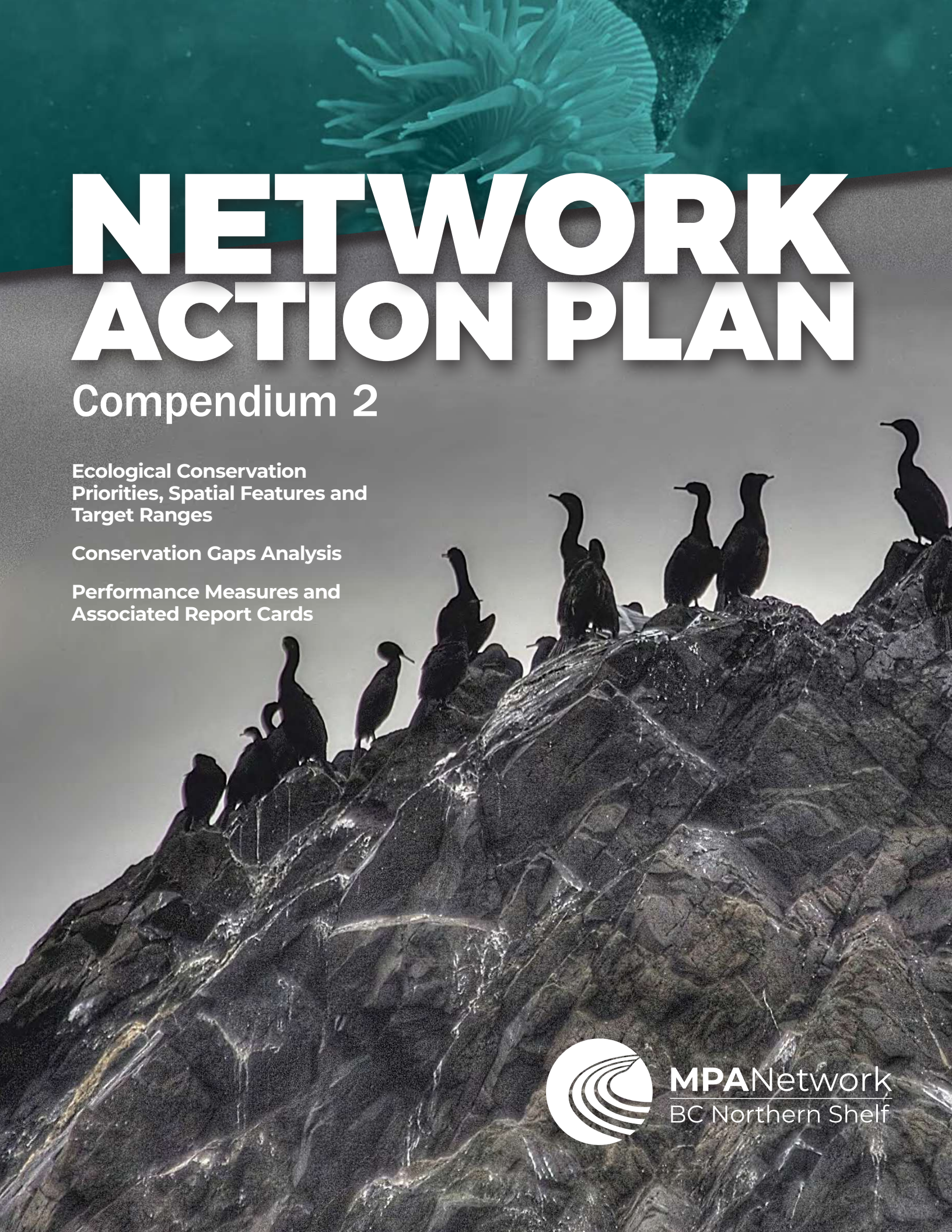
NETWORK ACTION PLAN

Compendium 2

Ecological Conservation Priorities, Spatial Features and Target Ranges

Conservation Gaps Analysis

Performance Measures and Associated Report Cards



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Acronyms

BCMCA	B.C. Marine Conservation Atlas
CCIRA	Central Coast Indigenous Resource Alliance
C-CP	(First Nations) cultural conservation priority
CGA	Conservation Gaps Analysis
CPUE	Catch per Unit effort
DFO	Department of Fisheries and Oceans Canada
EBSA	Ecologically or Biologically Significant Marine Area
E-CP	Ecological conservation priority
EI(P)	Ecological intactness (proxy)
I/OAC	Integrated/Ocean Advisory Committee
IUCN	International Union for Conservation of Nature
MaPP	Marine Plan Partnership for the North Pacific Coast
MPA	Marine protected area
MPATT	Marine Protected Area Technical Team
NEMES	Noise Exposure to the Marine Environment from Ships
NSB	Northern Shelf Bioregion
NVI	Northern Vancouver Island
PHMA	Pacific Halibut Management Association
PM	Performance measure
PMZ	Protection Management Zone
RCA	Rockfish Conservation Area
SAC	Science Advisory Committee
RCA	Rockfish Conservation Area
SAC	Science Advisory Committee

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1. Introduction

This compendium provides supplementary material to the Network Action Plan (the 'Action Plan'). Developed through a trilateral partnership between the governments of Canada, British Columbia (B.C.), and 17 First Nations (the 'Governance Partners'), the Action Plan is a blueprint to guide implementation of a network of marine protected areas (MPAs) in the Northern Shelf Bioregion (NSB). This is one of three compendium documents, which provide additional information on the context, components, objectives, and outcomes of the Network planning process.

Included in Compendium 2:

Ecological conservation priorities and associated spatial features and target ranges

Ecological conservation priorities (E-CPs) are the species, habitats, areas, and other natural features prioritized for protection within the MPA Network. Target ranges specify how much of each E-CP should be included in the Network. All E-CPs and target ranges are listed here according to species type (Tables 1-5) or area-based representation (Table 6).

Conservation Gaps Analysis

The Conservation Gaps Analysis (CGA) was developed to assess the contributions of existing and proposed new protected areas to the Network goals and objectives concerning representation. The tool tracks the proportion of each E-CP within a zone and reports it in two ways: presence within a network scenario footprint, and 'down-scaled' presence within a network scenario footprint when considering potential interactions of human use activities. For the baseline case this assessment was informed by a combination of existing management direction and occurrence of human activities within MPAs. For the proposed Network this was based on existing restrictions, likelihood of activity presence, and presumed mitigation between identified activities of concern and the E-CPs present within a zone. The steps and components of the tool are illustrated in Figures 1 and 2 (s. 3.2), and a summary of results is provided (s. 3.3). It is recognized that there is an assumption that the future mitigation measures will benefit all E-CPs potentially affected by a mitigated activity within a particular zone, which may not always be the case as it depends on the nature of the mitigation developed to protect zone specific conservation objectives.

Performance measures and associated report cards

The performance measures are quantitative and qualitative metrics developed to evaluate and compare alternative Network design scenarios against Network goals and objectives (s.4.1.2), and design guidance (s. 4.1.3). The performance measures are listed and described in section 4.1.4. Following is an executive summary and detailed 'report cards' of the proposed Network (Scenario 2) and the baseline case of existing MPAs (s. 4.2).

Other compendiums:

Compendium 1
• Existing MPAs in the NSB • Stakeholder Engagement and Consultation Details • Network Design Guidelines • Description of Current Activities in the NSB
Compendium 3
• Socio-Economic Overview of the Northern Shelf Bioregion

Additional materials have been developed to inform and support future establishment of the proposed MPA Network, including draft management measures and monitoring approaches, and will continue to be refined in early implementation of the Network Action Plan.

2. Ecological Conservation Priorities, Spatial Features and Target Ranges

Ecological conservation priorities and design strategies (including ecological conservation targets) for marine protected area (MPA) network planning in the Northern Shelf Bioregion (NSB) are informed by peer reviewed science undertaken to support this planning process (DFO 2019a; DFO 2019b; Gale et al. 2019; Martone et al. 2021). The ecological conservation targets specify how much of each spatial feature representing individual ecological conservation priorities should be included in the Network. Ecological conservation priorities were assigned to a low (10-20%), medium (20-40%), or high (40-60%) target range, based on conservation status, vulnerability, ecological role, and expert feedback. Conservation priorities and their associated spatial features and ecological conservation targets have been used in analyses with Marxan, a decision support tool, during the design scenarios phase and Conservation Gaps Analysis (CGA).

Following expert advice, the best available spatial features were compiled to represent each ecological conservation priority. Spatial features began with the ecological conservation target range assigned to the associated ecological conservation priority, then adjusted based on the appropriateness of the feature for inclusion in design scenarios, following the design strategies science advice (DFO 2019b; Martone et al. 2021). Target ranges were adjusted as follows:

1. Spatial features that were deemed inappropriate for use in Marxan based on expert assessment were assigned a target of 0. These ‘non-Marxan’ features did not influence the Marxan analyses. Spatial features were deemed inappropriate for several reasons, including limited spatial extents and low data quality or confidence.

2. For highly mobile species (ranging greater than 50 km), features representing distribution were adjusted to a low (10-20%) target range while features representing discrete/static areas or habitats of importance were not changed.

Spatial features representing ecological or habitat classification systems are considered coarse-filter features and were targeted based on the size of each habitat class so that rarer classes were assigned higher targets (DFO 2019b; Martone et al. 2021). The maximum target range for the classes within each classification system was 10-30% and was assigned to the class with the smallest spatial extent. More broadly distributed classes had a proportionally lower target range. For example, among the substrate types in the bottom patch classification, the rarer hard substrate class was assigned a target range of 10-30% and the broader soft substrate class was assigned a target of 7-22%.

The target range assigned to a spatial feature represents the proportion of the area or value of the feature that will be included in the outputs of the Marxan analyses. For example, the spatial feature representing butter clam covers 366 km2. To meet the associated target of 20-40%, Marxan will try to capture between 73-146 km2 of the butter clam feature. However, Marxan also strives to capture areas that meet the targets for multiple features; thus, the targets assigned to individual spatial features are not indicative of the proportion of the NSB that will be captured. There are no targets associated with the proportion or area of the NSB to be included in the Marxan outputs.

The current suite of ecological conservation priorities and their associated spatial features and ecological conservation targets are shown in Tables 1-6 below. The tables highlight features that have been updated or replaced to incorporate newer information, as well as new features that have been added to the analyses. Features designated with the feature type ‘Marxan’ were used in the original Marxan analyses and are assigned targets in the CGA. Features designated as ‘Non-Marxan’ features were not assigned a target in the original Marxan analyses or the CGA but are tracked to allow their representation in proposed Network scenarios to be assessed.

References:

DFO. 2019a. “A Framework for Identification of Ecological Conservation Priorities for Marine Protected Area Network Design and Its Application in the Northern Shelf Bioregion.” DFO Can. Sci. Advis. Sec. Res. Doc. 2018/055. https://waves-vagues.dfo-mpo.gc.ca/Library/40779774.pdf.

DFO. 2019b. “Design Strategies for the Northern Shelf Bioregional Marine Protected Area Network.” DFO Can. Sci. Advis. Sec. Res. Doc. 2019/026. https://waves-vagues.dfo-mpo.gc.ca/Library/40817787.pdf.

Gale, Katie SP, Alejandro Frid, Lynn Lee, Julie-Beth McCarthy, Carrie Robb, Jennifer Steele, and Janelle MR Curtis. 2019. “A Framework for Identification of Ecological Conservation Priorities for Marine Protected Area Network Design and Its Application in the Northern Shelf Bioregion.” DFO Can. Sci. Advis. Sec. Res. Doc. 2018/055. https://waves-vagues.dfo-mpo.gc.ca/Library/40779774.pdf.

Martone, Rebecca G, Carolyn K Robb, Katie SP Gale, Alejandro Frid, Chris McDougall, and Emily Rubidge. 2021. “Design Strategies for the Northern Shelf Bioregional Marine Protected Area Network.” DFO Can. Sci. Advis. Sec. Res. Doc. 2021/024. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2021/2021_024-eng.pdf.

Table 1. Ecological conservation priorities, spatial features, and ecological conservation targets representing fishes

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Arrowtooth	Arrowtooth flounder CPUE (DFO, PHMA surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Big skate	Big skate CPUE (DFO, PHMA surveys)	Marxan	40-60	No	40-60
Bocaccio	Bocaccio CPUE (DFO, PHMA surveys)	Marxan	40-60	No	40-60
Bocaccio	Bocaccio CPUE (CCIRA surveys) ^	Marxan	40-60	No	40-60
Canary rockfish	Canary rockfish CPUE (DFO, PHMA surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Canary rockfish	Canary rockfish CPUE (CCIRA surveys) ^	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
China rockfish	China rockfish CPUE (PHMA surveys)	Marxan	20-40	No	20-40
China rockfish	China rockfish CPUE (CCIRA surveys) ^	Marxan	20-40	No	20-40
Chinook salmon	Salmon estuaries – Chinook diversity	Marxan	40-60	No (home range >= 50 km, but data identify area(s) of importance)	40-60
Chum salmon	Salmon estuaries – chum diversity	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Coho salmon	Salmon estuaries – coho diversity	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Copper rockfish	Copper rockfish CPUE (DFO, PHMA surveys)	Marxan	20-40	No	20-40
Darkblotched rockfish	Darkblotched rockfish CPUE (DFO surveys)	Marxan	20-40	No	20-40
Dover sole	Dover sole CPUE (DFO surveys)	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Eulachon	Eulachon “Important Areas” – spawning	Marxan	40-60	No (home range >= 50 km, but data identify area(s) of importance)	40-60
Eulachon	Eulachon “Important Areas” – summer	Marxan	40-60	No (home range >= 50 km, but data identify area(s) of importance)	40-60
Green sturgeon	Green sturgeon “Important Areas”	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Greenstriped rockfish	Greenstriped rockfish CPUE (DFO, PHMA surveys)	Marxan	10-20	No	10-20
Lingcod	Lingcod CPUE (DFO, PHMA surveys)	Marxan	20-40	No	20-40
Lingcod	Lingcod CPUE (CCIRA surveys) ^	Marxan	20-40	No	20-40
Longnose skate	Longnose skate CPUE (DFO, PHMA surveys)	Marxan	20-40	No	20-40
Longspine thornyhead	Longspine thornyhead CPUE (DFO surveys)	Marxan	20-40	No	20-40
Pacific cod	Pacific cod CPUE (DFO, PHMA surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Pacific hake	Pacific hake biomass index	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Pacific halibut	Pacific halibut CPUE (DFO, PHMA surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Pacific herring	Pacific herring spawn habitat index	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Pacific ocean perch	Pacific ocean perch CPUE (DFO surveys)	Marxan	10-20	No	10-20
Pacific sand lance	Pacific sand lance CPUE (DFO surveys)	Marxan	20-40	No	20-40
Petrale sole	Petrale sole CPUE (DFO surveys)	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Pink salmon	Salmon estuaries – pink (even) diversity	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Pink salmon	Salmon estuaries – pink (odd) diversity	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Quillback rockfish	Quillback rockfish CPUE (DFO surveys)	Marxan	20-40	No	20-40
Quillback rockfish	Quillback rockfish CPUE (CCIRA surveys) ^	Marxan	20-40	No	20-40
Redstripe rockfish	Redstripe rockfish CPUE (DFO surveys)	Marxan	20-40	No	20-40
Redstripe rockfish	Redstripe rockfish CPUE (CCIRA surveys) #	Non-Marxan	N/A	N/A	N/A
Rex sole	Rex Sole CPUE (DFO surveys)	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Rock sole	Rock sole CPUE (DFO, PHMA surveys)	Marxan	10-20	No	10-20
Rockfish	Midlived rockfish CPUE (CCIRA surveys) *	Marxan	20-40	No	20-40
Rosethorn rockfish	Rosethorn rockfish CPUE (DFO, PHMA surveys)	Marxan	10-20	No	10-20
Rougheye-blackspotted rockfish	Rougheye-blackspotted rockfish CPUE (DFO, PHMA surveys)	Marxan	40-60	No	40-60
Rougheye-blackspotted rockfish	Rougheye-blackspotted rockfish CPUE (CCIRA surveys) #	Non-Marxan	N/A	N/A	N/A
Sablefish	Sablefish CPUE (DFO, PHMA surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Salmon species	Salmon estuaries – biomass	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Sandpaper skate	Sandpaper skate CPUE (DFO, PHMA surveys)	Marxan	10-20	No	10-20
Shortraker rockfish	Shortraker rockfish CPUE (DFO, PHMA surveys)	Marxan	20-40	No	20-40
Shortraker rockfish	Shortraker rockfish CPUE (CCIRA surveys) #	Non-Marxan	N/A	N/A	N/A
Shortspine thornyhead	Shortspine thornyhead CPUE (DFO surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Shortspine thornyhead	Shortspine Thornyhead CPUE (CCIRA surveys) #	Non-Marxan	N/A	N/A	N/A
Silvergray rockfish	Silvergray rockfish CPUE (DFO, PHMA surveys)	Marxan	10-20	No	10-20
Silvergray rockfish	Silvergray rockfish CPUE (CCIRA surveys) ^	Marxan	10-20	No	10-20
Sockeye salmon	Salmon estuaries – sockeye diversity	Marxan	20-40	No (home range >= 50 km, but data identify area(s) of importance)	20-40
Spiny dogfish	Spiny dogfish CPUE (DFO, PHMA surveys)	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Tiger rockfish	Tiger rockfish CPUE (PHMA surveys)	Marxan	20-40	No	20-40
Tiger rockfish	Tiger rockfish CPUE (CCIRA surveys) ^	Marxan	20-40	No	20-40

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Vermilion rockfish	Vermilion rockfish CPUE (PHMA surveys)	Marxan	10-20	No	10-20
Walleye pollock	Walleye pollock CPUE (DFO surveys)	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Widow rockfish	Widow rockfish CPUE (DFO surveys)	Marxan	20-40	No	20-40
Widow rockfish	Widow rockfish CPUE (CCIRA surveys) #	Non-Marxan	N/A	N/A	N/A
Yelloweye rockfish	Yelloweye rockfish CPUE (DFO, PHMA surveys)	Marxan	40-60	No	40-60
Yelloweye rockfish	Yelloweye rockfish CPUE (CCIRA surveys) ^	Marxan	40-60	No	40-60
Yellowmouth rockfish	Yellowmouth rockfish CPUE (DFO, PHMA surveys)	Marxan	20-40	No	20-40
Yellowtail rockfish	Yellowtail rockfish CPUE (DFO, PHMA surveys)	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Pacific herring	Pacific herring “Important Areas”	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Rosethorn rockfish	Rosethorn rockfish CPUE (CCIRA surveys) ^	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Roughtail skate	Roughtail skate CPUE (DFO surveys)	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Albacore	N/A	Gap	20-40	N/A (no data)	N/A
Basking shark	N/A	Gap	20-40	N/A (no data)	N/A
Black rockfish	N/A	Gap	20-40	N/A (no data)	N/A
Blue shark	N/A	Gap	40-60	N/A (no data)	N/A
Bluntnose sixgill shark	N/A	Gap	40-60	N/A (no data)	N/A
Capelin	N/A	Gap	40-60	N/A (no data)	N/A
Cutthroat trout	N/A	Gap	20-40	N/A (no data)	N/A
Dolly varden	N/A	Gap	20-40	N/A (no data)	N/A
Northern lampfish	N/A	Gap	10-20	N/A (no data)	N/A
Northern smoothtongue	N/A	Gap	10-20	N/A (no data)	N/A
Ocean sunfish	N/A	Gap	10-20	N/A (no data)	N/A
Pacific sardine	N/A	Gap	10-20	N/A (no data)	N/A
Pacific sleeper shark	N/A	Gap	20-40	N/A (no data)	N/A
Salmon shark	N/A	Gap	20-40	N/A (no data)	N/A
Steelhead	N/A	Gap	20-40	N/A (no data)	N/A
Striped seaperch	N/A	Gap	10-20	N/A (no data)	N/A
Surf smelt	N/A	Gap	20-40	N/A (no data)	N/A
Wolf eel	N/A	Gap	10-20	N/A (no data)	N/A

* Midlived rockfish CPUE (CCIRA surveys) – feature removed from analyses based on expert advice

^ feature updated in spring 2021

feature added in spring 2021, not targeted to enable comparative assessment with previous CGA results, assessment to be undertaken on individual basis

Table 2. Ecological conservation priorities, spatial features, and ecological conservation targets representing invertebrates

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Black corals	Predicted habitat suitability for black corals *(Antipatharia)*	Marxan	20-40	No	20-40
Butter clam	Butter clam locations	Marxan	20-40	No	20-40
Cockles	Cockle locations	Marxan	20-40	No	20-40
Corals	Coral presence (CCIRA surveys) ^	Marxan	20-40	No	20-40
Corals, besides sea pens	Coral CPUE (excluding sea pens) (DFO surveys and commercial catch)	Marxan	20-40	No	20-40
Deepwater grooved Tanner crab	Deepwater Tanner crab CPUE (DFO surveys)	Marxan	10-20	No	10-20
Dungeness crab	Dungeness crab locations	Marxan	10-20	No	10-20
Geoduck	Geoduck locations	Marxan	20-40	No	20-40
Giant Pacific octopus	Giant Pacific octopus locations	Marxan	20-40	No	20-40
Green urchin	Green sea urchin locations	Marxan	20-40	No	20-40
Horse clam	Horse clam locations	Marxan	20-40	No	20-40
Northern abalone	Northern abalone locations	Marxan	20-40	Yes (confidential data)	N/A
Opal squid	Opal squid locations	Marxan	20-40	No	20-40
Razor clam	Razor clam “Important Areas”	Marxan	20-40	No	20-40
Red urchin	Red sea urchin locations	Marxan	20-40	No	20-40
Scallops	Scallop CPUE (DFO surveys)	Marxan	10-20	No	10-20
Sea pens	Predicted habitat suitability for sea pens *(Pennatulacea)*	Marxan	20-40	No	20-40
Sea pens	Sea pen CPUE (DFO surveys and commercial catch)	Marxan	20-40	No	20-40
Soft corals	Predicted habitat suitability for soft corals *(Alyconacea)*	Marxan	20-40	No	20-40
Sponge reef	Sponge reef distribution based on geological signature ^	Marxan	40-60	No	40-60
Sponges	Glass sponge cover (CCIRA surveys) ^	Marxan	40-60	No	40-60
Sponges (demosponges and glass sponges)	Sponge CPUE (DFO surveys and commercial catch)	Marxan	20-40	No	20-40
Stony corals	Predicted habitat suitability for stony corals *(Scleractinia)*	Marxan	20-40	No	20-40
Sunflower sea star	Sunflower sea star locations	Marxan	20-40	No	20-40
Coonstripe/ dock shrimp	Coonstripe/dock shrimp records	Non-Marxan	20-40	No	0
Dungeness crab	Dungeness crab “Important Areas”	Non-Marxan	10-20	No	0
Humpback shrimp	Humpback shrimp locations	Non-Marxan	20-40	No	0
Littleneck clam	Littleneck clam locations	Non-Marxan	20-40	No	0
Ochre sea star	Ochre sea star locations	Non-Marxan	20-40	No	0
Olympia oyster	Olympia oyster locations	Non-Marxan	20-40	No	0
Prawn	Spot prawn locations	Non-Marxan	20-40	No	0
Puget Sound king crab	Puget Sound king crab locations	Non-Marxan	10-20	No	0
Purple-hinged rock scallop	Purple-hinged rock scallop locations	Non-Marxan	10-20	No	0
Sidestriped shrimp	Sidestriped shrimp locations	Non-Marxan	20-40	No	0
Smooth pink shrimp	Smooth pink shrimp locations	Non-Marxan	20-40	No	0
Spiny pink shrimp	Spiny pink shrimp locations	Non-Marxan	20-40	No	0
Aphrocallistes vastus	N/A – as sponge	N/A	40-60	N/A	N/A

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Demosponges	N/A – as sponge	N/A	20-40	N/A	N/A
Farrea occa	N/A – as sponge	N/A	40-60	N/A	N/A
Glass sponges	N/A – as sponge	N/A	40-60	N/A	N/A
Heterochone calyx	N/A – as sponge	N/A	40-60	N/A	N/A
Horse clam/fat gaper	N/A – as *Tresus* spp.	N/A	20-40	N/A	N/A
Horse clam/ Pacific gaper	N/A – as *Tresus* spp.	N/A	20-40	N/A	N/A
Inshore Tanner crab	N/A – inlets used as proxies	N/A	10-20	N/A	N/A
Pink scallop	N/A – as scallops	N/A	10-20	N/A	N/A
Spiny scallop	N/A – as scallops	N/A	10-20	N/A	N/A
Bay ghost shrimp	N/A	Gap	20-40	N/A (no data)	N/A
California mussel	N/A	Gap	20-40	N/A (no data)	N/A
Crustacean zooplankton	N/A	Gap	20-40	N/A (no data)	N/A
Euphausiids	N/A	Gap	20-40	N/A (no data)	N/A
Gooseneck barnacle	N/A	Gap	20-40	N/A (no data)	N/A
Littorina	N/A	Gap	10-20	N/A (no data)	N/A
Neocalanus copepods	N/A	Gap	20-40	N/A (no data)	N/A
Non-crustacean zooplankton	N/A	Gap	10-20	N/A (no data)	N/A
Weathervane scallop	N/A	Gap	10-20	N/A (no data)	N/A

^ - feature updated in spring 2021

Table 3. Ecological conservation priorities, spatial features, and ecological conservation targets representing mammals and reptiles

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Dall's porpoise	Dall's porpoise effort-corrected density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Fin whale	Fin whale effort-corrected density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Grey whale	Grey whale effort-corrected density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Harbour seal	Harbour seal haulouts	Marxan	40-60	No	40-60
Humpback whale	Humpback whale critical habitat (2009-2013)	Marxan	20-40	No	20-40
Humpback whale	Humpback whale effort-corrected density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Northern resident orca	Killer whale (northern resident) designated critical habitat	Marxan	40-60	No	40-60
Northern resident orca	Killer whale (northern resident) habitat of special importance *	Marxan	40-60	No	40-60
Northern resident orca	Killer whale (northern resident) potential critical habitat (2006)	Marxan	40-60	No	40-60
Pacific white-sided dolphin	Pacific white-sided dolphin effort-corrected density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Sea otter	Sea otter modeled habitat	Marxan	40-60	No	40-60
Sperm whale	Sperm whale effort-corrected density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Steller sea lion	Steller sea lion haulouts (winter)	Marxan	40-60	No	40-60
Steller sea lion	Steller sea lion haulouts (year-round)	Marxan	40-60	No	40-60
Steller sea lion	Steller sea lion rookeries	Marxan	40-60	No	40-60

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Leatherback turtle	Leatherback turtle “Important Areas”	Marxan	20-40	No	20-40
Blue whale	Blue whale “Important Areas”	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
California sea lion	California sea lion haulouts	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Common minke whale	Common minke whale effort-corrected density	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Fin whale	Fin whale habitat of special importance	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Fin whale	Fin whale “Important Areas” ^	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Grey whale	Grey whale migration routes	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Harbour porpoise	Harbour porpoise effort-corrected density	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Northern fur Seal	Northern fur seal “Important Areas”	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Northern resident orca	Killer whale “Important Areas”	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Northern right whale dolphin	Northern right whale dolphin effort-corrected density	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Sea otter	Sea otter “Important Areas”	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Sei whale	Sei whale “Important Areas”	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0
Sperm whale	Sperm whale “Important Areas”	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
West coast transient Orca	Killer whale (transient) habitat of special importance	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Risso’s dolphin	N/A	Gap	20-40	N/A (no data)	N/A
Offshore orca	N/A	Gap	40-60	N/A (no data)	N/A
Southern resident orca	N/A	Gap	40-60	N/A (no data)	N/A
Northern elephant Seal	N/A	Gap	40-60	N/A (no data)	N/A
North Pacific right whale	N/A	Gap	40-60	N/A (no data)	N/A

* Killer whale (northern resident) habitat of special importance – this area has now been designated as critical habitat and the spatial feature combined with the feature titled “Killer whale (northern resident) designated critical habitat”

^ Fin Whale “Important Areas” – feature removed from analyses based on expert advice

Table 4. Ecological conservation priorities, spatial features, and ecological conservation targets representing plants and algae

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Phytoplankton	Near-surface Chlorophyll A Concentration	Marxan	20-40	No	20-40
Bull kelp	Bull kelp beds *	Marxan	20-40	No	20-40
Bull kelp	Bull kelp biobands	Marxan	20-40	No	20-40
Eelgrass	Eelgrass beds *	Marxan	20-40	No	20-40
Eelgrass	Eelgrass biobands	Marxan	20-40	No	20-40
Eelgrass	Eelgrass priority beds *	Marxan	20-40	No	20-40
General kelp	General kelp beds	Marxan	20-40	No	20-40
Giant kelp	Giant kelp beds *	Marxan	20-40	No	20-40
Giant Kelp	Giant kelp biobands	Marxan	20-40	No	20-40
Surfgrass	Surfgrass biobands	Marxan	20-40	No	20-40
Phytoplankton	Near-surface Chlorophyll A Bloom Frequency	Non-Marxan	20-40	Yes (data not appropriate for Marxan)	0

* Spatial features updated in spring 2021

Table 5. Ecological conservation priorities, spatial features, and ecological conservation targets representing marine birds

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Albatrosses	Albatross density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Ancient murrelet	Ancient murrelet colonies	Marxan	40-60	No	40-60
Black oystercatcher	Black oystercatcher breeding sites	Marxan	20-40	No	20-40
Brandt's cormorant	Brandt's cormorant colonies	Marxan	40-60	No	40-60
Cassin's auklet	Cassin's auklet colonies	Marxan	40-60	No	40-60
Common murre	Common murre colonies	Marxan	40-60	No	40-60
Cormorants	Cormorant density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Cormorants	Cormorant winter density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Geese & swans	Goose/swan density	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Geese & swans	Goose/swan winter density	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Great blue heron, *fannini* subspecies	Great blue heron nesting sites	Marxan	10-20	No	10-20
Great Blue Heron, *fannini* suspecies	Great blue heron winter density	Marxan	10-20	No (home range >= 50 km, but target already low)	10-20
Gulls	Gull density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Gulls	Gull winter density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Horned puffin	Horned puffin colonies	Marxan	40-60	No	40-60
Loons & grebes	Loon/grebe density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Loons & grebes	Loon/grebe winter density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Marbled murrelet	Marbled murrelet density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Marbled murrelet	Marbled murrelet winter density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Mud or sand flat intertidal birds	Shorebird key sites	Marxan	40-60	No	40-60
Murres & large alcids	Murre/large alcid density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Murres & large alcids	Murre/large alcid winter density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Pelagic cormorant	Pelagic cormorant colonies	Marxan	20-40	No	20-40
Pigeon guillemot	Pigeon guillemot colonies	Marxan	20-40	No	20-40
Pigeon guillemot	Pigeon guillemot density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Puffins	Puffin density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Rhinoceros auklet	Rhinoceros auklet colonies	Marxan	20-40	No	20-40
Rocky intertidal birds	Rocky intertidal bird density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Sea ducks	Sea duck joint venture key sites	Marxan	20-40	No	20-40
Sea ducks	Sea duck moulting density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Sea ducks	Sea duck pre-migration staging density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Sea ducks	Sea duck winter density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Shearwaters & fulmars	Shearwater/fulmar density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Small alcids	Small alcid density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Small alcids	Small alcid winter density	Marxan	40-60	Yes (home range >= 50 km, and distribution data)	10-20
Storm petrels & phalaropes	Storm petrel/phalarope density	Marxan	20-40	Yes (home range >= 50 km, and distribution data)	10-20
Storm petrels & phalaropes	Storm petrel colonies	Marxan	20-40	No	20-40
Thick-billed murre	Thick-billed murre colonies	Marxan	40-60	No	40-60
Tufted puffin	Tufted puffin colonies	Marxan	40-60	No	40-60
Mud or sand flat intertidal birds	Mud/sand flat intertidal bird density	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Seabirds	Seabird “Important Areas”	Non-Marxan	40-60	Yes (data not appropriate for Marxan)	0
Short-tailed albatross	N/A – in albatrosses		40-60	N/A	N/A
Laysan albatross	N/A – in albatrosses		20-40	N/A	N/A
Black-footed albatross	N/A – in albatrosses		20-40	N/A	N/A
Canada goose (Pacific, residents & migrants)	N/A – in geese & swans		10-20	N/A	N/A
Cackling goose	N/A – in geese & swans		10-20	N/A	N/A
Trumpeter swan	N/A – in geese & swans		10-20	N/A	N/A
California gull	N/A – in gulls		20-40	N/A	N/A
Thayer’s gull	N/A – in gulls		20-40	N/A	N/A
Western grebe	N/A – in loons & grebes		40-60	N/A	N/A
Yellow-billed loon	N/A – in loons & grebes		10-20	N/A	N/A
Common loon	N/A – in loons & grebes		10-20	N/A	N/A
Pacific loon	N/A – in loons & grebes		10-20	N/A	N/A
Horned grebe	N/A – in loons & grebes		10-20	N/A	N/A
Sanderling	N/A – in mud or sand flat intertidal birds		20-40	N/A	N/A
Dunlin	N/A – in mud or sand flat intertidal birds		40-60	N/A	N/A
Red knot	N/A – in mud or sand flat intertidal birds		20-40	N/A	N/A
Western sandpiper	N/A – in mud or sand flat intertidal birds		10-20	N/A	N/A
Short-billed dowitcher	N/A – in mud or sand flat intertidal birds		40-60	N/A	N/A
Whimbrel	N/A – in mud or sand flat intertidal birds		20-40	N/A	N/A
Surfbird	N/A – in rocky intertidal birds		20-40	N/A	N/A
Ruddy turnstone	N/A – in rocky intertidal birds		20-40	N/A	N/A
Black turnstone	N/A – in rocky intertidal birds		10-20	N/A	N/A
Rock sandpiper	N/A – in rocky intertidal birds		10-20	N/A	N/A
Wandering tattler	N/A – in rocky intertidal birds		10-20	N/A	N/A
Common goldeneye	N/A – in sea ducks		10-20	N/A	N/A
Barrow’s goldeneye	N/A – in sea ducks		20-40	N/A	N/A
Long-tailed duck	N/A – in sea ducks		10-20	N/A	N/A
Harlequin duck	N/A – in sea ducks		20-40	N/A	N/A
Black scoter	N/A – in sea ducks		20-40	N/A	N/A
White-winged scoter	N/A – in sea ducks		20-40	N/A	N/A
Surf scoter	N/A – in sea ducks		20-40	N/A	N/A

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Northern fulmar	N/A – in shearwaters & fulmars		10-20	N/A	N/A
Buller's shearwater	N/A – in shearwaters & fulmars		10-20	N/A	N/A
Pink-footed shearwater	N/A – in shearwaters & fulmars		40-60	N/A	N/A
Sooty shearwater	N/A – in shearwaters & fulmars		10-20	N/A	N/A
Short-tailed shearwater	N/A – in shearwaters & fulmars		10-20	N/A	N/A
Fork-tailed storm-petrel	N/A – in storm petrels & phalaropes		10-20	N/A	N/A
Leach's storm-petrel	N/A – in storm petrels & phalaropes		20-40	N/A	N/A
Red phalarope	N/A – in storm petrels & phalaropes		10-20	N/A	N/A
Red-necked phalarope	N/A – in storm petrels & phalaropes		10-20	N/A	N/A
Pelagic cormorant, *Pelagicus* subspecies	N/A		40-60	N/A (no data)	N/A

Table 6. Ecological conservation priorities, spatial features, and ecological conservation targets representing area-based features

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Areas of high species abundance, diversity or richness	Benthic fish diversity (CCIRA surveys) *	Marxan	10-30	No	10-30
Areas of high species abundance, diversity or richness	Rockfish species richness (CCIRA surveys) *	Non-Marxan	N/A	N/A	N/A
Areas of high species abundance, diversity or richness	Fish Diversity Hotspots (nearshore and shelf)	Marxan	10-30	No	10-30
Areas of high species abundance, diversity or richness	Fish Shelf Biomass Hotspots	Marxan	10-30	No	10-30
Areas of high species abundance, diversity or richness	Invertebrate Shelf Biomass Hotspots	Marxan	10-30	No	10-30
Areas of high species abundance, diversity or richness	Invertebrate Shelf Diversity Hotspots	Marxan	10-30	No	10-30
Areas of high species abundance, diversity or richness	Nearshore Habitat Richness Hotspots	Marxan	10-30	No	10-30
Areas of high habitat heterogeneity	Areas of high rugosity	Marxan	20-60	No	20-60
Estuaries	Estuaries ^	Marxan	20-60	No	20-60
Tidal passes and currents	Areas of high tidal current that meet EBSA criteria	Marxan	20-60	No	20-60
Ecological classification (coarse-filter) – Bottom patches	Hard	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – Bottom patches	Mixed	Marxan	8-24	No	8-24
Ecological classification (coarse-filter) – Bottom patches	Soft	Marxan	7-22	No	7-22

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Ecological classification (coarse-filter) – Coastal classes	Channel	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – Coastal classes	Estuary (Organics/ Fines)	Marxan	2-6	No	2-6
Ecological classification (coarse-filter) – Coastal classes	Gravel Beach	Marxan	2-6	No	2-6
Ecological classification (coarse-filter) – Coastal classes	Gravel Flat	Marxan	5-16	No	5-16
Ecological classification (coarse-filter) – Coastal classes	Mud Flat	Marxan	6-19	No	6-19
Ecological classification (coarse-filter) – Coastal classes	Rock Cliff	Marxan	1-3	No	1-3
Ecological classification (coarse-filter) – Coastal classes	Rock Platform	Marxan	1-4	No	1-4
Ecological classification (coarse-filter) – Coastal classes	Rock Ramp	Marxan	1-2	No	1-2
Ecological classification (coarse-filter) – Coastal classes	Sand and Gravel Beach	Marxan	2-6	No	2-6
Ecological classification (coarse-filter) – Coastal classes	Sand and Gravel Flat or Fan	Marxan	2-5	No	2-5
Ecological classification (coarse-filter) – Coastal classes	Sand Beach	Marxan	4-11	No	4-11
Ecological classification (coarse-filter) – Coastal classes	Sand Flat	Marxan	2-5	No	2-5
Ecological classification (coarse-filter) – Ecosections	Continental Slope	Marxan	4-11	No	4-11
Ecological classification (coarse-filter) – Ecosections	Dixon Entrance	Marxan	5-15	No	5-15
Ecological classification (coarse-filter) – Ecosections	Hecate Strait	Marxan	5-14	No	5-14
Ecological classification (coarse-filter) – Ecosections	Johnstone Strait	Marxan	9-28	No	9-28
Ecological classification (coarse-filter) – Ecosections	North Coast Fjords	Marxan	4-13	No	4-13
Ecological classification (coarse-filter) – Ecosections	Queen Charlotte Sound	Marxan	3-8	No	3-8
Ecological classification (coarse-filter) – Ecosections	Queen Charlotte Strait	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – Ecosections	Vancouver Island Shelf	Marxan	9-28	No	9-28

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Ecological classification (coarse-filter) – PMECS	Biophysical Units – DogfishBank	Marxan	5-16	No	5-16
Ecological classification (coarse-filter) – PMECS	Biophysical Units – OtherBank	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – PMECS	Biophysical Units – Shelf	Marxan	3-8	No	3-8
Ecological classification (coarse-filter) – PMECS	Biophysical Units – Slope	Marxan	4-11	No	4-11
Ecological classification (coarse-filter) – PMECS	Biophysical Units – Trough	Marxan	3-10	No	3-10
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Fjord, Crest	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Fjord, Depression	Marxan	6-17	No	6-17
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Fjord, Depression floor	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Fjord, Mound	Marxan	8-24	No	8-24
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Fjord, Wall, steeply sloping	Marxan	6-19	No	6-19
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Shelf, Crest	Marxan	4-12	No	4-12
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Shelf, Depression	Marxan	3-8	No	3-8
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Shelf, Depression floor	Marxan	5-14	No	5-14
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Shelf, Mound	Marxan	2-7	No	2-7
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Shelf, Wall, sloping	Marxan	3-10	No	3-10
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Slope, Canyon floor	Marxan	6-17	No	6-17
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Slope, Ridge	Marxan	6-18	No	6-18
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Slope, Wall, sloping	Marxan	10-29	No	10-29
Ecological classification (coarse-filter) – PMECS	Geomorphic Units – Slope, Wall, steeply sloping	Marxan	3-10	No	3-10
Ecological classification (coarse-filter) – Upper ocean sub-regions	Aristazabal Banks Upwelling	Marxan	6-18	No	6-18

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Ecological classification (coarse-filter) – Upper ocean sub-regions	Cape Scott Tidal Mixing	Marxan	4-13	No	4-13
Ecological classification (coarse-filter) – Upper ocean sub-regions	Cape St. James Tidal Mixing	Marxan	9-28	No	9-28
Ecological classification (coarse-filter) – Upper ocean sub-regions	Coastal Mixing Region	Marxan	3-8	No	3-8
Ecological classification (coarse-filter) – Upper ocean sub-regions	Dixon Entrance Coastal Flow Region	Marxan	5-16	No	5-16
Ecological classification (coarse-filter) – Upper ocean sub-regions	Dogfish Bank Frontal Region	Marxan	9-28	No	9-28
Ecological classification (coarse-filter) – Upper ocean sub-regions	Eastern Queen Charlotte Sound	Marxan	6-17	No	6-17
Ecological classification (coarse-filter) – Upper ocean sub-regions	Hecate Strait	Marxan	4-12	No	4-12
Ecological classification (coarse-filter) – Upper ocean sub-regions	Johnstone Strait	Marxan	9-27	No	9-27
Ecological classification (coarse-filter) – Upper ocean sub-regions	Low Flow Nearshore	Marxan	8-24	No	8-24
Ecological classification (coarse-filter) – Upper ocean sub-regions	Mainland Fjords	Marxan	5-14	No	5-14
Ecological classification (coarse-filter) – Upper ocean sub-regions	Northern Strait of Georgia	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – Upper ocean sub-regions	Rose Spit Eddy	Marxan	10-30	No	10-30
Ecological classification (coarse-filter) – Upper ocean sub-regions	SE Alaska Mixing Region	Marxan	5-16	No	5-16
Ecological classification (coarse-filter) – Upper ocean sub-regions	West Coast QCI Upwelling Region	Marxan	6-19	No	6-19
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Bella Bella nearshore	Marxan	4-12	No	4-12
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Brooks Peninsula	Marxan	5-15	No	5-15
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Cape St. James	Marxan	3-8	No	3-8

Conservation Priority	Spatial Feature	Feature Type	Original E-CP Target Range (%)	Target Range Adjusted for Marxan	Final Marxan Target Range (%)
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Central Mainland	Marxan	3-8	No	3-8
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Chatham Sound	Marxan	3-9	No	3-9
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Dogfish Banks	Marxan	3-9	No	3-9
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Haida Gwaii nearshore	Marxan	3-10	No	3-10
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Hecate Strait	Marxan	3-9	No	3-9
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Learmouth Bank	Marxan	10-30	No	10-30
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – McIntyre Bay	Marxan	4-12	No	4-12
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – North Island Straits	Marxan	3-8	No	3-8
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Scott Islands	Marxan	2-5	No	2-5
Ecologically and Biologically Significant Areas (EBSAs)	EBSAs – Shelf Break	Marxan	1-3	No	1-3
Ecologically and Biologically Significant Areas (EBSAs)	Seamount summits #	Non-Marxan	N/A	N/A	N/A
Ecologically and Biologically Significant Areas (EBSAs)	Seamounts #	Non-Marxan	N/A	N/A	N/A
Ecologically and Biologically Significant Areas (EBSAs)	Cold seeps #	Non-Marxan	N/A	N/A	N/A
Areas of high species abundance, diversity, or richness	Important Bird Areas	Non-Marxan	10-30	Yes (data not appropriate for Marxan)	0
Tidal passes and currents	Areas of high tidal current	Non-Marxan	20-60	Yes (data not appropriate for Marxan)	0
Degraded areas	Degraded areas	Gap	10-30	N/A (no data)	N/A
Areas important for carbon sequestration/"blue carbon" (areas of climate resilience)	N/A – in estuaries, kelp, eelgrass	N/A	20-60	N/A	N/A
Areas of upwelling	N/A – in EBSAs	N/A	20-60	N/A	N/A
Eddies and plumes	N/A – in EBSAs	N/A	10-30	N/A	N/A
Frontal zones	N/A – in EBSAs	N/A	20-60	N/A	N/A
Marine areas influenced by freshwater discharges with high oxygen levels (climate refugia)	N/A – in estuaries	N/A	10-30	N/A	N/A
Submarine canyons and steep walled troughs	N/A – in geomorphic units, EBSAs	N/A	20-60	N/A	N/A
Tidal passes and currents	N/A – in EBSAs	N/A	20-60	N/A	N/A
Underwater banks (climate refugia)	N/A – in geomorphic units, biophysical units	N/A	10-30	N/A	N/A

* Benthic fish diversity (CCIRA surveys) – feature updated in spring 2021 and replaced by "Rockfish species richness (CCIRA surveys)"

^ - feature updated in spring 2021

- feature added in spring 2021

3. Conservation Gaps Analysis

3.1. Ecological conservation priorities – target ranges and CGA results (scaled and unscaled) for proposed Network Scenario 2 (Version P3)

This document presents the summary results of the Conservation Gaps Analysis run on the proposed Network scenario (version P3) for individual ecological conservation priorities (E-CPs). Spatial features representing E-CPs have been assessed at the zone level and summarized at the Network/regional scale, both unscaled (proportional amount contained in the proposed Network scenario footprint) and scaled (incorporating any down-scaling due to potential interaction with human activities). Additional columns indicate the target ranges assigned to features representing E-CPs (DFO 2019b; Martone et al. 2021) and where the features land relative to their respective target ranges (using both unscaled and scaled CGA results) in the proposed Network scenario (version P3).

An illustration of the steps and components of the CGA are shown in s. 3.2 (Figures 1 and 2). The summary of results is given in s. 3.3.

3.2. CGA: Steps and components

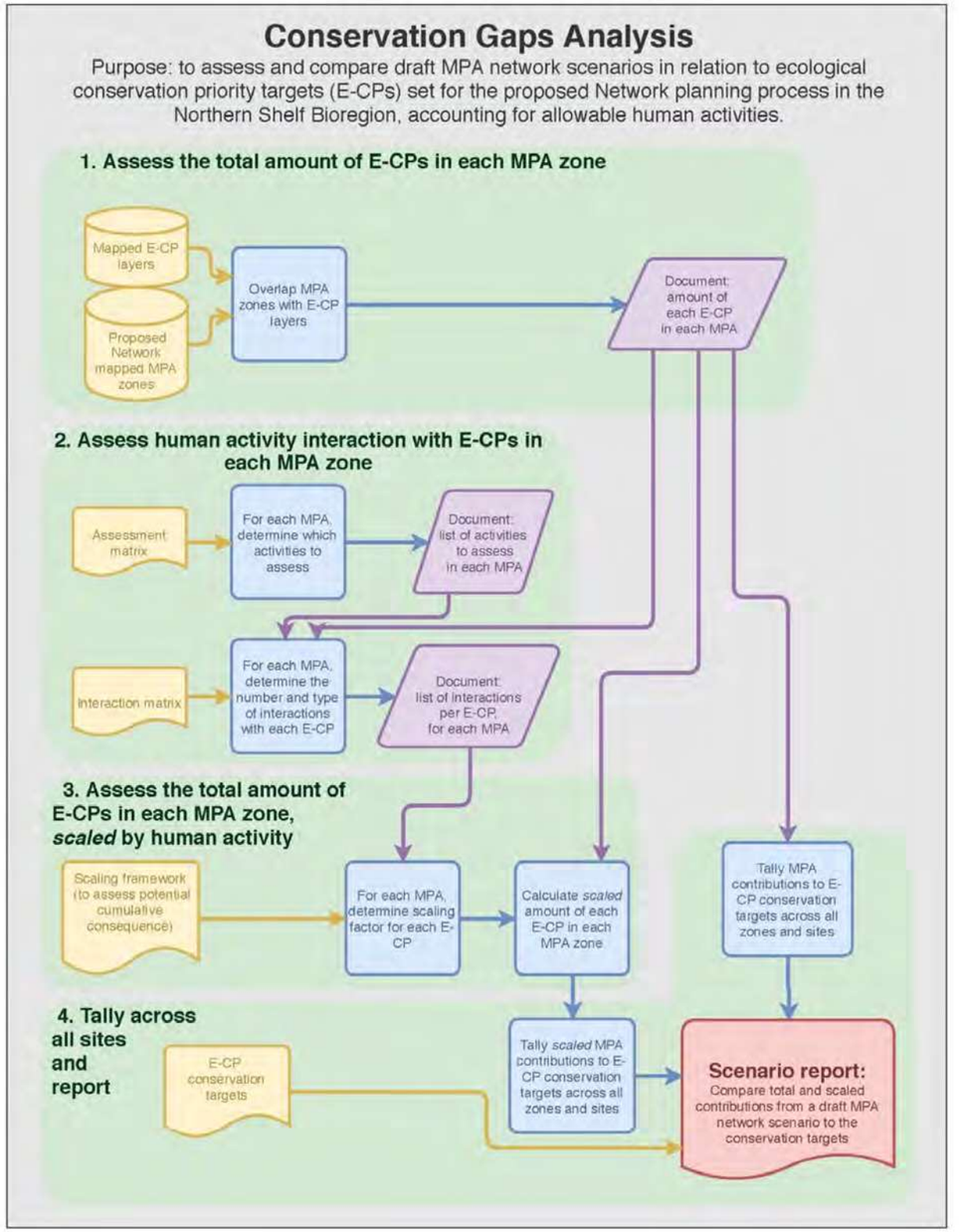

Figure 1. Conservation Gaps Analysis (part 1)

3.2. CGA: Steps and components

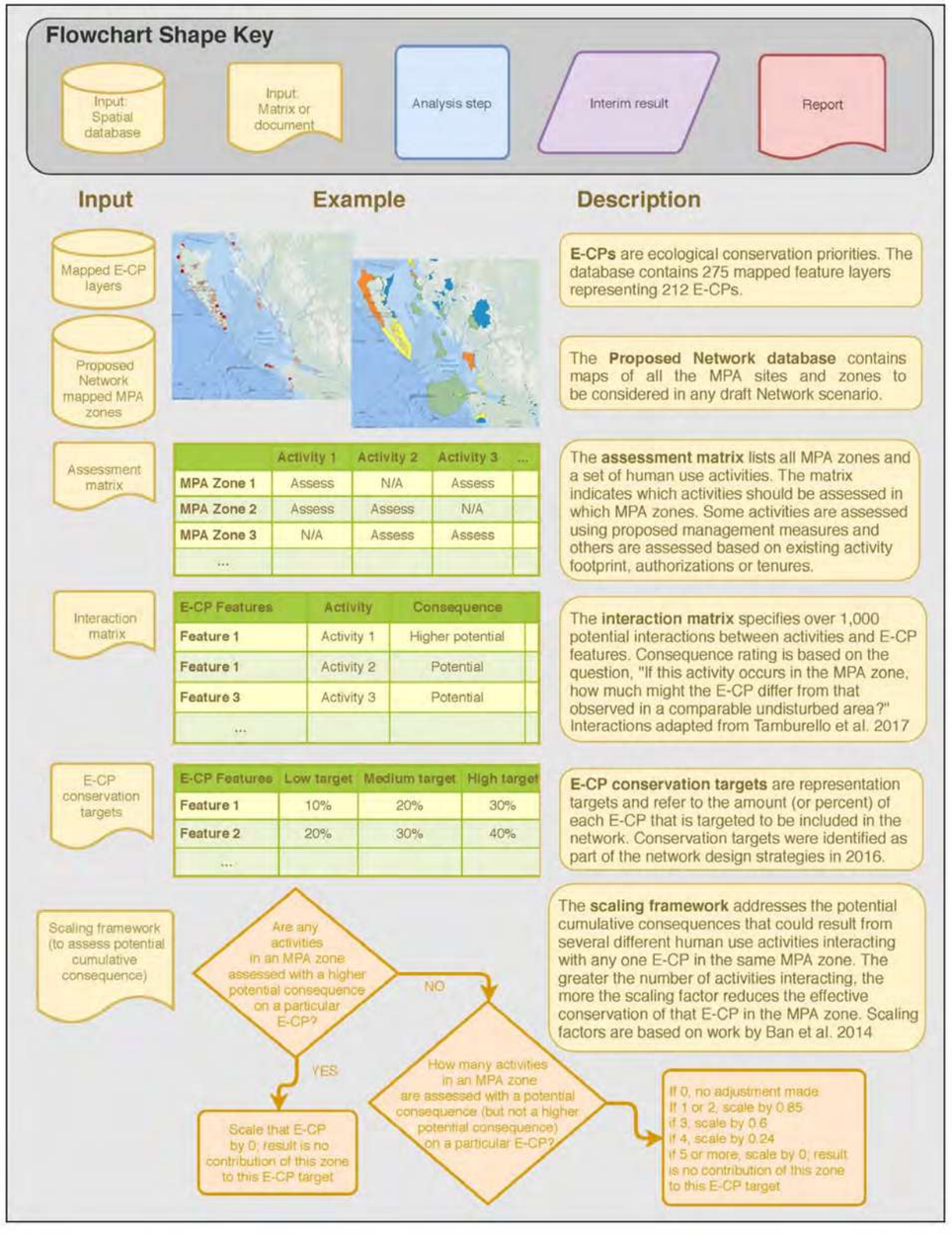

Figure 2. Conservation Gaps Analysis (part 2)

3.3. Summary of results

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas	Benthic Fish diversity hotspot	20.5%	20.5%	10.0%	20.0%	30.0%	3. meets med, below high target	3. Scaled meets med, below high target
Areas	Estuaries polygons	35.0%	20.2%	20.0%	40.0%	60.0%	2. meets low, below med target	2. Scaled meets low, below med target
Areas	Habitat Richness nearshore	72.8%	72.8%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas	High Current^ non EBSA	100.0%	100.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Areas	High Rugosity polygons	38.6%	38.6%	20.0%	40.0%	60.0%	2. meets low, below med target	2. Scaled meets low, below med target
Areas	Important Bird Areas^ polygons	46.5%	46.5%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Areas	Rockfish density CCIRA	70.6%	70.6%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas	Seamount^ summit	100.0%	100.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Areas	Shelf Fish biomass hotspot	18.4%	18.4%	10.0%	20.0%	30.0%	2. meets low, below med target	2. Scaled meets low, below med target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas	Shelf Invertebrate biomass hotspot	21.4%	21.4%	10.0%	20.0%	30.0%	3. meets med, below high target	3. Scaled meets med, below high target
Areas	Shelf Invertebrate diversity hotspot	17.8%	17.8%	10.0%	20.0%	30.0%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - Bottom Patches	Hard substrate Bottom Patches	55.6%	49.0%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas - Bottom Patches	Mixed substrate Bottom Patches	33.9%	33.9%	8.1%	16.2%	24.3%	4. meets high target	4. Scaled meets high target
Areas - Bottom Patches	Soft substrate Bottom Patches	21.2%	13.1%	7.3%	14.6%	21.9%	3. meets med, below high target	2. Scaled meets low, below med target
Areas - Coastal Classes	Channel Coastal Classes	71.1%	71.1%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Estuary (Organics/ Fines) Coastal Classes	66.1%	66.1%	2.0%	4.0%	6.0%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Gravel Beach Coastal Classes	49.4%	49.4%	2.1%	4.1%	6.2%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Gravel Flat Coastal Classes	44.6%	44.6%	5.3%	10.6%	15.9%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Mud Flat Coastal Classes	36.2%	36.2%	6.4%	12.7%	19.1%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Rock Cliff Coastal Classes	52.0%	52.0%	0.9%	1.7%	2.6%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Rock Platform Coastal Classes	75.4%	75.4%	1.2%	2.5%	3.7%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Rock Ramp Coastal Classes	58.8%	58.8%	0.7%	1.3%	2.0%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Sand and Gravel Beach Coastal Classes	46.1%	46.1%	2.0%	4.0%	5.9%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Sand and Gravel Flat or Fan Coastal Classes	52.8%	52.8%	1.6%	3.2%	4.8%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Sand Beach Coastal Classes	79.6%	79.6%	3.8%	7.6%	11.4%	4. meets high target	4. Scaled meets high target
Areas - Coastal Classes	Sand Flat Coastal Classes	61.8%	61.8%	1.8%	3.6%	5.3%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Bella Bella Nearshore EBSAS	71.8%	71.8%	4.1%	8.2%	12.3%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Brooks Peninsula EBSAS	7.5%	7.5%	4.9%	9.8%	14.7%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - EBSA	Cape St James EBSAS	47.3%	47.3%	2.6%	5.2%	7.9%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Central Mainland EBSAS	38.8%	38.8%	2.6%	5.1%	7.7%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas - EBSA	Chatham Sound EBSAS	21.1%	21.1%	2.9%	5.9%	8.8%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Dogfish Banks EBSAS	14.9%	14.9%	3.1%	6.2%	9.3%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Haida Gwaii Nearshore EBSAS	87.2%	87.2%	3.4%	6.8%	10.1%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Hecate Strait EBSAS	11.2%	11.2%	3.1%	6.3%	9.4%	4. meets high target	4. Scaled meets high target
Areas - EBSA	High Current EBSA	99.3%	99.3%	20.0%	40.0%	60.0%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Learmonth Bank EBSAS	53.8%	53.8%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas - EBSA	McIntyre Bay EBSAS	14.2%	14.2%	4.1%	8.1%	12.2%	4. meets high target	4. Scaled meets high target
Areas - EBSA	North Island Straits EBSAS	18.9%	18.9%	2.7%	5.4%	8.1%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Scott Islands EBSAS	73.6%	73.6%	1.8%	3.6%	5.5%	4. meets high target	4. Scaled meets high target
Areas - EBSA	Seamount^ EBSA	33.0%	33.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Areas - EBSA	Shelf Break EBSAS	33.6%	33.6%	1.0%	2.0%	2.9%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas - Ecosections	Continental Slope Ecosections	36.5%	36.5%	2.7%	5.5%	8.2%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	Dixon Entrance Ecosections	16.6%	16.6%	3.8%	7.6%	11.4%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	Hecate Strait Ecosections	25.8%	25.8%	3.5%	7.0%	10.4%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	Johnstone Strait Ecosections	25.7%	25.7%	7.1%	14.3%	21.4%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	North Coast Fjords Ecosections	34.5%	34.5%	3.2%	6.3%	9.5%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	Queen Charlotte Sound Ecosections	30.4%	30.4%	2.1%	4.2%	6.4%	4. meets high target	4. Scaled meets high target
Areas - Ecosections	Queen Charlotte Strait Ecosections	19.5%	19.5%	7.6%	15.1%	22.7%	3. meets med, below high target	3. Scaled meets med, below high target
Areas - Ecosections	Vancouver Island Shelf Ecosections	53.2%	53.2%	7.0%	14.0%	21.1%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Biophysical	Dogfish Bank Biophysical Units	9.5%	9.5%	5.4%	10.7%	16.1%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - PMECS, Biophysical	Other Banks Biophysical Units	22.7%	22.7%	10.0%	20.0%	30.0%	3. meets med, below high target	3. Scaled meets med, below high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas - PMECS, Biophysical	Shelf Biophysical Units	27.3%	27.3%	2.5%	5.1%	7.6%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Biophysical	Slope Biophysical Units	31.0%	31.0%	3.7%	7.4%	11.1%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Biophysical	Trough Biophysical Units	26.0%	26.0%	3.4%	6.8%	10.3%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Fjord crest Geomorphic Units	38.8%	38.8%	9.8%	19.7%	29.5%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Fjord depression floor Geomorphic Units	30.0%	30.0%	10.0%	20.0%	30.0%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Fjord depression Geomorphic Units	21.6%	21.6%	5.6%	11.3%	16.9%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Fjord mound Geomorphic Units	34.8%	34.8%	8.1%	16.2%	24.3%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Fjord wall steep Geomorphic Units	32.8%	32.8%	6.2%	12.4%	18.6%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Shelf crest Geomorphic Units	49.5%	49.5%	4.0%	8.0%	12.0%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Shelf depression floor Geomorphic Units	30.1%	30.1%	4.5%	9.1%	13.6%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Shelf depression Geomorphic Units	25.9%	25.9%	2.5%	5.0%	7.5%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Shelf mound Geomorphic Units	22.2%	22.2%	2.3%	4.5%	6.8%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Shelf wall sloping Geomorphic Units	35.4%	35.4%	3.2%	6.4%	9.6%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Slope canyon floor Geomorphic Units	37.2%	37.2%	5.6%	11.3%	16.9%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Slope ridge Geomorphic Units	35.4%	35.4%	6.0%	12.1%	18.1%	4. meets high target	4. Scaled meets high target
Areas - PMECS, Geomorphic	Slope wall sloping Geomorphic Units	22.1%	22.1%	9.7%	19.5%	29.2%	3. meets med, below high target	3. Scaled meets med, below high target
Areas - PMECS, Geomorphic	Slope wall steep Geomorphic Units	29.3%	29.3%	3.3%	6.6%	9.9%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Aristazabal Banks Upwelling Upper Ocean Subregion	32.5%	32.5%	5.8%	11.7%	17.5%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Cape Scott Tidal Mixing Upper Ocean Subregion	52.6%	52.6%	4.4%	8.7%	13.1%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Areas - Upper Ocean SR	Cape St James Tidal Mixing Upper Ocean Subregion	48.1%	48.1%	9.2%	18.4%	27.7%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Coastal Mixing Region Upper Ocean Subregion	29.1%	29.1%	2.8%	5.5%	8.3%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Dixon Entrance Coastal Flow Region Upper Ocean Subregion	9.5%	9.5%	5.4%	10.8%	16.2%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - Upper Ocean SR	Dogfish Bank Frontal Region Upper Ocean Subregion	12.7%	12.7%	9.2%	18.4%	27.5%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - Upper Ocean SR	Eastern Queen Charlotte Sound Upper Ocean Subregion	27.7%	27.7%	5.6%	11.2%	16.8%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Hecate Strait Upper Ocean Subregion	16.4%	16.4%	4.1%	8.1%	12.2%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Johnstone Strait Upper Ocean Subregion	19.6%	19.6%	8.8%	17.6%	26.5%	3. meets med, below high target	3. Scaled meets med, below high target
Areas - Upper Ocean SR	Low Flow Nearshore Upper Ocean Subregion	67.7%	67.7%	8.1%	16.2%	24.3%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Mainland Fjords Upper Ocean Subregion	39.4%	39.4%	4.6%	9.2%	13.8%	4. meets high target	4. Scaled meets high target
Areas - Upper Ocean SR	Northern Strait of Georgia Upper Ocean Subregion	16.9%	16.9%	10.0%	20.0%	30.0%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - Upper Ocean SR	Rose Spit Eddy Upper Ocean Subregion	19.5%	19.5%	10.0%	20.0%	30.0%	2. meets low, below med target	2. Scaled meets low, below med target
Areas - Upper Ocean SR	SE Alaska Mixing Region Upper Ocean Subregion	16.2%	16.2%	5.4%	10.9%	16.3%	3. meets med, below high target	3. Scaled meets med, below high target
Areas - Upper Ocean SR	West Coast QCI Upwelling Region Upper Ocean Subregion	39.5%	39.5%	6.2%	12.3%	18.5%	4. meets high target	4. Scaled meets high target
Fishes	Arrowtooth Flounder Research CPUE	29.0%	15.5%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Big Skate Research CPUE	34.3%	13.2%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Bocaccio CCIRA Research CPUE	85.0%	50.9%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Bocaccio Research CPUE	35.7%	12.0%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Canary Rockfish CCIRA Research CPUE	73.5%	43.0%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Fishes	Canary Rockfish Research CPUE	39.3%	14.1%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	China Rockfish CCIRA Research CPUE	74.6%	55.6%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Fishes	China Rockfish Research CPUE	56.4%	20.1%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Chinook Salmon diversity hotspot	40.1%	20.9%	40.0%	50.0%	60.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Chum Salmon diversity hotspot	56.9%	30.7%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Coho Salmon diversity hotspot	53.3%	23.9%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Copper Rockfish Research CPUE	46.4%	15.6%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Fishes	Darkblotched Rockfish Research CPUE	22.4%	16.9%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Dover Sole Research CPUE	24.0%	17.1%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Eulachon Important Areas - spawn	27.7%	22.6%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Eulachon Important Areas - summer	28.7%	26.7%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Green Sturgeon Important Area	6.4%	6.4%	20.0%	30.0%	40.0%	1. below low target	1. Scaled below low target
Fishes	Greenstriped Rockfish Research CPUE	34.0%	17.2%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Lingcod CCIRA Research CPUE	70.3%	50.3%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Fishes	Lingcod Research CPUE	36.1%	14.9%	20.0%	30.0%	40.0%	3. meets med, below high target	1. Scaled below low target
Fishes	Longnose Skate Research CPUE	31.5%	16.3%	20.0%	30.0%	40.0%	3. meets med, below high target	1. Scaled below low target
Fishes	Longspine Thornyhead Research CPUE	22.1%	18.2%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Pacific Cod Research CPUE	30.6%	14.3%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Fishes	Pacific Hake biomass index	25.5%	8.4%	10.0%	15.0%	20.0%	4. meets high target	1. Scaled below low target
Fishes	Pacific Halibut Research CPUE	33.0%	12.4%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Pacific Herring spawn habitat index	53.8%	27.0%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Pacific Herring ^ Important Areas	34.7%	15.4%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Pacific Ocean Perch Research CPUE	25.1%	18.2%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Pacific Salmon biomass hotspot	44.2%	26.3%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Pacific Sand Lance Research CPUE	17.3%	16.9%	20.0%	30.0%	40.0%	1. below low target	1. Scaled below low target
Fishes	Petrale Sole Research CPUE	24.4%	16.7%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Pink Salmon (even) diversity hotspot	56.3%	26.9%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Pink Salmon (odd) diversity hotspot	45.6%	22.3%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Quillback Rockfish CCIRA Research CPUE	71.6%	46.7%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Fishes	Quillback Rockfish Research CPUE	35.5%	12.9%	20.0%	30.0%	40.0%	3. meets med, below high target	1. Scaled below low target
Fishes	Redstripe Rockfish Research CPUE	26.0%	12.0%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Redstripe Rockfish^ CCIRA Research CPUE	64.6%	52.5%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Rex Sole Research CPUE	23.6%	16.9%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Rock Sole Research CPUE	29.0%	20.0%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Fishes	Rosethorn Rockfish Research CPUE	38.1%	16.2%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Rosethorn Rockfish^ CCIRA Research CPUE	40.7%	28.2%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Fishes	Rougheye/ Blackspotted Rockfish Research CPUE	31.4%	17.2%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Rougheye/ Blackspotted Rockfish^ CCIRA Research CPUE	33.6%	28.5%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Roughtail Skate^ Research CPUE	21.1%	18.2%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Sablefish Research CPUE	32.1%	15.1%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Sandpaper Skate Research CPUE	29.7%	16.2%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Shortraker Rockfish Research CPUE	24.9%	15.0%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Shortraker Rockfish^ CCIRA Research CPUE	52.1%	33.1%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Shortspine Thornyhead Research CPUE	24.7%	18.3%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Shortspine Thornyhead^ CCIRA Research Surveys	73.7%	64.7%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Silvergray Rockfish CCIRA Research CPUE	65.8%	56.2%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Fishes	Silvergray Rockfish Research CPUE	35.7%	19.5%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Sockeye Salmon diversity hotspot	52.4%	24.4%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Spiny Dogfish Research CPUE	35.5%	14.0%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Fishes	Tiger Rockfish CCIRA Research CPUE	80.6%	58.3%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Fishes	Tiger Rockfish Research CPUE	46.1%	17.4%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Fishes	Vermillion Rockfish Research CPUE	57.3%	20.8%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Fishes	Walleye Pollock Research CPUE	23.0%	13.4%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Fishes	Widow Rockfish Research CPUE	26.7%	13.0%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Fishes	Widow Rockfish^ CCIRA Research CPUE	90.5%	33.9%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Fishes	Yelloweye Rockfish CCIRA Research CPUE	82.7%	53.1%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Fishes	Yelloweye Rockfish Research CPUE	38.1%	14.7%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Fishes	Yellowmouth Rockfish Research CPUE	32.7%	14.4%	20.0%	30.0%	40.0%	3. meets med, below high target	1. Scaled below low target
Fishes	Yellowtail Rockfish Research CPUE	32.9%	12.0%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Invertebrates	Black corals predicted habitat	28.0%	17.6%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Butter clams records	61.9%	24.7%	20.0%	30.0%	40.0%	4. meets high target	2. Scaled meets low, below med target
Invertebrates	Cockles records	58.0%	39.3%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Invertebrates	Coonstripe/ dock shrimp^ records	21.9%	19.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Corals hotspot CCIRA Research Surveys	51.3%	39.0%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Invertebrates	Corals Survey and Fishery CPUE	27.0%	16.9%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Deepwater Tanner Crab Research CPUE	30.9%	11.6%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Invertebrates	Dungeness crab records	19.1%	8.4%	10.0%	15.0%	20.0%	3. meets med, below high target	1. Scaled below low target
Invertebrates	Dungeness crab ^ Important Areas	14.1%	8.9%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Geoduck records	66.5%	15.2%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Invertebrates	Giant Pacific octopus records	34.9%	27.0%	20.0%	30.0%	40.0%	3. meets med, below high target	2. Scaled meets low, below med target
Invertebrates	Glass sponge reefs polygons	89.7%	74.8%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Invertebrates	Green sea urchin records	44.8%	11.6%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Invertebrates	Hard or stony corals predicted habitat	29.7%	16.1%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Horse clam records	69.9%	53.9%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Invertebrates	Humpback shrimp ^ records	30.9%	13.8%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Littleneck clam^ records	62.4%	20.8%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Ochre sea star^ records	64.3%	44.9%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Olympia oyster^ records	55.2%	52.4%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Opal squid records	17.2%	16.9%	20.0%	30.0%	40.0%	1. below low target	1. Scaled below low target
Invertebrates	Pink and Spiny Scallops Research CPUE	28.7%	27.9%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Invertebrates	Puget Sound king crab^ records	62.1%	62.1%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Purple-hinged rock scallop^ records	70.9%	61.7%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Razor clam Important Areas	61.8%	5.8%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Invertebrates	Red sea urchin records	60.1%	14.1%	20.0%	30.0%	40.0%	4. meets high target	1. Scaled below low target
Invertebrates	Sea pens predicted habitat	24.3%	14.7%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Sea pens Survey and Fishery CPUE	18.5%	10.5%	20.0%	30.0%	40.0%	1. below low target	1. Scaled below low target
Invertebrates	Sidestripe shrimp^ records	15.3%	8.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Smooth pink shrimp^ records	13.9%	10.7%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Soft corals predicted habitat	27.2%	17.6%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Spiny or northern pink shrimp^ records	12.9%	5.5%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Invertebrates	Sponge hotspot/ glass and other CCIRA Research Surveys	65.9%	43.3%	40.0%	50.0%	60.0%	4. meets high target	2. Scaled meets low, below med target
Invertebrates	Sponges Survey and Fishery CPUE	24.6%	14.1%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Invertebrates	Spot prawn^ records	35.4%	17.8%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Invertebrates	Sunflower sea star records	22.8%	12.2%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Mammals	Blue Whale^ Important Areas	25.9%	22.3%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Common Minke Whale^ density	21.8%	5.7%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Dall's Porpoise density	28.4%	25.0%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Mammals	Fin Whale density	34.2%	9.0%	10.0%	15.0%	20.0%	4. meets high target	1. Scaled below low target
Mammals	Fin Whale^ Habitat of Special Importance	26.7%	12.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Grey Whale density	34.6%	31.6%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Mammals	Grey Whale^ Migration Route	24.7%	22.7%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Harbour Porpoise^ density	29.3%	18.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Harbour Seal Haulouts	63.8%	57.7%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Mammals	Humpback Whale Critical Habitat	49.2%	33.8%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Mammals	Humpback Whale density	37.7%	25.6%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Mammals	Killer Whale - Northern Residents Critical Habitat	15.3%	14.0%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Mammals	Killer Whale - Northern Residents Potential Critical Habitat	25.0%	22.3%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Mammals	Killer Whale - Northern Residents^ Important Areas	28.1%	26.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Mammals	Killer Whale - Transients^ Habitat of Special Importance	44.5%	42.3%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Northern fur seal^ Important Areas	37.0%	31.9%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Northern Right Whale Dolphin^ density	57.6%	44.4%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Pacific White-sided Dolphin density	35.6%	31.4%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Mammals	Sea Otter Modeled Habitat	52.6%	41.1%	40.0%	50.0%	60.0%	3. meets med, below high target	2. Scaled meets low, below med target
Mammals	Sea Otter^ Important Areas	53.5%	42.2%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Sei Whale^ Important Areas	30.2%	3.4%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Mammals	Sperm Whale density	30.9%	30.9%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Mammals	Sperm Whale^ Important Areas	30.2%	30.2%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Mammals	Steller Sea Lion Haulouts - yr round	93.4%	81.3%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Mammals	Steller Sea Lion Haulouts in winter	100.0%	85.6%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Mammals	Steller Sea Lion Rookeries	67.0%	55.0%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Albatrosses density - yr round	29.7%	11.8%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Marine birds	Ancient Murrelet ri1 colonies	96.3%	52.0%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Ancient Murrelet ri2 colonies	97.1%	51.9%	40.0%	50.0%	60.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Ancient Murrelet ri3 colonies	91.3%	48.4%	40.0%	50.0%	60.0%	4. meets high target	2. Scaled meets low, below med target
Marine birds	Black Oystercatcher nesting sites	69.9%	63.5%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Brandt's cormorant ri2 colonies	100.0%	97.3%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Cassin's Auklet ri1 colonies	84.0%	74.7%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Marine birds	Cassin's Auklet ri2 colonies	86.4%	77.7%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Cassin's Auklet ri3 colonies	100.0%	93.8%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Common Murre ri1 colonies	94.2%	82.6%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Common Murre ri3 colonies	100.0%	94.8%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Double-crested cormorant density - yr round	52.2%	24.1%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Goose/Swan density - yr round	51.8%	47.9%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Goose/Swan density in winter	46.0%	42.6%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Great Blue Heron density in winter	43.0%	40.7%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Great Blue Heron nests and foraging areas	32.6%	31.6%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Gulls density - yr round	34.3%	29.7%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Gulls density in winter	39.8%	34.7%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Horned Puffin colonies	91.2%	78.1%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Loon/Grebe density - yr round	38.4%	32.0%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Loon/Grebe density in winter	40.2%	34.6%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Marbled Murrelet density - yr round	44.7%	19.1%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Marbled Murrelet density in winter	31.2%	12.0%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Marine birds	Murres/Large Alcids density - yr round	31.7%	20.0%	10.0%	15.0%	20.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Murres/Large Alcids density in winter	30.4%	23.1%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Pelagic cormorant ri1 colonies	82.0%	68.1%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Pelagic cormorant ri2 colonies	70.3%	63.0%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Pelagic cormorant ri3 colonies	100.0%	95.8%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Pigeon Guillemot density - yr round	43.2%	38.5%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Marine birds	Pigeon Guillemot ri1 colonies	67.0%	58.9%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Pigeon Guillemot ri2 colonies	55.9%	51.0%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Puffins density - yr round	55.3%	49.8%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Rhinoceros Auklet ri1 colonies	79.2%	36.2%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Marine birds	Rhinoceros Auklet ri2 colonies	93.4%	71.4%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Rhinoceros Auklet ri3 colonies	49.9%	40.0%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Sea duck, unspecified density - moulting	38.8%	32.7%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Sea duck, unspecified density - staging	45.1%	37.9%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Sea duck, unspecified density in winter	49.7%	42.8%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Sea duck, unspecified Key Sites	20.2%	19.0%	20.0%	30.0%	40.0%	2. meets low, below med target	1. Scaled below low target
Marine birds	Seabirds^ Important Area	41.0%	41.0%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Marine birds	Shearwaters and Fulmars density - yr round	28.0%	10.1%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Marine birds	Shorebird (rocky) density - yr round	66.3%	62.4%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Shorebird (sand) Key Sites	17.5%	15.9%	40.0%	50.0%	60.0%	1. below low target	1. Scaled below low target
Marine birds	Shorebird (sand)^ density - yr round	29.1%	27.2%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Marine birds	Small Alcids density - yr round	41.5%	30.8%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Small Alcids density in winter	19.8%	19.7%	10.0%	15.0%	20.0%	3. meets med, below high target	3. Scaled meets med, below high target
Marine birds	Storm Petrel density - yr round	27.4%	27.1%	10.0%	15.0%	20.0%	4. meets high target	4. Scaled meets high target
Marine birds	Storm Petrel ri1 colonies	92.2%	87.2%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Storm Petrel ri2 colonies	70.7%	67.3%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Marine birds	Storm Petrel ri3 colonies	9.3%	9.3%	20.0%	30.0%	40.0%	1. below low target	1. Scaled below low target
Marine birds	Thick-billed Murre colonies	100.0%	99.1%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target

Feature group	E-CP feature name and type	Sum of proportion	Sum of proportion Draft Network (P3) scaled	Target Range (low end)	Target Range (mid-point)	Target Range (high-point)	Unscaled status CGA results (P3)	Scaled status CGA results (P3)
Marine birds	Tufted Puffin ri1 colonies	84.3%	47.9%	40.0%	50.0%	60.0%	4. meets high target	2. Scaled meets low, below med target
Marine birds	Tufted Puffin ri2 colonies	100.0%	77.1%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Tufted Puffin ri3 colonies	83.9%	82.3%	40.0%	50.0%	60.0%	4. meets high target	4. Scaled meets high target
Marine birds	Unspecified Cormorant density in winter	25.2%	11.6%	10.0%	15.0%	20.0%	4. meets high target	2. Scaled meets low, below med target
Plants and algae	Bull Kelp Biobands	64.3%	62.5%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Bull Kelp Distribution	77.7%	76.3%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Eelgrass Biobands	63.7%	50.1%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Eelgrass Distribution	49.4%	39.4%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Plants and algae	Eelgrass Priority Polygons	47.8%	37.9%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target
Plants and algae	General Kelp Distribution	63.2%	60.7%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Giant Kelp Biobands	81.2%	79.2%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Giant Kelp Distribution	76.0%	73.0%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Plants and algae	Phytoplankton Chlorophyll A Concentration	26.0%	25.7%	20.0%	30.0%	40.0%	2. meets low, below med target	2. Scaled meets low, below med target
Plants and algae	Phytoplankton^ Chlorophyll A Blooms	23.6%	23.3%	0.0%	0.0%	0.0%	5. not targeted	5. Not scaled or not targeted
Plants and algae	Surfgrass Biobands	82.9%	66.6%	20.0%	30.0%	40.0%	4. meets high target	4. Scaled meets high target
Reptiles	Leatherback Sea Turtle Important Areas	43.6%	39.5%	20.0%	30.0%	40.0%	4. meets high target	3. Scaled meets med, below high target

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4. Performance Measures

4.1. MPA Network Scenario Design Performance Measures

4.1.1. Introduction

This document presents a revised set of performance measures (PMs), which have been developed for the Marine Protected Area (MPA) Network process in the Northern Shelf Bioregion (NSB) to assist technical planners, stakeholders, advisory committee members, and decision makers in evaluating and comparing different Network scenario designs. The following list of PMs has been refined by the MPA Technical Team (MPATT). The list is based on consideration of available spatial datasets, stakeholder input collected at a joint workshop held February 2018, feedback from MPA Network Science Advisory Committee members, and feedback collected from Integrated/Ocean Advisory Committee (I/OACs) members and/or submitted to MPATT as part of the proposed Network scenario review.

PMs are specific metrics that can be used to consistently evaluate and compare alternative Network design scenarios and will be used as a decision support tool. They are quantitative or qualitative measures that report the achievement of Network goals, objectives, and adherence to design guidelines. Performance measures also reveal potential trade-offs between different Network design scenarios and help improve transparency in the Network design process. These PMs were developed to assist with the Network design process specifically. Network implementation and Network effectiveness post implementation will be evaluated separately, and a subset of PMs used to assist with Network design may continue to be utilized in some form (e.g., representation of ecological conservation priorities.

Trade-offs among different proposed MPA Network scenario designs, each described by this set of PMs, will be considered in light of guidance to:

- achieve the Network goals and objectives,
- maximize positive and minimize negative ecological, cultural, social, and economic impacts in MPA Network design, and
- distribute impacts as equitably as possible across communities and users.

The list of PMs builds upon earlier work concerning MPA Network development and design for the NSB and is best understood when read in conjunction with these documents. The Network goals (Canada, 2014) and objectives are listed below, and it is recommended that readers are also familiar with the supporting documentation on Network Design Guidelines (MPATT, 2017), identification of ecological conservation priorities for the NSB (DFO, 2019a), and Network design strategies for the NSB (DFO, 2019b).

The PMs leverage spatial data gathered to support the development of an MPA Network for the Northern Shelf Bioregion. These data represent ecological conservation priority features (E-CPs; e.g., marine species and habitats), First Nations cultural conservation priorities (C-CPs; e.g., areas important for harvesting, areas important for culturally significant species, areas important for culture and spirituality), and human uses (e.g., commercial fishing catch and effort data, administrative boundaries, marine tenure information). We have tried to limit the bias in our ecological features by using datasets that are effort-corrected, random-stratified, and do not target specific areas or species. However, all data sources have some amount of bias and uncertainty, and our data, like all data, are limited to the time and space that sampling occurred. The spatial data used to calculate the PMs are one of several inputs used to develop the proposed MPA Network, and the PMs will be interpreted in the context of any limitations associated with the spatial data.

There are many PMs that are being reported. In some cases, such as those for ecological representation and replication, PMs represent subsets of species or features that are also captured as a component of another, more aggregated or “rolled-up” PM. This is to provide additional detail and context for the varied intended audiences. It is anticipated that different audiences will have different interests and perspectives on individual PMs. The PMs provide an assessment of a Network scenario at the regional and sub-regional scales. Where possible, PMs are linked to recommended design strategies (e.g., representational target ranges) from the Network design guidance documentation (DFO 2019b, MPATT 2017), while other PMs are more descriptive. In both instances the PMs will enable comparison among multiple scenarios, noting that an MPA network will not necessarily meet every PM at its recommended level, if applicable, subject to trade-off discussions and the associated decision-making process.

This summary list organises the administrative, cultural, and ecological PMs according to Network goal, objective, and/or design guidance so that the link is clear. All these PMs are to be presented in a report card format, one for each Network design scenario. PMs still under development are noted as such in the ‘Description’ column of the tables.

Note: The social and economic PMs are listed in two separate tables and are included in Compendium 3 where they can be viewed within the context of additional social and economic content.

4.1.2. Network goals and objectives with related PMs

Some Network goals and objectives are associated with several PMs, but not all goals and objectives can be measured directly by Network design. In those cases, comments below suggest which design guidance is relevant and/or whether the goal or objective is best measured at the implementation stage or through effectiveness monitoring post-implementation.

GOAL 1: TO PROTECT AND MAINTAIN MARINE BIODIVERSITY, ECOLOGICAL REPRESENTATION AND SPECIAL NATURAL FEATURES (*Goal 1 is of primary importance)

- Contribute to the conservation of the diversity of species, populations, and ecological communities, and their viability in changing environments.
- Protect natural trophic structures and food webs, including populations of upper-level predators, key forage species, nutrient importing and exporting species, and structure- providing species.
- Conserve areas of high biological diversity (species, habitat, and genetic diversity).
- Protect representative areas of every marine habitat in the bioregion.
- Contribute to protection of rare, unique, threatened, and/or endangered species and their habitats.
- Conserve ecologically significant areas associated with geological features and enduring/recurring oceanographic features.
- Contribute to conservation of areas important for the life history of resident and migratory species.

GOAL 2: TO CONTRIBUTE TO THE CONSERVATION AND PROTECTION OF FISHERY RESOURCES AND THEIR HABITATS.

- Contribute to conservation of areas important for the life history of resident and migratory species. Maintain or improve stock stability and productivity of species important for commercial, recreational, and Aboriginal fisheries.
    - *Performance of this objective is not specifically measured through scenario design. Some E-CPs represent species that are fisheries resources and representation of these in a network scenario is tracked through PMs. However, assessing stock stability and productivity for changes is best done post-implementation through effectiveness monitoring.*
- Maintain within protected areas the natural size and age structure of fished populations.
    - *Relates to guidance on well-distributed varying levels of protection, especially areas protected from fisheries harvest. Specifically assessing natural size and age structure of fished populations is best done post-implementation through effectiveness monitoring.*
- Conserve habitat important to ensuring that the productive capacity and harvestable biomass of commercial, recreational, and Aboriginal fisheries species are maintained within healthy and resilient ecological limits.
    - *Relates to guidance on representation of all habitat classes and other features that represent habitats identified through species assemblages (e.g., nearshore richness).*

GOAL 3: TO MAINTAIN AND FACILITATE OPPORTUNITIES FOR TOURISM AND RECREATION.

- Conserve sites compatible with and of high value for sustainable tourism and recreation.

GOAL 4: TO CONTRIBUTE TO SOCIAL, COMMUNITY AND ECONOMIC CERTAINTY AND STABILITY.

- Maintain or enhance the long-term productivity, resilience and reliability of marine ecosystem goods and services.
    - *While Ecosystem Goods and Services is a broad category, we have selected a range of social and economic performance measures that speak to how communities on the coast use and benefit from the marine environment.*
- Support opportunities for local communities to benefit socially, culturally, and economically from MPAs.
    - *Elements of this objective are measured through some of the tourism, recreation, and C-CP related performance measures but will require further attention during implementation and site-level planning.*
    - *Overall Goal 4 is related to guidance to consider the suite of human uses and values of the marine ecosystem. Not all objectives under goal 4 can be measured through scenario design. Goal 4 objectives are applicable to Network implementation, ongoing management, and effectiveness monitoring.*

GOAL 5: TO CONSERVE AND PROTECT TRADITIONAL USE, CULTURAL HERITAGE AND ARCHAEOLOGICAL RESOURCES.

- Increase awareness and understanding of First Nations use and stewardship of resources and territories.
    - *Performance of this objective is not specifically measured through scenario design, although inclusion of C-CPs in the design scenario will implicitly increase awareness of First Nations use and stewardship of resources and territories.*
- Represent marine areas of high cultural or historical value.
- Contribute to conservation of species significant to First Nations and coastal communities including those important for cultural use and food security.

GOAL 6: TO PROVIDE OPPORTUNITIES FOR SCIENTIFIC RESEARCH, EDUCATION AND AWARENESS.

- *Relates to guidance on well-distributed varying levels of protection which is relevant to experimental design. However, performance of objectives under Goal 6 are not specifically measured through scenario design. Additional measures to look specifically at scientific research, education and awareness will be applicable to Network implementation and ongoing management.*

4.1.3. Network design guidance that informs performance measures (MPATT, 2017)

- Representation of marine biodiversity
- Replication of marine biodiversity
- Well-distributed varying levels of protection
- Minimum size of individual sites
- Optimal spacing among network sites
- Connectivity between network sites and with terrestrial protected areas
- Resilience to climate change
- Consideration of the suite of human uses and values of the marine ecosystem
- Planning in the context of a wider suite of management approaches
- Enhancing management effectiveness and compliance
- Keeping MPA boundaries simple to assist with compliance and enforcement
- Enhancing protection levels of existing sites

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4.1.4. Performance measures – Administrative, cultural, and ecological

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1 Guidance on well-distributed representation & on resilience to climate change	**Sub-regional distribution of the Network area and zones**	km^2/%/#	X	X	Amount of Network area and proportion of Network area in the Northern Shelf Bioregion (NSB) and per sub-region. Number of Network zones in the NSB and per sub-region.	There is no overall area target for the MPA Network, but well-distributed representation means a balanced distribution across sub-regions. This measure helps assess the balance.	Results in Report Card
Goal 1, Objective 1, Goal 2 Guidance on protection levels	**Distribution of Network area by protection level**	km^2/%/#	X	X	Amount of Network area and proportion of Network area in the NSB and per sub-region, aligning with two levels of protection: • highly protected (IUCN Ia to III) • moderate to limited protection (IUCN IV to VI)	Guidance on protection levels suggests 20-50% of the Network in no-take or limited take (i.e., aligning with highly protected or IUCN Ib to III) (DFO 2019) Note: Identification of zones in high protection is limited to existing MPAs at this time. Although it is anticipated that the area in high protection will increase as a result of implementation of the Network, the exact location and size of the increase will be influenced by the results of finer scale risk assessments undertaken during implementation, and by any resulting mitigation measures identified and applied by management. All proposed new or modified zones are categorized as 'Moderate/Limited IUCN IV-VI' at this time.	Results in Report Card

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1, Goal 2 Guidance on size of protected area	**Size of Network protected areas**	% (#)	X	X	Area (proportion) of Network scenario that meet minimum size guidelines, in the NSB and per sub-region. I.e., Area (proportion) of scenario: • Larger than 12.6 km^2 • Larger than 50 km^2	Size guidelines suggest protected areas be 50-150 km^2 (to protect species within restricted and moderate movement classes) and at least 12.6 km^2 (to protect adults of species with restricted home ranges) (DFO 2019.	Results in Report Card
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on well-distributed representation, protection levels & on resilience to climate change	**Distribution of Network area in the nearshore, offshore, and inlets by protection level**	km^2/%	X	X	Amount of Network area and proportion of the Network area in the nearshore, offshore, and inlets by protection level (note: high protection assessed for existing MPAs only). Quantified for the NSB and per sub-region. Compare to NSB which is 24% nearshore, 76% offshore, and has 13% of its area in inlets.	Nearshore and offshore area are defined by the nearshore polygon developed for EBSAs, which has been CSAS reviewed (DFO 2018). Inlet area is defined by two Upper Ocean Sub-regions, Mainland Fjords and Low Flow Nearshore, with Portland Inlet and Canal added. Nearshore, offshore, and inlet area maps provided in the Report Card.	Results in Report Card

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on well-distributed representation	**Representation of E-CP species and area features**	% (#) of features	X		Proportion (number) of ecological conservation priority (E-CP) species features meeting each level of representational targets, using unscaled values. Quantifies number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	E-CPs identified in DFO 2017. Representational target ranges identified in DFO 2019. Results provided for all species features and these classes of species: Marine Plants and Algae, Fish, Invertebrates, Marine Mammals, Turtles, Seabirds. Results provided for these groups separately: "Fine filter area-based features" (i.e., Estuaries, biodiversity hotspots, high current/high rugosity, important bird areas), fish and invertebrate predators, marine mammal predators, forage fish, habitat forming, and nutrient exchangers. Note that habitat and coarse scale features are reported on in other PMs.	Results by species class in Report Card. Representation level achieved by each feature available in detail report.
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on well-distributed representation and protection levels	**Representation of E-CP species and area features, taking human activities into account.**	% (#) of features	X		Proportion (number) of E-CP species features meeting each level of representational targets, using scaled values. Quantifies number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	Same features as above but now incorporating protection afforded based on results of the Conservation Gaps Analysis (CGA). The CGA is a risk-based analysis method developed to assess the effectiveness of existing and proposed MPAs by accounting for the potential impacts of acceptable human activities on E-CPs using scaling factors derived from a global meta-analysis of MPAs published in the scientific literature (DFO 2019)	Results by species class in Report Card. Representation level achieved by each feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on well-distributed replication	**Replication of E-CP species and area features**	% (#) of features		X	Proportion (number) of E-CP species features 'adequately' (see PM details for this item) replicated in geographically dispersed sites in the Network, using unscaled values.	Replication analysis does not include density and point features. 'Adequate' replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB. 'Adequate' replication is assessed per sub-region. Replication assessment methods were developed from guidance in DFO 2019 and in collaboration with the Science Advisory Committee (SAC).	Results by species class in Report Card. Replication by feature available in detail report.
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on well-distributed replication and protection level	**Replication of E-CP species and area features, taking human activities into account**	% (#) of features		X	Proportion (number) of E-CP species features adequately replicated in geographically dispersed sites in the Network, using scaled values.	Replication analysis does not include density and point features. Adequate replication and distribution are based on feature amount in NSB, average patch size, and number of patches in NSB. Adequate replication is assessed per sub-region and takes into account the protection afforded based on results of CGA.	Results by species class in Report Card. Replication by feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1, Goal 2 Guidance on connectivity	**Spacing between Network sites**	% (#) of clumps (adjacent / aggregate zones)	X		Proportion (number) of Network sites that meet spacing guidelines (i.e., are located 40 – 200 km from a neighbouring site). Assessment performed on all zones and high protection zones only (note: high protection assessed for existing MPAs only). Additional connectivity performance measure is under development.	Spacing distance is calculated edge to nearest edge between aggregated adjacent candidate MPAs and is assessed 'as the fish swims,' avoiding terrestrial areas. Spacing guidelines suggest at least 40-200 km between sites (DFO 2019).	Results in Report Card
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on connectivity to support viability	**Land-sea connectivity – coastline adjacent to terrestrial protected areas**	km and % of coastline	X	X	Length and proportion of coastline captured in Network that is adjacent to terrestrial protected areas. Length and proportion of coastline adjacent to terrestrial protected areas within the planning area that is captured in the Network.	Establish nearshore MPAs near terrestrial protected areas to minimize potential impacts from land-based stressors. This guidance stems from advice to avoid and mitigate for cumulative impacts (DFO 2019). For context, the proportion of NSB coastline adjacent to terrestrial protected areas is included in the Report Card.	Results in Report Card

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 1, Goal 2, Goal 5 Guidance on resilience to Climate Change	**Climate change resiliency metric**				Under development		
Goal 1, Objective 2, Goal 2, Objective 3 Guidance on viability and resilience to Climate Change	**Potential loss of ecological intactness in Network sites, taking human activities into account**	% (#) of ecological roles lost, and/or % sites with lost roles	X		Difference in Ecological Intactness (EI) measured before and after taking human activities into account. EI is assessed per site as the number of ecological roles filled by E-CP features present, with a maximum of six roles per site. Losses in EI are a proxy measure of potential impacts to ecosystem function within a site.	Roles to be filled by features include habitat forming (structure providing), forage, nutrient exchange, and three types of upper-level predators. (A role is 'lost' when more than two human activities have potential consequence interactions with a feature playing role; see CGA details). Losses by site are tallied for a scenario to obtain this score. (EI assessment methods were developed in collaboration with the SAC.)	Results in Report Card; Lower numbers indicate greater Network viability and potential resilience to climate change.
Goal 1, Objective 3	**Representation of areas of high biodiversity – see representation of EBSAs, species, and habitats**				See other PMs.		Results by feature classes in Report Card. Representation level achieved by each feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 4, Goal 2, Goal 5 Guidance on well-distributed representation	**Representation of E-CP habitat class features**	% (#) of features	X		Proportion (number) of E-CP habitat class features meeting each level of representational targets, using unscaled values. Quantifies number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	E-CPs identified in DFO 2017. Representational target ranges identified in DFO 2019. Results provided for all habitat class features, then results by classes of habitats including: • Biophysical units • Bottom patches • Coastal classes • Ecosections • Geomorphic units • Ocean regions	Results by habitat class in Report Card. Representation level achieved by each feature available in detail report.
Goal 1, Objective 4, Goal 2, Goal 5 Guidance on well-distributed representation and protection levels	**Representation of E-CP habitat class features in highly protected Network areas**	% (#) of features	X		Proportion (number) of E-CP habitat class features meeting each level of representational targets in highly protected areas. Quantifies number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets. (note: high protection assessed for existing MPAs only).	Results provided for all habitat class features, then results by classes of habitats including: • Biophysical units • Bottom patches • Coastal classes • Ecosections • Geomorphic units • Ocean regions • Amount in highly protected areas counts toward representational targets.	Results by habitat class in Report Card. Representation level achieved by each feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 4, Goal 2, Goal 5 Guidance on well-distributed replication	**Replication of E-CP habitat class features**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed sites in the Network, using unscaled values.	Replication analysis does not include coastal class features. Adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB as recommended in DFO 2019. Adequate replication is assessed per sub-region as recommended in DFO 2019.	Results by habitat class in Report Card. Replication by feature available in detail report.
Goal 1, Objective 4, Goal 2, Goal 5 Guidance on well-distributed replication and protection levels	**Replication of E-CP habitat class features in highly protected Network areas**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed sites in the Network, counting amounts in highly protected zones only (note: high protection assessed for existing MPAs only).	Replication analysis does not include coastal class features. Adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB. Adequate replication is assessed per sub-region and counts amounts in highly protected zones only.	Results by habitat class in Report Card. Replication by feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 5, Goal 2, Goal 5 Guidance on well-distributed representation	**Representation of E-CP features of conservation concern**	% (#) of features	X		Proportion (number) of E-CP features of conservation concern meeting each level of representational targets, using unscaled values. Quantifies the number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	Conservation concern features only. E-CP feature list, identifying those specified as conservation concern, from Gale et al 2019. Representational target ranges identified in DFO 2019.	Results by conservation concern group in Report Card. Representation level achieved by each feature available in detail report.
Goal 1, Objective 5, Goal 2, Goal 5 Guidance on well-distributed representation and protection levels	**Representation of E-CP features of conservation concern, taking human activities into account**	% (#) of features	X		Proportion (number) of E-CP features of conservation concern meeting each level of representational targets, using scaled values. Quantifies the number and proportion of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	Conservation concern features only.	Results by conservation concern group in Report Card. Representation level achieved by each feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological

Network Goal & Objective *Design Guidance*	Performance Measure						
	Name	Units	Scope: Bioregion	Scope: Sub-regional	Description	Guidance or PM Details	Reporting mechanism
Goal 1, Objective 5, Goal 2, Goal 5 Guidance on well-distributed replication	**Replication of E-CP features of conservation concern**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed sites in the Network, using unscaled values.	Conservation concern features only. Adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB as recommended in DFO 2019. Adequate replication is assessed per sub-region as recommended in DFO 2019.	Results by conservation concern group in Report Card. Replication by feature available in detail report.
Goal 1, Objective 5, Goal 2, Goal 5 Guidance on well-distributed replication and protection levels	**Replication of E-CP features of conservation concern, taking human activities into account**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed sites in the Network, using scaled values.	Conservation concern features only. Adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB. Adequate replication is assessed per sub-region and takes into account the protection afforded based on results of CGA.	Results by conservation concern group in Report Card. Replication by feature available in detail report.
Goal 1, Objective 6, Goal 2 Guidance on well-distributed representation	**Representation of E-CP EBSA features**	% (#) of features	X		Proportion (number) of E-CP EBSA features meeting each level of representational targets, using unscaled values. Quantifies the proportion and number of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	EBSA features in the NSB identified and reassessed in DFO 2018. EBSA features presented under habitat classes.	Results for EBSA group in Report Card. Representation level achieved by each feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological

Network Goal & Objective *Design Guidance*	Performance Measure						
	Name	Units	Scope: Bioregion	Scope: Sub-regional	Description	Guidance or PM Details	Reporting mechanism
Goal 1, Objective 6, Goal 2 Guidance on well-distributed representation and protection levels	**Representation of E-CP EBSA features, in highly protected Network areas**	% (#) of features	X		Proportion (number) of E-CP EBSA features meeting each level of representational targets in highly protected areas (note: high protection assessed for existing MPAs only). Quantifies the proportion and number of features falling short, falling between low and med targets, falling between med and high targets, and exceeding targets.	EBSA features presented under habitat classes. Amount in highly protected areas counts toward representational targets.	Results EBSA group in Report Card. Representation level achieved by each feature available in detail report.
Goal 1, Objective 6, Goal 2 Guidance on well-distributed replication	**Replication of E-CP EBSA features**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed sites in the Network, using unscaled values.	EBSA features presented under habitat classes. Adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB as recommended in DFO 2019. Adequate replication is assessed per sub-region as recommended in DFO 2019.	Results by EBSA group in Report Card. Replication by feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Goal 1, Objective 6, Goal 2 Guidance on well-distributed replication and protection levels	**Replication of E-CP EBSA features, in highly protected Network areas**	% (#) of features		X	Proportion (number) of E-CP features adequately replicated in geographically dispersed highly protected sites in the Network (note: high protection assessed for existing MPAs only).	EBSA features presented under habitat classes; adequate replication is based on feature amount and distribution in NSB, average patch size, and number of patches in NSB. Adequate replication is assessed per sub-region and counts amounts in highly protected zones only.	Results by EBSA group in Report Card. Replication by feature available in detail report.
Goal 1, Objective 7	**Representation of areas important for the life history of resident and migratory species – see representation of species groups and habitat classes**				See other PMs		Representation and replication results by individual feature available in detail report.

MPA Network PM Summary – Administrative, Cultural and Ecological							
Network Goal & Objective *Design Guidance*	**Performance Measure**						
	Name	**Units**	**Scope**		**Description**	**Guidance or PM Details**	**Reporting mechanism**
			Bioregion	**Sub-regional**			
Guidance on enhancing protection level in existing sites	**New area and existing protection incorporated into MPA Network**	km^2/%	X	X	Amount and proportion of the MPA design scenario that overlaps: • existing MPAs, • existing RCAs and PMZs, • new area. Amount and proportion of existing protection incorporated into the MPA design scenario, including: • existing MPAs, • RCAs, • PMZs.	"New" area is area outside of current protection measures (i.e., current measures include existing MPAs, RCAs, and MaPP PMZs) Guidance on enhancing the protection levels of existing sites with supplementary management measures to meet conservation objectives (MPATT 2017).	Results in Report Card.

MPA Network PM Summary – Administrative, Cultural and Ecological

Network Goal & Objective *Design Guidance*	Performance Measure						
	Name	Units	Scope: Bioregion	Scope: Sub-regional	Description	Guidance or PM Details	Reporting mechanism
Guidance on planning in the context of a wider suite of management approaches and enhancing management effectiveness and compliance to maximize benefits and minimize costs.	**Feasibility of implementation, future monitoring, and enforcement**		X		Under development – potential expansion into multiple PMs.	Related to the complexity of a Network scenario. Example guidance (MPATT 2017): • Plan in the context of a wider suite of management approaches, considering other relevant management measures and how the addition of MPAs in the region can maximize the effectiveness of existing measures, while minimizing operational redundancies or conflicts. • Enhance the protection levels of existing sites with supplementary management measures to meet conservation objectives. • Keep MPA boundaries simple to assist with compliance and enforcement.	
Goal 5, Objective 2 Guidance on inclusion of culturally important areas	**Representation of First Nation C-CP features (#) in the Network**	% (#) of features	X	X	# and proportion of First Nation C-CPs captured in the Network, stratified by critical, very high, and high.	C-CPs are counted if >75% of the area falls into a Network site. Guidance is to prioritize culturally important areas for inclusion in MPAs, where these are brought forward by First Nations (MPATT 2017).	Results in the Report Card

MPA Network PM Summary – Administrative, Cultural and Ecological

Network Goal & Objective *Design Guidance*	Performance Measure						
	Name	Units	Scope: Bioregion	Scope: Sub-regional	Description	Guidance or PM Details	Reporting mechanism
Goal 5, Objective 2 Guidance on inclusion of culturally important areas	**Representation of First Nation C-CP features (area) in the Network**	km^2/%	X	X	Area and proportion of First Nation C-CP area captured in the Network, stratified by critical, very high, and high.	Guidance is to prioritize culturally important areas for inclusion in MPAs, where these are brought forward by First Nations (MPATT 2017).	Results in the Report Card
Goal 5, Objective 2 Guidance on inclusion of culturally important areas and on protection levels	**Representation of First Nation C-CP features (#) in the Network captured in each level of protection**	# (%) of features	X	X	# and proportion of First Nation C-CPs captured in the Network, stratified by level of protection (note: high protection assessed for existing MPAs only).	C-CPs are counted if >75% of the area falls into a Network site. Guidance is to prioritize culturally important areas for inclusion in MPAs, where these are brought forward by First Nations (MPATT 2017).	Results in the Report Card
Goal 5, Objective 2 Guidance on inclusion of culturally important areas and on protection levels	**Representation of First Nation C-CP features (area) in the Network captured in each level of protection**	km^2/%	X	X	Area and proportion of First Nation C-CP area captured in the Network, stratified by level of protection (note: high protection assessed for existing MPAs only).	Guidance is to prioritize culturally important areas for inclusion in MPAs, where these are brought forward by First Nations (MPATT 2017).	Results in the Report Card

4.2. Performance Measure Results

Executive Summary – Ecological, Cultural and Administrative Performance Measures: Proposed Network Scenario (Version P3) compared to existing MPAs (Baseline Case)

This document presents a high-level summary report of the suite of ecological, cultural, and administrative performance measures developed for the Marine Protected Area (MPA) Network process in the Northern Shelf Bioregion (NSB) to assist in evaluating and comparing different Network designs. Below we report the performance of the proposed MPA Network (Version P3) compared to the baseline of existing MPAs in the NSB (Baseline Case). The full detailed report cards for the individual scenarios follow.

This report indicates that the proposed Network significantly improves ecological and cultural performance compared to baseline existing MPAs. However, trade-offs among multiple objectives, and the lack of active planning in some portions of the northern shelf bioregion at this time (i.e., Category 3 areas), have led to some gaps in performance. Some of these gaps can be improved upon in future Network design iterations and/or with implementation of other marine management practices and conservation initiatives.

Network area

- 30% of the NSB is part of the proposed Network, compared to 16% in current MPAs.
  - Proportion of sub-region in proposed Network varies from 25% - 41%.
  - Additional Inlet, nearshore, and offshore habitats are represented in the proposed Network, as well as in each sub-region. Balance of these broad habitat types is improved over current MPAs across the region and among sub-regions.

Protection level

- 2,933 km^2 (10%) of the proposed Network is categorized as highly protected (IUCN I-III), which is the same area in the current MPAs due to the fact that identification of zones in high protection is limited to existing MPAs at this time. In the context of existing MPAs only, the 2,933 km^2 represents 18% of the current footprint. Although it is anticipated that the area in high protection will increase as a result of implementation of the proposed Network, the exact location and size of the increase will be influenced by the results of finer scale risk assessments undertaken during implementation and by any resulting mitigation measures identified and applied by management. All proposed new or modified zones are categorized as 'Moderate/Limited - IUCN IV-VI' at this time.
  - Current high protection is not well distributed among sub-regions; almost all is outside the NVI sub-region.
  - Most current high protection is offshore, with some notable nearshore and inlet areas of high protection in the Haida Gwaii sub-region.

Site size

- The proportion of the proposed Network and existing MPA footprint in 'clumps' (spatially contiguous Network areas) that are at least 12.6 km^2 (minimum size) and 50 km^2 (recommended size) for the NSB are 99% and 95% respectively for the proposed Network and 99% and 96% respectively for existing MPAs.

Connections to existing protection

- The proposed Network is adjacent to 92% of the terrestrially protected coastline; existing MPAs are adjacent to 76%.
- 100% of existing MPAs and RCAs are incorporated into the proposed Network.

Representation of First Nations cultural conservation priorities (C-CPs)

- Representation of C-CP area is 60% in the proposed Network, compared to 12% in existing MPAs.
- No portion of C-CPs is currently highly protected in an existing MPA.
- 73% of critical C-CP area is represented in the proposed Network.

Representation of ecological conservation priority (E-CP) features

- Less than 10% of species, and no habitats are under-represented in the proposed Network, compared to 26% of species and 20% of habitats under-represented in existing MPAs.
- Ten conservation concern E-CP features are under-represented in the proposed Network, while 20 are under-represented in existing MPAs. Under-represented E-CP features playing key ecological roles are fewer in every category in the proposed Network compared to existing MPAs.
- After taking conservation objectives and consideration of potential interactions with human activities for each zone into account, 74% of species features meet or exceed representation target ranges in the proposed Network, compared to 42% of species in existing MPAs.
- 33% of all habitat E-CP features are adequately represented, falling within or exceeding the target range in proposed higher protection areas in both the proposed Network and existing MPAs, though high protection assessments are limited to existing MPAs only (see Protection level, above).
- Overall, fewer species are falling short of their representational target ranges after considering human activities in the proposed Network versus existing MPAs (41 versus 93 respectively; 17 versus 34 for species of 'conservation concern').
- In the proposed Network footprint significant numbers of E-CP features (16–56% of features) representing key ecosystem components (e.g., fish and invertebrate predators, forage, habitat forming, and nutrient transporting species) fall short of meeting representation targets after taking potential human activities into account. However, in existing MPAs, 42–100% of these same features fall short of targets when human activities are considered.
- Fish and invertebrate E-CP features are better represented in the proposed Network than in existing MPAs (86% and 91% meet the target range, compared to 70% and 43%, respectively). However, they are not as well protected in the proposed Network as other E-CP features when comparing scaled values based on potential human activities. 38% of fish E-CP features and 61% of invertebrate E-CP features fall short of targets when potential human activities are considered.

Replication of E-CP features

- Replication of habitats is increased in all sub-regions in the proposed Network. Habitat features with two to three replicates per sub-region increased from 30-56% to 49-97% (range by sub-region).
- Species features with replicates also increased in the proposed Network (52-91% range by sub-region) compared to existing MPAs (8-82% range by sub-region); 42-91% range by sub-region compared to 4-79% in existing MPAs when considering human activities.

Future improvements

The proposed Network improves ecological conservation within the NSB across performance measures when compared to the baseline case of existing MPAs. However, it is important to note that it does not fully achieve all of the desired overarching Network objectives. While it is expected that there will be adjustments and refinements to the Network during establishment processes, ongoing planning ahead of these processes aims to fill some of these gaps. With regard to representation and replication, target shortfalls will be evaluated on a feature-by-feature basis. This evaluation incorporates a number of considerations, including:

- potential future contributions from Category 3 areas;
- potential contribution of Network zones with known data gaps;
- mitigation measures; and,
- additional research.

MPATT, August 13, 2020

4.2.1. Administrative, cultural, and ecological performance measures – Report card description

Each Report Card reports on performance measures that have been quantified to assess performance of MPA Network scenarios developed during planning, and to support assessments of future performance as the proposed Network is implemented.[1] The following performance measures are quantified in each report.

1. Physical characteristics of scenario
2. Representation of ecological conservation priorities
3. Replication of ecological conservation priorities
4. Ecological Intactness Proxy
5. Representation of First Nations cultural conservation priorities

Physical characteristics of scenario	
Measure	**Explanation**
Area; km² (proportion of planning area)	Area **in planning area** is the total area (km²) in the Northern Shelf Bioregion (NSB), and in each of the four sub-regions (Central Coast, Haida Gwaii, North Coast, and Northern Vancouver Island). Area **in inlets** is the total area (km²) in inlets and channels (Figure 3) in the NSB and in each sub-region, with the proportion in parentheses. Area **in nearshore** is the total area (km²) within 2 km of the shoreline or up to 20 m depth in the NSB (Figure 4) and in each sub-region, with the proportion in parentheses. Area **in offshore** is the total area (km²) not considered nearshore in the NSB (Figure 4) and in each sub-region, with the proportion in parentheses. Area in scenario is the total area (km²) of the scenario in the NSB, and in each of the four sub-regions. The proportion of the planning area covered by the scenario is in parentheses.
Count	The total number of **zones** in the scenario that are in the NSB and each sub-region.
Area; km² (proportion) of scenario meeting [size guidelines] …	The area and proportion of scenario ‘clumps’ (spatially contiguous Network areas) that are at least 12.6 km² (minimum size) and 50 km² (recommended size) in size for the NSB and each of the sub-regions, and the corresponding proportion of sites is in parentheses.

1 Note IUCN high protection levels were assessed on existing sites only during the planning phase. As sites are implemented, IUCN protection level assessment will be expanded to include these new/modified sites.

Physical characteristics of scenario	
Measure	**Explanation**
Area of scenario by IUCN protection level; km² (proportion)	The area (km²) of the scenario footprint consistent with guidance on **High (IUCN Ib-III)** or **Moderate- Limited (IUCN IV-VI)** protection levels for the NSB and each sub-region, and the corresponding proportion of the scenario area is in parentheses. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Area of scenario in inlets; km² (proportion of scenario)	The area (km²) of the scenario footprint that is in inlets and channels (Figure 3) for the NSB and each sub-region, with the corresponding proportion in parentheses. The area is also broken down by IUCN protection level. For context, 13% of the NSB is in inlets and channels. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Area of scenario in nearshore; km² (proportion)	The area (km²) of the scenario footprint that is nearshore (i.e., within 2 km of the shoreline or up to 20 m depth, Figure 4) for the NSB and each sub-region, with the corresponding proportion in parentheses. The area is also broken down by IUCN protection level. For context, 24% of the NSB is nearshore. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Area of scenario in offshore; km² (proportion)	The area (km²) of the scenario footprint that is offshore or not nearshore (Figure 4) for the NSB and each sub-region, with the corresponding proportion in parentheses. The area is also broken down by IUCN protection level. For context, 76% of the NSB is offshore. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Number (proportion) of zones adjacent to a terrestrial protected area	The number of scenario zones that are adjacent to a terrestrial protected area for the NSB and each of the sub-regions, and the corresponding proportion of zones is in parentheses.
Area of scenario covering existing protected areas; km² (proportion of scenario)	The area (km²) of the scenario footprint that is New Area (i.e., area within the scenario that is not currently covered with an existing MPA [federal or provincial], Rockfish Conservation Area [RCA], or Protection Management Zone [PMZ] identified in Marine Plan Partnership 2015 Plans), Existing MPAs (both federal and provincial), Existing RCAs, or Existing PMZs for the NSB and each sub-region, with the corresponding proportions in parentheses.
Area of existing protected areas within scenario; km² (proportion of area of existing protected areas)	The area (km²) of Existing MPAs, Existing RCAs, or Existing PMZs captured in the scenario for the NSB. The proportion in this case is the area (of each type) in the scenario over the total area of Existing MPAs, Existing RCAs, or Existing PMZs.

Physical characteristics of scenario	
Measure	**Explanation**
Coastline; km (proportion of coastline in planning area)	The first two measures are for comparison and do not change with the scenario. 'In planning area' is the total length of coastline (km) in the NSB and for each sub-region. Next is the length of coastline (km) that is adjacent to terrestrial protected area (both federal and provincial), with that as a proportion of total coastline. Finally, the length of coastline (km) in the scenario is reported for the NSB and each sub-region, and that as a proportion of the total coastline.
Coastline in scenario; km (proportion of coastline in scenario)	The length of coastline (km) in the scenario for the NSB and each sub-region broken down by IUCN protection level, and that as a proportion of the scenario coastline. Proportions for High protection and Mod/Limited protection add to 1.0. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Coastline in scenario that is adjacent to terrestrial protected area; km (proportion of coastline in planning area that is adjacent to terrestrial protected area)	The length of coastline (km) in the scenario that is adjacent to a terrestrial protected area (both federal and provincial) for the NSB and each sub-region. This is also broken down by IUCN protection level. The proportions in this case are the lengths reported divided by the length of coastline in the planning area that is adjacent to terrestrial protected areas. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Spacing of sites: Number (proportion) of clumps within 40 km of another clump	The number (proportion in parentheses) of clumps (i.e., spatially contiguous Network areas) that meet spacing guidelines. Guidelines suggest 40 km - 200 km spacing between sites (DFO 2019). Clumps can be made up of several sites if the sites are spatially adjacent to each other, or can include parts of sites if the parts are separated in space (e.g., Hecate Sponge Reef Site). All spacing measurements are made from edge to nearest edge and as-the-fish-swims around any land masses. If clumps have 40 km or less between them, they are "connected" at 40 km. Spacing is reported for all clumps, clumps consisting of high protection zones only (i.e., under the column titled, "Incorporating Human Activities"), and each type meeting the minimum size guideline (12.6 km²), or the recommended size guideline (50 km²). *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*

Physical characteristics of scenario	
Measure	**Explanation**
Spacing of sites: Area of clumps; km² (proportion of total area of clumps) within 40 km of another clump	The area in km² (proportion of total area in parentheses) of clumps (i.e., spatially contiguous Network areas) that meet spacing guidelines. Guidelines suggest 40 km - 200 km spacing between sites (DFO 2019). Clumps can be made up of several sites if the sites are spatially adjacent to each other, or can include parts of sites if the parts are separated in space (e.g., Hecate Sponge Reef Site). All spacing measurements are made from edge to nearest edge and as the fish swims around any land masses. If clumps have 40 km or less between them, they are "connected" at 40 km. Spacing is reported for all clumps, clumps consisting of high protection zones only (i.e., under the column titled, "Incorporating Human Activities"), and each type meeting the minimum size guideline (12.6 km²), or the recommended size guideline (50 km²). *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Spacing of sites: Number (proportion) of clumps within 200 km of another clump	The number (proportion in parentheses) of clumps (i.e., spatially contiguous Network areas) that meet spacing guidelines. Guidelines suggest 40 km - 200 km spacing between sites (DFO 2019). Clumps can be made up of several sites if the sites are spatially adjacent to each other, or can include parts of sites, if the parts are separated in space (e.g., Hecate Sponge Reef Site). All spacing measurements are made from edge to nearest edge and as the fish swims around any land masses. If clumps have 200 km or less between them, they are "connected" at 200 km. Spacing is reported for all clumps, clumps consisting of high protection zones only (i.e., under the column titled, "Incorporating Human Activities"), and each type meeting the minimum size guideline (12.6 km²), or the recommended size guideline (50 km²). *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
Spacing of sites: Area of clumps; km² (proportion of total area of clumps) within 200 km of another clump	The area in km² (proportion of total area in parentheses) of clumps (i.e., spatially contiguous Network areas) that meet spacing guidelines. Guidelines suggest 40 km - 200 km spacing between sites (DFO 2019). Clumps can be made up of several sites if the sites are spatially adjacent to each other, or can include parts of sites, if the parts are separated in space (e.g., Hecate Sponge Reef Site). All spacing measurements are made from edge to nearest edge and as the fish swims around any land masses. If clumps have 200 km or less between them, they are "connected" at 200 km. Spacing is reported for all clumps, clumps consisting of high protection zones only (i.e., under the column titled, "Incorporating Human Activities"), and each type meeting the minimum size guideline (12.6 km²), or the recommended size guideline (50 km²). *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time*.

Representation of Ecological Conservation Priorities	
Measure	**Explanation**

Proportion (number) of features	This measure summarizes how well the E-CP features are represented in the scenario. The proportion of ecological features in each feature category that falls into a target range category is reported. In parentheses is the corresponding number of features out of total possible features in that feature category. Listing of features within each feature category are provided in Appendix A.
	
	The proportion and number of targeted ecological features that are represented in the scenario fall into these target range categories:
	· **Below LOW target**
	  · E.g., for a feature targeted at 10-20%, below low target means the scenario captures less than 10% of the feature.
	· **At or above LOW but below MEDIUM target**
	  · E.g., for a feature targeted at 10-20%, this category means the scenario captures 10 or more % and less than 15% of the feature.
	· **At or above MEDIUM but below HIGH target**
	  · E.g., for a feature targeted at 10-20%, this category means the scenario captures 15 or more % and less than 20% of the feature.
	· **At or above HIGH target**
	  · E.g., for a feature targeted at 10-20%, this category means the scenario captures 20% or more of the feature.
	
	The first column of results (Not Incorporating Human Activities) provides these measures for the scenario in the NSB based on the unscaled proportions of features. The second column of results (Incorporating Human Activities) provides these measures for the scenario in the NSB based on the scaled proportions of features after incorporating any down-scaling due to potential interaction with human activities or, for categories marked with +, based on features within High Protection zones only. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.*
	
	This measure is reported for several categories of targeted E-CP features:
	1. Habitats
	· All Habitat features+ (70 features)
	· Biophysical Units+ (5 features)
	· Bottom Patches+ (3 features)
	· Coastal Classes+ (12 features)
	· Ecologically and Biologically Significant Areas (EBSAs)+ (13 features)
	· Ecosections+ (8 features)
	· Geomorphic Units+ (14 features)
	· Upper-ocean Sub-regions+ (15 features)

Representation of Ecological Conservation Priorities	
Measure	**Explanation**
	2. Species, by category • Conservation concern species* (73 features) • Significant areas+ (9 features) • Predators; fishes and invertebrates only (22 features) • Forage species (9 features) • Habitat-forming species (19 features) • Mammals (15 features) • Nutrient-transporting species (10 features) **3. Species, by species group** • All species features (157 features) • Birds (53 features) • Fish (57 features) • Invertebrates (23 features) • Mammals and Reptiles (16 features) • Plants and Algae (10 features). **Conservation concern species were identified based on conservation status and vulnerability (Gale et al., 2019)*
Proportion (number) meeting replication target	This measure summarizes how well the scenario captures replicates of E- CP features. Of the 238 ecological features in the Network analysis with representational targets, 102 are described by area-based data (versus density distributions, modelled habitat, point observations, or line data) and were assessed for their replicate count. Replication targets for these features range from 2-3 per sub-region and were determined based on a feature's spatial extent in each sub-region, average patch size and number of patches in NSB. The size threshold to be counted as a replicate varies by feature, and the target number of replicates varies by feature and sub-region. Replicates are assessed by site. Replication assessment methods, available upon request, were developed in collaboration with the Science Advisory Committee (SAC) and using guidance in DFO 2019. This measure represents the proportion of ecological features in each feature category that meets replication targets. In parentheses is the corresponding number of features out of total possible features in that category that could be replicated in each sub-region. The number of features that could possibly be replicated in each sub-region varies because a feature needs to be present with sufficient total area to account for possible replicates.

Representation of Ecological Conservation Priorities	
Measure	**Explanation**
	The first column of results (Not Incorporating Human Activities) provides these measures for the scenario in each sub-region based on the unscaled proportions of features. The second column of results (Incorporating Human Activities) provides these measures for the scenario in each sub-region based on the scaled proportions of features after incorporating any down-scaling due to potential interaction with human activities, or for categories marked with +, based on feature amounts within High Protection zones only. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.* The replication measures are provided for several categories of features: **1. Habitats** • All Habitat features+ • Biophysical Units+ • Bottom Patches+ • Ecologically and Biologically Significant Areas (EBSAs)+ • Ecosections+ • Geomorphic Units+ • Upper-ocean Sub-regions+ **2. Species features, by category** • Conservation concern species • Significant areas+ • Forage species • Habitat-forming species • Mammals • Nutrient-transporting species **3. Species features, by species group** • All species features • Birds • Fish • Invertebrates • Mammals and Reptiles • Plants and Algae

Representation of Ecological Conservation Priorities	
Measure	**Explanation**
Loss of ecological roles captured in scenario due to interactions	Five measures are provided to describe the potential impact to ecosystem function that may result from human activity in scenario sites. The Ecological Intactness Proxy (EIP) is assessed per site as the number of ecological roles filled by E-CP features present, with a maximum of six roles per site. Roles to be filled by features include habitat forming (structure providing), forage, nutrient exchange, and three types of upper-level predators. A role is 'lost' when more than two human activities have potential consequence interactions with a feature playing a role or a single activity has a higher potential consequence, as determined by the Conservation Gaps Analysis (CGA, DFO 2019). EIP assessment methods, available upon request, were developed in collaboration with the SAC. Three measures are reported for both unscaled values (Not Incorporating Human Activities) and scaled values (Incorporating Human Activities): 1. **Average n ecological roles per site** is the average number of ecological roles per site; maximum possible is 6. 2. **Total roles** is the total number of roles filled by E-CP features present in all sites in the scenario. 3. **Number (proportion) of sites with fewer than 6 roles (i.e., fewer than maximum possible)** is reported because an ecologically intact site would theoretically have all 6 roles filled. Two measures are reported for the entire NSB to describe the potential loss of ecosystem function that may result from human activity in scenario sites: 1. **Number (proportion) roles lost** is the total number of features that could play an ecological role in a site but have potential interactions with human activities that could disrupt that function. The proportion is roles lost over the total number of roles fulfilled by features in all sites in the scenario. 2. **Number (proportion) sites with lost roles** is the number of sites where activity interactions could disrupt the ecological function of one or more features playing an ecological role. The proportion is the number of sites with lost roles over the total number of sites in the scenario.

Representation of First Nations cultural conservation priorities (C-CPs)	
Measure	**Explanation**
Area of C-CPs in scenario; km² (proportion of C-CP area)	The First Nation C-CP area (km²) that is captured in the scenario footprint for the entire NSB and for each of the four sub-regions, with the proportion of C-CP total area in parentheses. The first column of results (Not Incorporating Human Activities) provides these measures for the NSB and each sub-region based on simple overlap with all scenario zones. The second column of results (Incorporating Human Activities) provides these measures for the NSB and each sub-region based on overlap with High Protection zones only. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time.* The measure is provided for four classes of C-CPs based on their ranking: 1. All features+ (177 C-CPs in total) 2. Critical+ (68 C-CPs) 3. Very High+ (66 C-CPs) 4. High+ (43 C-CPs)
Proportion (number) of FNCCPs in scenario, counting only FNCCPs with 75% or more area in scenario	The proportion of the C-CPs that are captured in the scenario for the entire NSB and for each of the four sub-regions. The proportion in this measure is based on a count of areas identified by the First Nations as C-CPs. The corresponding number of C-CPs captured is in parentheses. A C-CP is counted if 75% or more of its area is captured in the scenario. The first column of results (Not Incorporating Human Activities) provides these measures for the NSB and each sub-region based on simple overlap with all scenario zones. The second column of results (Incorporating Human Activities) provides these measures for the NSB and each sub-region based on overlap with High Protection zones only. *Note: only existing MPAs have been assessed for High Protection (IUCN I-III) at this time*. The measure is provided for the same four classes of C-CPs.

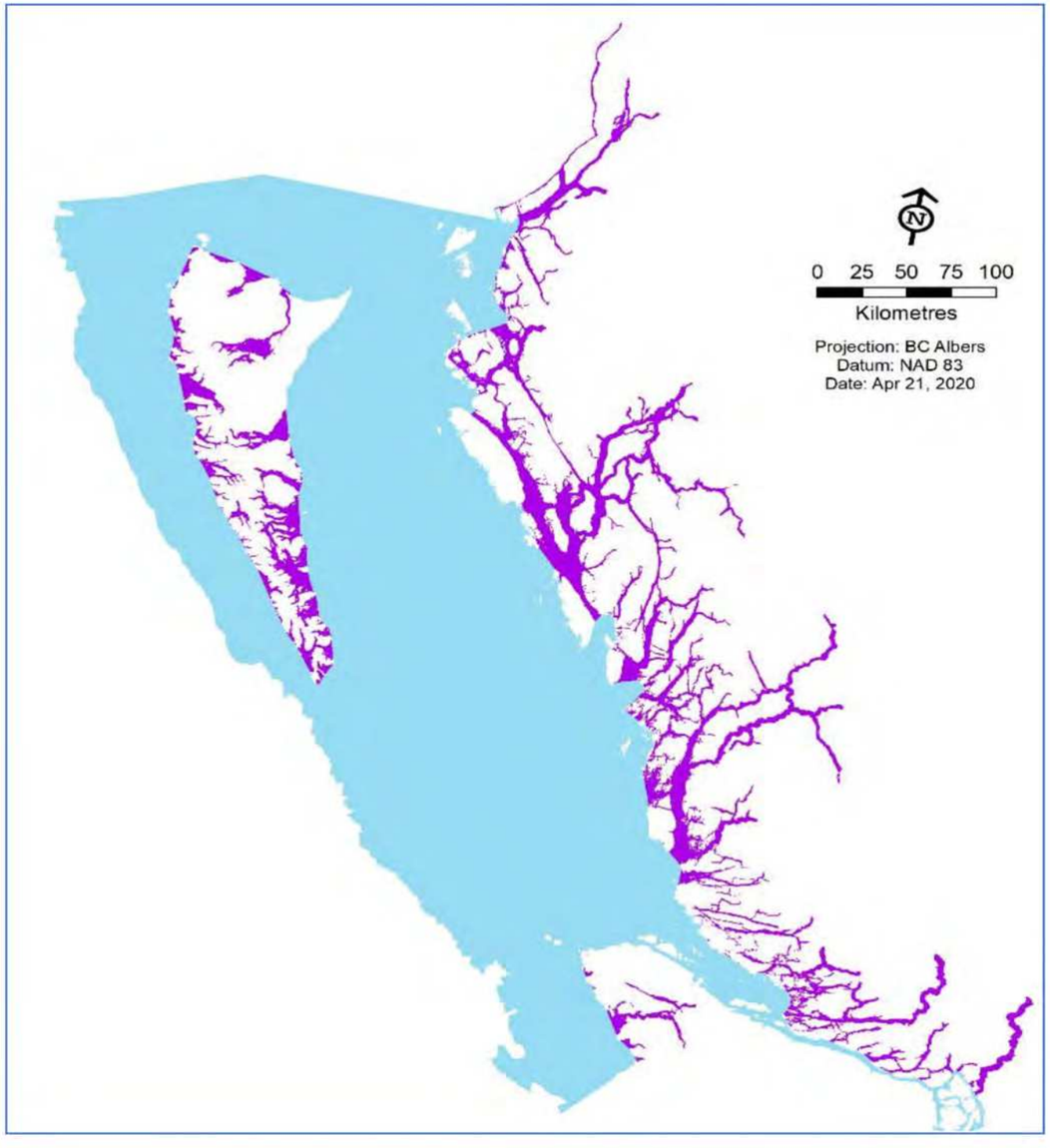

Figure 3. Inlets and channels (purple) and the remainder of the Northern Shelf Bioregion (blue). Inlets and channels make up 13% of the NSB overall.

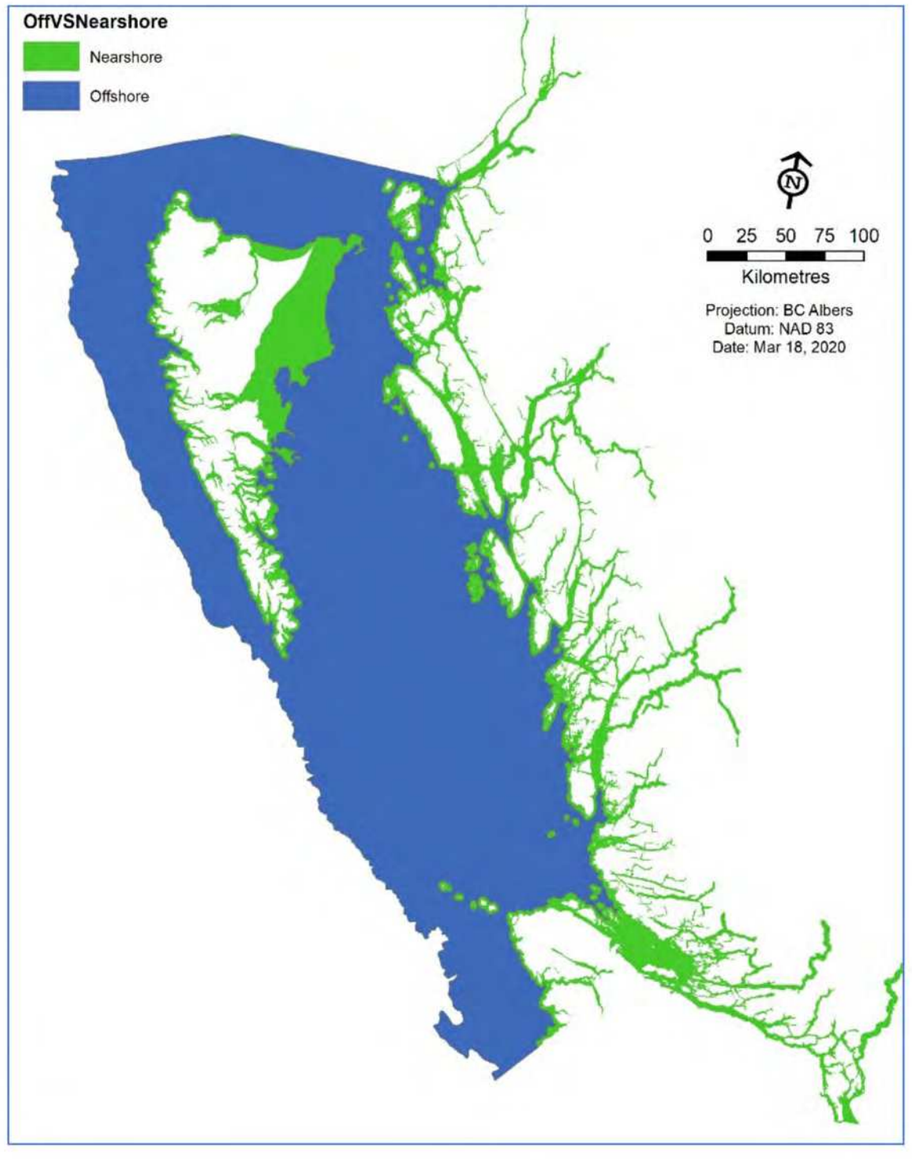

Figure 4. Nearshore (green) and offshore (blue) areas of the NSB. The nearshore makes up 24% of the NSB and the offshore makes up the remaining 76%.

References

DFO. “Design Strategies for the Northern Shelf Bioregional Marine Protected Area Network.” DFO Can. Sci. Advis. Sec. Res. Doc. 2019/026, 2019. https://waves-vagues.dfo-mpo.gc.ca/Library/40817787.pdf.

4.2.2. Performance measures for existing MPAs scenario

Scenario run 2021-02-12. PDF Report Card compiled 2022-07-26.

	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Physical characteristics of scenario										
Area; km2 (proportion of planning area)										
In planning area	101524	22083	46057	19495	13889	-	-	-	-	-
In planning area – inlets	13263 (0.13)	3507 (0.16)	2700 (0.06)	4622 (0.24)	2434 (0.18)	-	-	-	-	-
In planning area – nearshore	24284 (0.24)	4434 (0.20)	7307 (0.16)	6848 (0.35)	5695 (0.41)	-	-	-	-	-
In planning area – offshore	77240 (0.76)	17649 (0.80)	38749 (0.84)	12647 (0.65)	8194 (0.59)	-	-	-	-	-
In scenario	16641 (0.16)	6125 (0.28)	5224 (0.11)	1693 (0.09)	3599 (0.26)	-	-	-	-	-
Count										
Zone	137	23	16	53	45	-	-	-	-	-
Area^; km2 (proportion) of scenario meeting...										
Min. size of 12.6 km2	16751 (0.99)	-	-	-	-	-	-	-	-	-
Rec. size of 50 km2	16369 (0.96)	-	-	-	-	-	-	-	-	-
Total area all clumps	16999 (1.00)	-	-	-	-	-	-	-	-	-
Area^; km2 (proportion) of scenario in high protection meeting...										
Min. size of 12.6 km2	2938 (0.99)	-	-	-	-	-	-	-	-	-
Rec. size of 50 km2	2909 (0.98)	-	-	-	-	-	-	-	-	-
Total area all clumps	2976 (1.00)	-	-	-	-	-	-	-	-	-
Area of scenario by IUCN protection level; km2 (proportion)										
High IUCN Ib-III^^	2933 (0.18)	833 (0.14)	1422 (0.27)	674 (0.4)	4 (0)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	13708 (0.82)	5292 (0.86)	3802 (0.73)	1019 (0.6)	3595 (1)	-	-	-	-	-
Area of scenario in inlets; km2 (proportion of scenario)										
Inlets: All Protection Levels	2692 (0.16)	387 (0.06)	1841 (0.35)	329 (0.19)	135 (0.04)	-	-	-	-	-
High IUCN Ib-III^^	428 (0.03)	0 (0.00)	428 (0.08)	0 (0.00)	0 (0.00)	-	-	-	-	-
Mod/Limited IUCNIV-VI^^	2264 (0.14)	387 (0.06)	1413 (0.27)	329 (0.19)	135 (0.04)	-	-	-	-	-
Area of scenario in nearshore; km2 (proportion of scenario)										
Nearshore: All Protection Levels	4611 (0.28)	676 (0.11)	2633 (0.50)	649 (0.38)	653 (0.18)	-	-	-	-	-
High IUCN Ib-III^^	596 (0.04)	4 (0.00)	588 (0.11)	0 (0.00)	4 (0.00)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	4015 (0.24)	672 (0.11)	2045 (0.39)	649 (0.38)	649 (0.18)	-	-	-	-	-
Area of scenario in offshore; km2 (proportion of scenario)										
Offshore: All Protection Levels	12030 (0.72)	5448 (0.89)	2591 (0.50)	1044 (0.62)	2947 (0.82)	-	-	-	-	-
High IUCN Ib-III^^	2337 (0.14)	829 (0.14)	834 (0.16)	674 (0.40)	0 (0.00)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	9693 (0.58)	4620 (0.75)	1757 (0.34)	370 (0.22)	2947 (0.82)	-	-	-	-	-
Number (proportion) of zones adjacent to a terrestrial protected area										
Zones	123 (0.89)	16 (0.69)	14 (0.87)	51 (0.96)	42 (0.93)	-	-	-	-	-
Area of scenario covering existing protected areas; km2 (proportion of scenario)										
Existing MPAs**	16641 (1.00)	6125 (1.00)	5224 (1.00)	1693 (1.00)	3599 (1.00)	-	-	-	-	-
Existing RCAs**	816 (0.05)	113 (0.02)	110 (0.02)	137 (0.08)	457 (0.13)	-	-	-	-	-
Existing PMZs**	2369 (0.14)	565 (0.09)	1687 (0.32)	113 (0.07)	4 (0.00)	-	-	-	-	-
Area of existing protected areas within scenario; km2 (proportion of area of existing protected areas)										
Existing MPAs**	16641 (1.00)	-	-	-	-	-	-	-	-	-
Existing RCAs**	816 (0.28)	-	-	-	-	-	-	-	-	-
Existing PMZs**	2369 (0.15)	-	-	-	-	-	-	-	-	-
Coastline; km (proportion of coastline in planning area)										
In planning area	29385	8008	4662	9149	7563	-	-	-	-	-
Adjacent to terrestrial protected area	12309 (0.42)	3830 (0.48)	3432 (0.74)	3475 (0.38)	1572 (0.21)	-	-	-	-	-
In scenario	9435 (0.32)	1523 (0.19)	3450 (0.74)	3070 (0.34)	1392 (0.18)	-	-	-	-	-
Coastline in scenario; km (proportion of coastline in scenario)										
High IUCN Ib-III^^	727 (0.08)	14 (0.01)	702 (0.2)	0 (0)	12 (0.01)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	8708 (0.92)	1509 (0.99)	2748 (0.8)	3070 (1)	1380 (0.99)	-	-	-	-	-
Coastline in scenario that is adjacent to terrestrial protected area; km (proportion of coastline in planning area that is adjacent to terrestrial protected area)										
In scenario	9333 (0.76)	1517 (0.4)	3432 (1)	3039 (0.87)	1345 (0.86)	-	-	-	-	-
High IUCN Ib-III^^	726 (0.06)	13 (0)	701 (0.2)	0 (0)	12 (0.01)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	8607 (0.7)	1504 (0.39)	2731 (0.8)	3039 (0.87)	1333 (0.85)	-	-	-	-	-
Spacing of sites: Area^ of clumps considered in analysis; km2										
All clumps	16999	-	-	-	-	2976	-	-	-	-
Clumps larger than 12.6 km2	16751	-	-	-	-	2938	-	-	-	-
Clumps larger than 50 km2	16369	-	-	-	-	2909	-	-	-	-
Spacing of sites: Number (proportion) of clumps within 40 km of another clump										
All clumps	229/236 (0.97)	-	-	-	-	22/24 (0.92)	-	-	-	-
Clumps larger than 12.6 km2	21/27 (0.78)	-	-	-	-	11/13 (0.85)	-	-	-	-
Clumps larger than 50 km2	7/13 (0.54)	-	-	-	-	10/12 (0.83)	-	-	-	-
Spacing of sites: Area^ of clumps; km2 (proportion of total area of clumps) within 40 km of another clump										
All clumps	16979 (1.00)	-	-	-	-	2278 (0.77)	-	-	-	-
Clumps larger than 12.6 km2	9104 (0.54)	-	-	-	-	2241 (0.76)	-	-	-	-
Clumps larger than 50 km2	7726 (0.47)	-	-	-	-	2212 (0.76)	-	-	-	-

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	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Spacing of sites: Number (proportion) of clumps within 200 km of another clump										
All clumps	236/236 (1.00)	-	-	-	-	24/24 (1.00)	-	-	-	-
Clumps larger than 12.6 km2	27/27 (1.00)	-	-	-	-	13/13 (1.00)	-	-	-	-
Clumps larger than 50 km2	13/13 (1.00)	-	-	-	-	12/12 (1.00)	-	-	-	-
Spacing of sites: Area^ of clumps; km2 (proportion of total area of clumps) within 200 km of another clump										
All clumps	16999 (1.00)	-	-	-	-	2976 (1.00)	-	-	-	-
Clumps larger than 12.6 km2	16751 (1.00)	-	-	-	-	2938 (1.00)	-	-	-	-
Clumps larger than 50 km2	16369 (1.00)	-	-	-	-	2909 (1.00)	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Species, by category										
Conservation Concern Species - proportion (number) of features...										
Below LOW target	0.27 (20/73)	-	-	-	-	0.47 (34/73)	-	-	-	-
At or above LOW but below MEDIUM target	0.04 (3/73)	-	-	-	-	0.14 (10/73)	-	-	-	-
At or above MEDIUM but below HIGH target	0.12 (9/73)	-	-	-	-	0.08 (6/73)	-	-	-	-
At or above HIGH target	0.56 (41/73)	-	-	-	-	0.32 (23/73)	-	-	-	-
Significant Areas - proportion (number) of features...										
Below LOW target+	0.44 (4/9)	-	-	-	-	0.78 (7/9)	-	-	-	-
At or above LOW but below MEDIUM target+	0.11 (1/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.11 (1/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above HIGH target+	0.11 (1/9)	-	-	-	-	0 (0/9)	-	-	-	-
Predators (fish, invert.) - proportion (number) of features...										
Below LOW target	0.50 (11/22)	-	-	-	-	1.00 (22/22)	-	-	-	-
At or above LOW but below MEDIUM target	0.14 (3/22)	-	-	-	-	0 (0/22)	-	-	-	-
At or above MEDIUM but below HIGH target	0.23 (5/22)	-	-	-	-	0 (0/22)	-	-	-	-
At or above HIGH target	0.14 (3/22)	-	-	-	-	0 (0/22)	-	-	-	-
Forage Species - proportion (number) of features...										
Below LOW target	0.44 (4/9)	-	-	-	-	1.00 (9/9)	-	-	-	-
At or above LOW but below MEDIUM target	0.44 (4/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above MEDIUM but below HIGH target	0.11 (1/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above HIGH target	0 (0/9)	-	-	-	-	0 (0/9)	-	-	-	-
Habitat-forming Species - proportion (number) of features...										
Below LOW target	0.21 (4/19)	-	-	-	-	0.42 (8/19)	-	-	-	-
At or above LOW but below MEDIUM target	0.21 (4/19)	-	-	-	-	0.11 (2/19)	-	-	-	-
At or above MEDIUM but below HIGH target	0.16 (3/19)	-	-	-	-	0.11 (2/19)	-	-	-	-
At or above HIGH target	0.42 (8/19)	-	-	-	-	0.37 (7/19)	-	-	-	-
Mammals - proportion (number) of features...										
Below LOW target	0.40 (6/15)	-	-	-	-	0.53 (8/15)	-	-	-	-
At or above LOW but below MEDIUM target	0.07 (1/15)	-	-	-	-	0.20 (3/15)	-	-	-	-
At or above MEDIUM but below HIGH target	0.13 (2/15)	-	-	-	-	0.07 (1/15)	-	-	-	-
At or above HIGH target	0.40 (6/15)	-	-	-	-	0.20 (3/15)	-	-	-	-
Nutrient-transporting Species - proportion (number) of features...										
Below LOW target	0.30 (3/10)	-	-	-	-	1.00 (10/10)	-	-	-	-
At or above LOW but below MEDIUM target	0.60 (6/10)	-	-	-	-	0 (0/10)	-	-	-	-
At or above MEDIUM but below HIGH target	0.10 (1/10)	-	-	-	-	0 (0/10)	-	-	-	-
At or above HIGH target	0 (0/10)	-	-	-	-	0 (0/10)	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Habitats										
All Habitat Features - proportion (number) of features...										
Below LOW target+	0.20 (14/70)	-	-	-	-	0.67 (47/70)	-	-	-	-
At or above LOW but below MEDIUM target+	0.16 (11/70)	-	-	-	-	0.21 (15/70)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.10 (7/70)	-	-	-	-	0.04 (3/70)	-	-	-	-
At or above HIGH target+	0.53 (37/70)	-	-	-	-	0.07 (5/70)	-	-	-	-
Biophysical Units - proportion (number) of features...										
Below LOW target+	0.20 (1/5)	-	-	-	-	0.60 (3/5)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/5)	-	-	-	-	0.40 (2/5)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.20 (1/5)	-	-	-	-	0 (0/5)	-	-	-	-
At or above HIGH target+	0.60 (3/5)	-	-	-	-	0 (0/5)	-	-	-	-
Bottom Patches - proportion (number) of features...										
Below LOW target+	0 (0/3)	-	-	-	-	1.00 (3/3)	-	-	-	-
At or above LOW but below MEDIUM target+	0.33 (1/3)	-	-	-	-	0 (0/3)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.67 (2/3)	-	-	-	-	0 (0/3)	-	-	-	-
At or above HIGH target+	0 (0/3)	-	-	-	-	0 (0/3)	-	-	-	-
Coastal Classes - proportion (number) of features...										
Below LOW target+	0 (0/12)	-	-	-	-	0.42 (5/12)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/12)	-	-	-	-	0.33 (4/12)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.17 (2/12)	-	-	-	-	0.17 (2/12)	-	-	-	-
At or above HIGH target+	0.83 (10/12)	-	-	-	-	0.08 (1/12)	-	-	-	-
EBSAs - proportion (number) of features...										
Below LOW target+	0.23 (3/13)	-	-	-	-	0.77 (10/13)	-	-	-	-
At or above LOW but below MEDIUM target+	0.15 (2/13)	-	-	-	-	0 (0/13)	-	-	-	-
At or above MEDIUM but below HIGH target+	0 (0/13)	-	-	-	-	0 (0/13)	-	-	-	-
At or above HIGH target+	0.54 (7/13)	-	-	-	-	0.23 (3/13)	-	-	-	-
Ecosections - proportion (number) of features...										
Below LOW target+	0.12 (1/8)	-	-	-	-	0.62 (5/8)	-	-	-	-
At or above LOW but below MEDIUM target+	0.25 (2/8)	-	-	-	-	0.25 (2/8)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.12 (1/8)	-	-	-	-	0.12 (1/8)	-	-	-	-
At or above HIGH target+	0.50 (4/8)	-	-	-	-	0 (0/8)	-	-	-	-

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	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Geomorphic Units - proportion (number) of features...										
Below LOW target+	0.29 (4/14)	-	-	-	-	0.79 (11/14)	-	-	-	-
At or above LOW but below MEDIUM target+	0.14 (2/14)	-	-	-	-	0.14 (2/14)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.07 (1/14)	-	-	-	-	0 (0/14)	-	-	-	-
At or above HIGH target+	0.50 (7/14)	-	-	-	-	0.07 (1/14)	-	-	-	-
Upper-ocean Subregions - proportion (number) of features...										
Below LOW target+	0.33 (5/15)	-	-	-	-	0.67 (10/15)	-	-	-	-
At or above LOW but below MEDIUM target+	0.27 (4/15)	-	-	-	-	0.33 (5/15)	-	-	-	-
At or above MEDIUM but below HIGH target+	0 (0/15)	-	-	-	-	0 (0/15)	-	-	-	-
At or above HIGH target+	0.40 (6/15)	-	-	-	-	0 (0/15)	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Species, by species group										
All Species Features - proportion (number) of features...										
Below LOW target	0.26 (41/159)	-	-	-	-	0.58 (93/159)	-	-	-	-
At or above LOW but below MEDIUM target	0.14 (22/159)	-	-	-	-	0.10 (16/159)	-	-	-	-
At or above MEDIUM but below HIGH target	0.18 (28/159)	-	-	-	-	0.06 (9/159)	-	-	-	-
At or above HIGH target	0.43 (68/159)	-	-	-	-	0.26 (41/159)	-	-	-	-
Birds - proportion (number) of features...										
Below LOW target	0.08 (4/53)	-	-	-	-	0.17 (9/53)	-	-	-	-
At or above LOW but below MEDIUM target	0 (0/53)	-	-	-	-	0.15 (8/53)	-	-	-	-
At or above MEDIUM but below HIGH target	0.11 (6/53)	-	-	-	-	0.11 (6/53)	-	-	-	-
At or above HIGH target	0.81 (43/53)	-	-	-	-	0.57 (30/53)	-	-	-	-
Fish - proportion (number) of features...										
Below LOW target	0.30 (17/57)	-	-	-	-	0.96 (55/57)	-	-	-	-
At or above LOW but below MEDIUM target	0.30 (17/57)	-	-	-	-	0.04 (2/57)	-	-	-	-
At or above MEDIUM but below HIGH target	0.23 (13/57)	-	-	-	-	0 (0/57)	-	-	-	-
At or above HIGH target	0.18 (10/57)	-	-	-	-	0 (0/57)	-	-	-	-
Invertebrates - proportion (number) of features...										
Below LOW target	0.57 (13/23)	-	-	-	-	0.83 (19/23)	-	-	-	-
At or above LOW but below MEDIUM target	0.13 (3/23)	-	-	-	-	0 (0/23)	-	-	-	-
At or above MEDIUM but below HIGH target	0.13 (3/23)	-	-	-	-	0.04 (1/23)	-	-	-	-
At or above HIGH target	0.17 (4/23)	-	-	-	-	0.13 (3/23)	-	-	-	-
Mammals and Reptiles - proportion (number) of features...										
Below LOW target	0.38 (6/16)	-	-	-	-	0.50 (8/16)	-	-	-	-
At or above LOW but below MEDIUM target	0.06 (1/16)	-	-	-	-	0.25 (4/16)	-	-	-	-
At or above MEDIUM but below HIGH target	0.19 (3/16)	-	-	-	-	0.06 (1/16)	-	-	-	-
At or above HIGH target	0.38 (6/16)	-	-	-	-	0.19 (3/16)	-	-	-	-
Plants and Algae - proportion (number) of features...										
Below LOW target	0.10 (1/10)	-	-	-	-	0.20 (2/10)	-	-	-	-
At or above LOW but below MEDIUM target	0.10 (1/10)	-	-	-	-	0.20 (2/10)	-	-	-	-
At or above MEDIUM but below HIGH target	0.30 (3/10)	-	-	-	-	0.10 (1/10)	-	-	-	-
At or above HIGH target	0.50 (5/10)	-	-	-	-	0.50 (5/10)	-	-	-	-
Habitat features - proportion (number) meeting replication target										
All Habitat Features+	-	0.35 (12/34)	0.56 (20/36)	0.41 (13/32)	0.27 (10/37)	-	0 (0/34)	0 (0/36)	0 (0/32)	0 (0/37)
Biophysical Units+	-	0.60 (3/5)	0.60 (3/5)	0.25 (1/4)	0 (0/5)	-	0 (0/5)	0 (0/5)	0 (0/4)	0 (0/5)
Bottom Patches+	-	0 (0/3)	1.00 (3/3)	0.67 (2/3)	0.33 (1/3)	-	0 (0/3)	0 (0/3)	0 (0/3)	0 (0/3)
EBSAs+	-	0.33 (1/3)	0.33 (2/6)	0.50 (2/4)	0.67 (2/3)	-	0 (0/3)	0 (0/6)	0 (0/4)	0 (0/3)
Ecosections+	-	0.75 (3/4)	0.75 (3/4)	0.75 (3/4)	0.50 (3/6)	-	0 (0/4)	0 (0/4)	0 (0/4)	0 (0/6)
Geomorphic Units+	-	0.21 (3/14)	0.44 (4/9)	0.20 (2/10)	0.07 (1/14)	-	0 (0/14)	0 (0/9)	0 (0/10)	0 (0/14)
Upper-ocean Subregions+	-	0.40 (2/5)	0.56 (5/9)	0.43 (3/7)	0.50 (3/6)	-	0 (0/5)	0 (0/9)	0 (0/7)	0 (0/6)
Species features, by category - proportion (number) meeting replication target										
Conservation Concern Species	-	0.08 (1/13)	0.71 (15/21)	0.23 (3/13)	0.44 (8/18)	-	0.08 (1/13)	0.71 (15/21)	0.23 (3/13)	0.44 (8/18)
Significant Areas+	-	0.43 (3/7)	0.29 (2/7)	0.29 (2/7)	0.17 (1/6)	-	0 (0/7)	0 (0/7)	0 (0/7)	0 (0/6)
Forage Species	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)
Habitat-forming Species	-	0.14 (1/7)	0.83 (5/6)	0.29 (2/7)	0.14 (1/7)	-	0 (0/7)	0.67 (4/6)	0.29 (2/7)	0 (0/7)
Mammals	-	0.20 (1/5)	0.83 (5/6)	0.57 (4/7)	0.67 (4/6)	-	0.20 (1/5)	0.83 (5/6)	0.57 (4/7)	0.67 (4/6)
Nutrient-transporting Species	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)
Species features, by species group - proportion (number) meeting replication target										
All Species Features	-	0.08 (2/25)	0.82 (27/33)	0.26 (7/27)	0.39 (13/33)	-	0.04 (1/25)	0.79 (26/33)	0.26 (7/27)	0.33 (11/33)
Birds	-	0 (0/11)	0.80 (16/20)	0.08 (1/12)	0.37 (7/19)	-	0 (0/11)	0.80 (16/20)	0.08 (1/12)	0.32 (6/19)
Fish	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)	-	0 (0/2)	0 (0/1)	0 (0/2)	0 (0/1)
Invertebrates	-	1.00 (1/1)	-	0 (0/1)	0 (0/1)	-	0 (0/1)	-	0 (0/1)	0 (0/1)
Mammals and Reptiles	-	0.17 (1/6)	0.86 (6/7)	0.57 (4/7)	0.71 (5/7)	-	0.17 (1/6)	0.86 (6/7)	0.57 (4/7)	0.71 (5/7)
Plants and Algae	-	0 (0/5)	1.00 (5/5)	0.40 (2/5)	0.20 (1/5)	-	0 (0/5)	0.80 (4/5)	0.40 (2/5)	0 (0/5)
Ecological Intactness Proxy										
Loss of ecological roles captured in scenario due to interactions										
Average n ecological roles per site	4.8	-	-	-	-	4.1	-	-	-	-
Total roles	558	-	-	-	-	470	-	-	-	-
Number (proportion) of sites with fewer than 6 roles (i.e., fewer than maximum possible)	80 (0.69)	-	-	-	-	109 (0.94)	-	-	-	-
Number (proportion) roles lost	-	-	-	-	-	88 (0.16)	-	-	-	-
Number (proportion) sites with lost roles	-	-	-	-	-	60 (0.52)	-	-	-	-
Representation of First Nations Cultural Conservation Priorities										
Area of FNCCPs in scenario; km2 (proportion of FNCCP area)										
All Features+	2156 (0.12)	643 (0.14)	1308 (0.17)	201 (0.05)	5 (0.00)	2 (0.00)	0 (0.00)	0 (0.00)	2 (0.00)	0 (0.00)
Critical+	897 (0.16)	476 (0.14)	353 (0.79)	68 (0.04)	-	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	-
Very High+	1068 (0.22)	140 (0.35)	805 (0.36)	123 (0.07)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
High+	192 (0.03)	27 (0.04)	150 (0.03)	10 (0.02)	5 (0.01)	2 (0.00)	0 (0.00)	0 (0.00)	2 (0.00)	0 (0.00)
Proportion (number) of FNCCPs in scenario, counting only FNCCPs with 75 percent or more area in scenario										
All Features+	0.11 (20/177)	0.05 (3/57)	0.40 (16/40)	0.02 (1/50)	0 (0/30)	0 (0/177)	0 (0/57)	0 (0/40)	0 (0/50)	0 (0/30)
Critical+	0.10 (7/68)	0.03 (1/33)	0.38 (6/16)	0 (0/19)	-	0 (0/68)	0 (0/33)	0 (0/16)	0 (0/19)	-
Very High+	0.17 (11/66)	0.15 (2/13)	0.62 (8/13)	0.05 (1/19)	0 (0/21)	0 (0/66)	0 (0/13)	0 (0/13)	0 (0/19)	0 (0/21)
High+	0.05 (2/43)	0 (0/11)	0.18 (2/11)	0 (0/12)	0 (0/9)	0 (0/43)	0 (0/11)	0 (0/11)	0 (0/12)	0 (0/9)

Note:
* Some sites span multiple subregions, so in some cases subregional calculations may not sum to NSB values.

^ Size and spacing calculations use scenario data transferred onto a 50m grid which results in minor changes to the overall area footprint.

^^ Identification of zones in high protection is limited to existing MPAs at this time. Although it is anticipated that the area in high protection will increase as a result of implementation of the Network, the exact location and size of the increase will be influenced by the results of finer scale risk assessments undertaken during implementation, and by any resulting mitigation measures identified and applied by management. All proposed new or modified zones are categorized as "Moderate/Limited IUCN IV-VI" at this time.

** New Area refers to area within the scenario that is not currently covered with an existing MPA (federal or provincial Marine Protected Area), RCA (Rockfish Conservation Area), or PMZ (Marine Plan Partnership [MaPP] Protection Management Zone). Because MPAs, RCAs, and PMZs often overlap in space, proportions for each type will not sum to 1.

+'Incorporating Human Activities' for rows marked with + refers to area or features within High Protection zones only. For all other rows, 'Incorporating Human Activities' refers to the 'scaled' values resulting from the Conservation Gaps Analysis.

4.2.3. Performance measures for proposed Network (version P3)

Scenario run 2021-12-01. PDF Report Card compiled 2022-07-26.

	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Physical characteristics of scenario										
Area; km2 (proportion of planning area)										
In planning area	101524	22083	46057	19495	13889	-	-	-	-	-
In planning area – inlets	13263 (0.13)	3507 (0.16)	2700 (0.06)	4622 (0.24)	2434 (0.18)	-	-	-	-	-
In planning area – nearshore	24284 (0.24)	4434 (0.20)	7307 (0.16)	6848 (0.35)	5695 (0.41)	-	-	-	-	-
In planning area – offshore	77240 (0.76)	17649 (0.80)	38749 (0.84)	12647 (0.65)	8194 (0.59)	-	-	-	-	-
In scenario	30493 (0.30)	9097 (0.41)	11692 (0.25)	5159 (0.26)	4546 (0.33)	-	-	-	-	-
Count										
Zone	357	83	84	68	122	-	-	-	-	-
Area^; km2 (proportion) of scenario meeting...										
Min. size of 12.6 km2	30737 (0.99)	-	-	-	-	-	-	-	-	-
Rec. size of 50 km2	29594 (0.95)	-	-	-	-	-	-	-	-	-
Total area all clumps	31115 (1.00)	-	-	-	-	-	-	-	-	-
Area^; km2 (proportion) of scenario in high protection meeting...										
Min. size of 12.6 km2	2938 (0.99)	-	-	-	-	-	-	-	-	-
Rec. size of 50 km2	2909 (0.98)	-	-	-	-	-	-	-	-	-
Total area all clumps	2976 (1.00)	-	-	-	-	-	-	-	-	-
Area of scenario by IUCN protection level; km2 (proportion)										
High IUCN Ib-III^^	2933 (0.1)	833 (0.09)	1422 (0.12)	674 (0.13)	4 (0)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	27560 (0.9)	8263 (0.91)	10270 (0.88)	4485 (0.87)	4542 (1)	-	-	-	-	-
Area of scenario in inlets; km2 (proportion of scenario)										
Inlets: All Protection Levels	5818 (0.19)	1866 (0.21)	1982 (0.17)	1351 (0.26)	619 (0.14)	-	-	-	-	-
High IUCN Ib-III^^	428 (0.01)	0 (0.00)	428 (0.04)	0 (0.00)	0 (0.00)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	5389 (0.18)	1866 (0.21)	1553 (0.13)	1351 (0.26)	619 (0.14)	-	-	-	-	-
Area of scenario in nearshore; km2 (proportion of scenario)										
Nearshore: All Protection Levels	9831 (0.32)	2713 (0.30)	3411 (0.29)	2175 (0.42)	1533 (0.34)	-	-	-	-	-
High IUCN Ib-III^^	596 (0.02)	4 (0.00)	588 (0.05)	0 (0.00)	4 (0.00)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	9235 (0.30)	2709 (0.30)	2823 (0.24)	2175 (0.42)	1528 (0.34)	-	-	-	-	-

(continued)

	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Area of scenario in offshore; km2 (proportion of scenario)										
Offshore: All Protection Levels	20661 (0.68)	6383 (0.70)	8281 (0.71)	2984 (0.58)	3013 (0.66)	-	-	-	-	-
High IUCN Ib-III^^	2337 (0.08)	829 (0.09)	834 (0.07)	674 (0.13)	0 (0.00)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	18325 (0.60)	5555 (0.61)	7447 (0.64)	2310 (0.45)	3013 (0.66)	-	-	-	-	-
Number (proportion) of zones adjacent to a terrestrial protected area										
Zones	229 (0.64)	56 (0.67)	47 (0.5)	55 (0.80)	71 (0.58)	-	-	-	-	-
Area of scenario covering existing protected areas; km2 (proportion of scenario)										
New Area**	4823 (0.16)	270 (0.03)	2864 (0.24)	1599 (0.31)	89 (0.02)	-	-	-	-	-
Existing MPAs**	16615 (0.54)	6122 (0.67)	5204 (0.45)	1691 (0.33)	3599 (0.79)	-	-	-	-	-
Existing RCAs**	2953 (0.10)	315 (0.03)	112 (0.01)	1223 (0.24)	1303 (0.29)	-	-	-	-	-
Existing PMZs**	10093 (0.33)	3256 (0.36)	5292 (0.45)	1345 (0.26)	200 (0.04)	-	-	-	-	-
Area of existing protected areas within scenario; km2 (proportion of area of existing protected areas)										
Existing MPAs**	16615 (1.00)	-	-	-	-	-	-	-	-	-
Existing RCAs**	2953 (1.00)	-	-	-	-	-	-	-	-	-
Existing PMZs**	10093 (0.62)	-	-	-	-	-	-	-	-	-
Coastline; km (proportion of coastline in planning area)										
In planning area	29385	8008	4662	9149	7563	-	-	-	-	-
Adjacent to terrestrial protected area	12309 (0.42)	3830 (0.48)	3432 (0.74)	3475 (0.38)	1572 (0.21)	-	-	-	-	-
In scenario	16930 (0.58)	5718 (0.71)	3758 (0.81)	4495 (0.49)	2959 (0.39)	-	-	-	-	-
Coastline in scenario; km (proportion of coastline in scenario)										
High IUCN Ib-III^^	727 (0.04)	14 (0)	702 (0.19)	0 (0)	12 (0)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	16203 (0.96)	5704 (1)	3056 (0.81)	4495 (1)	2947 (1)	-	-	-	-	-
Coastline in scenario that is adjacent to terrestrial protected area; km (proportion of coastline in planning area that is adjacent to terrestrial protected area)										
In scenario	11360 (0.92)	3344 (0.87)	3403 (0.99)	3231 (0.93)	1383 (0.88)	-	-	-	-	-
High IUCN Ib-III^^	727 (0.06)	14 (0)	702 (0.2)	0 (0)	12 (0.01)	-	-	-	-	-
Mod/Limited IUCN IV-VI^^	10633 (0.86)	3330 (0.87)	2701 (0.79)	3231 (0.93)	1371 (0.87)	-	-	-	-	-
Spacing of sites: Area^ of clumps considered in analysis; km2										
All clumps	31115	-	-	-	-	-	-	-	-	-
Clumps larger than 12.6 km2	30737	-	-	-	-	-	-	-	-	-
Clumps larger than 50 km2	29594	-	-	-	-	-	-	-	-	-
Spacing of sites: Number (proportion) of clumps within 40 km of another clump										
All clumps	214/217 (0.99)	-	-	-	-	-	-	-	-	-
Clumps larger than 12.6 km2	72/78 (0.92)	-	-	-	-	-	-	-	-	-
Clumps larger than 50 km2	29/33 (0.88)	-	-	-	-	-	-	-	-	-
Spacing of sites: Area^ of clumps; km2 (proportion of total area of clumps) within 40 km of another clump										
All clumps	31034 (1.00)	-	-	-	-	-	-	-	-	-
Clumps larger than 12.6 km2	30483 (0.99)	-	-	-	-	-	-	-	-	-
Clumps larger than 50 km2	29167 (0.99)	-	-	-	-	-	-	-	-	-
Spacing of sites: Number (proportion) of clumps within 200 km of another clump										
All clumps	217/217 (1.00)	-	-	-	-	-	-	-	-	-
Clumps larger than 12.6 km2	78/78 (1.00)	-	-	-	-	-	-	-	-	-
Clumps larger than 50 km2	33/33 (1.00)	-	-	-	-	-	-	-	-	-
Spacing of sites: Area^ of clumps; km2 (proportion of total area of clumps) within 200 km of another clump										
All clumps	31115 (1.00)	-	-	-	-	-	-	-	-	-
Clumps larger than 12.6 km2	30737 (1.00)	-	-	-	-	-	-	-	-	-
Clumps larger than 50 km2	29594 (1.00)	-	-	-	-	-	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Species, by category										
Conservation Concern Species - proportion (number) of features...										
Below LOW target	0.14 (10/72)	-	-	-	-	0.24 (17/72)	-	-	-	-
At or above LOW but below MEDIUM target	0.06 (4/72)	-	-	-	-	0.12 (9/72)	-	-	-	-
At or above MEDIUM but below HIGH target	0.06 (4/72)	-	-	-	-	0.15 (11/72)	-	-	-	-
At or above HIGH target	0.75 (54/72)	-	-	-	-	0.49 (35/72)	-	-	-	-
Significant Areas - proportion (number) of features...										
Below LOW target+	0 (0/9)	-	-	-	-	1.00 (9/9)	-	-	-	-
At or above LOW but below MEDIUM target+	0.44 (4/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.22 (2/9)	-	-	-	-	0 (0/9)	-	-	-	-
At or above HIGH target+	0.33 (3/9)	-	-	-	-	0 (0/9)	-	-	-	-
Predators (fish, invert) - proportion (number) of features...										
Below LOW target	0.23 (5/22)	-	-	-	-	0.50 (11/22)	-	-	-	-
At or above LOW but below MEDIUM target	0.14 (3/22)	-	-	-	-	0.27 (6/22)	-	-	-	-
At or above MEDIUM but below HIGH target	0.14 (3/22)	-	-	-	-	0.18 (4/22)	-	-	-	-
At or above HIGH target	0.50 (11/22)	-	-	-	-	0.05 (1/22)	-	-	-	-
Forage Species - proportion (number) of features...										
Below LOW target	0.33 (3/9)	-	-	-	-	0.56 (5/9)	-	-	-	-
At or above LOW but below MEDIUM target	0 (0/9)	-	-	-	-	0.33 (3/9)	-	-	-	-
At or above MEDIUM but below HIGH target	0 (0/9)	-	-	-	-	0.11 (1/9)	-	-	-	-
At or above HIGH target	0.67 (6/9)	-	-	-	-	0 (0/9)	-	-	-	-
Habitat-forming Species - proportion (number) of features...										
Below LOW target	0.05 (1/19)	-	-	-	-	0.16 (3/19)	-	-	-	-
At or above LOW but below MEDIUM target	0.16 (3/19)	-	-	-	-	0.16 (3/19)	-	-	-	-
At or above MEDIUM but below HIGH target	0 (0/19)	-	-	-	-	0.21 (4/19)	-	-	-	-
At or above HIGH target	0.79 (15/19)	-	-	-	-	0.47 (9/19)	-	-	-	-
Mammals - proportion (number) of features...										
Below LOW target	0.14 (2/14)	-	-	-	-	0.21 (3/14)	-	-	-	-
At or above LOW but below MEDIUM target	0 (0/14)	-	-	-	-	0.07 (1/14)	-	-	-	-
At or above MEDIUM but below HIGH target	0.07 (1/14)	-	-	-	-	0.21 (3/14)	-	-	-	-
At or above HIGH target	0.79 (11/14)	-	-	-	-	0.50 (7/14)	-	-	-	-

(continued)

	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
Nutrient-transporting Species - proportion (number) of features...										
Below LOW target	0.20 (2/10)	-	-	-	-	0.30 (3/10)	-	-	-	-
At or above LOW but below MEDIUM target	0.10 (1/10)	-	-	-	-	0.60 (6/10)	-	-	-	-
At or above MEDIUM but below HIGH target	0 (0/10)	-	-	-	-	0.10 (1/10)	-	-	-	-
At or above HIGH target	0.70 (7/10)	-	-	-	-	0 (0/10)	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Habitats										
All Habitat Features - proportion (number) of features...										
Below LOW target+	0 (0/70)	-	-	-	-	0.67 (47/70)	-	-	-	-
At or above LOW but below MEDIUM target+	0.09 (6/70)	-	-	-	-	0.21 (15/70)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.09 (6/70)	-	-	-	-	0.04 (3/70)	-	-	-	-
At or above HIGH target+	0.83 (58/70)	-	-	-	-	0.07 (5/70)	-	-	-	-
Biophysical Units - proportion (number) of features...										
Below LOW target+	0 (0/5)	-	-	-	-	0.60 (3/5)	-	-	-	-
At or above LOW but below MEDIUM target+	0.20 (1/5)	-	-	-	-	0.40 (2/5)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.20 (1/5)	-	-	-	-	0 (0/5)	-	-	-	-
At or above HIGH target+	0.60 (3/5)	-	-	-	-	0 (0/5)	-	-	-	-
Bottom Patches - proportion (number) of features...										
Below LOW target+	0 (0/3)	-	-	-	-	1.00 (3/3)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/3)	-	-	-	-	0 (0/3)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.33 (1/3)	-	-	-	-	0 (0/3)	-	-	-	-
At or above HIGH target+	0.67 (2/3)	-	-	-	-	0 (0/3)	-	-	-	-
Coastal Classes - proportion (number) of features...										
Below LOW target+	0 (0/12)	-	-	-	-	0.42 (5/12)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/12)	-	-	-	-	0.33 (4/12)	-	-	-	-
At or above MEDIUM but below HIGH target+	0 (0/12)	-	-	-	-	0.17 (2/12)	-	-	-	-
At or above HIGH target+	1.00 (12/12)	-	-	-	-	0.08 (1/12)	-	-	-	-
EBSAs - proportion (number) of features...										
Below LOW target+	0 (0/13)	-	-	-	-	0.77 (10/13)	-	-	-	-
At or above LOW but below MEDIUM target+	0.08 (1/13)	-	-	-	-	0 (0/13)	-	-	-	-
At or above MEDIUM but below HIGH target+	0 (0/13)	-	-	-	-	0 (0/13)	-	-	-	-
At or above HIGH target+	0.92 (12/13)	-	-	-	-	0.23 (3/13)	-	-	-	-
Ecosections - proportion (number) of features...										
Below LOW target+	0 (0/8)	-	-	-	-	0.62 (5/8)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/8)	-	-	-	-	0.25 (2/8)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.12 (1/8)	-	-	-	-	0.12 (1/8)	-	-	-	-
At or above HIGH target+	0.88 (7/8)	-	-	-	-	0 (0/8)	-	-	-	-
Geomorphic Units - proportion (number) of features...										
Below LOW target+	0 (0/14)	-	-	-	-	0.79 (11/14)	-	-	-	-
At or above LOW but below MEDIUM target+	0 (0/14)	-	-	-	-	0.14 (2/14)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.07 (1/14)	-	-	-	-	0 (0/14)	-	-	-	-
At or above HIGH target+	0.93 (13/14)	-	-	-	-	0.07 (1/14)	-	-	-	-
Upper-ocean Subregions - proportion (number) of features...										
Below LOW target+	0 (0/15)	-	-	-	-	0.67 (10/15)	-	-	-	-
At or above LOW but below MEDIUM target+	0.27 (4/15)	-	-	-	-	0.33 (5/15)	-	-	-	-
At or above MEDIUM but below HIGH target+	0.13 (2/15)	-	-	-	-	0 (0/15)	-	-	-	-
At or above HIGH target+	0.60 (9/15)	-	-	-	-	0 (0/15)	-	-	-	-
REPRESENTATION of Ecological Conservation Priorities – Species, by species group										
All Species Features - proportion (number) of features...										
Below LOW target	0.09 (14/157)	-	-	-	-	0.26 (41/157)	-	-	-	-
At or above LOW but below MEDIUM target	0.10 (15/157)	-	-	-	-	0.16 (25/157)	-	-	-	-
At or above MEDIUM but below HIGH target	0.05 (8/157)	-	-	-	-	0.18 (28/157)	-	-	-	-
At or above HIGH target	0.76 (120/157)	-	-	-	-	0.40 (63/157)	-	-	-	-
Birds - proportion (number) of features...										
Below LOW target	0.04 (2/53)	-	-	-	-	0.06 (3/53)	-	-	-	-
At or above LOW but below MEDIUM target	0.02 (1/53)	-	-	-	-	0.11 (6/53)	-	-	-	-
At or above MEDIUM but below HIGH target	0.02 (1/53)	-	-	-	-	0.11 (6/53)	-	-	-	-
At or above HIGH target	0.92 (49/53)	-	-	-	-	0.72 (38/53)	-	-	-	-
Fish - proportion (number) of features...										
Below LOW target	0.14 (8/56)	-	-	-	-	0.38 (21/56)	-	-	-	-
At or above LOW but below MEDIUM target	0.11 (6/56)	-	-	-	-	0.23 (13/56)	-	-	-	-
At or above MEDIUM but below HIGH target	0.07 (4/56)	-	-	-	-	0.25 (14/56)	-	-	-	-
At or above HIGH target	0.68 (38/56)	-	-	-	-	0.14 (8/56)	-	-	-	-
Invertebrates - proportion (number) of features...										
Below LOW target	0.09 (2/23)	-	-	-	-	0.61 (14/23)	-	-	-	-
At or above LOW but below MEDIUM target	0.30 (7/23)	-	-	-	-	0.17 (4/23)	-	-	-	-
At or above MEDIUM but below HIGH target	0.09 (2/23)	-	-	-	-	0.09 (2/23)	-	-	-	-
At or above HIGH target	0.52 (12/23)	-	-	-	-	0.13 (3/23)	-	-	-	-
Mammals and Reptiles - proportion (number) of features...										
Below LOW target	0.13 (2/15)	-	-	-	-	0.20 (3/15)	-	-	-	-
At or above LOW but below MEDIUM target	0 (0/15)	-	-	-	-	0.07 (1/15)	-	-	-	-
At or above MEDIUM but below HIGH target	0.07 (1/15)	-	-	-	-	0.27 (4/15)	-	-	-	-
At or above HIGH target	0.80 (12/15)	-	-	-	-	0.47 (7/15)	-	-	-	-
Plants and Algae - proportion (number) of features...										
Below LOW target	0 (0/10)	-	-	-	-	0 (0/10)	-	-	-	-
At or above LOW but below MEDIUM target	0.10 (1/10)	-	-	-	-	0.10 (1/10)	-	-	-	-
At or above MEDIUM but below HIGH target	0 (0/10)	-	-	-	-	0.20 (2/10)	-	-	-	-
At or above HIGH target	0.90 (9/10)	-	-	-	-	0.70 (7/10)	-	-	-	-

(continued)

	Not Incorporating Human Activities					Incorporating Human Activities				
	NSB	CC	HG	NC	NVI	NSB	CC	HG	NC	NVI
REPLICATION of Ecological Conservation Priorities										
Habitat features - proportion (number) meeting replication target										
All Habitat Features+	-	0.74 (25/34)	0.97 (35/36)	0.81 (26/32)	0.49 (18/37)	-	0 (0/34)	0 (0/36)	0 (0/32)	0 (0/37)
Biophysical Units+	-	0.80 (4/5)	0.80 (4/5)	0.75 (3/4)	0.20 (1/5)	-	0 (0/5)	0 (0/5)	0 (0/4)	0 (0/5)
Bottom Patches+	-	1.00 (3/3)	1.00 (3/3)	1.00 (3/3)	1.00 (3/3)	-	0 (0/3)	0 (0/3)	0 (0/3)	0 (0/3)
EBSAs+	-	0.67 (2/3)	1.00 (6/6)	0.50 (2/4)	0.67 (2/3)	-	0 (0/3)	0 (0/6)	0 (0/4)	0 (0/3)
Ecosections+	-	0.75 (3/4)	1.00 (4/4)	0.75 (3/4)	0.67 (4/6)	-	0 (0/4)	0 (0/4)	0 (0/4)	0 (0/6)
Geomorphic Units+	-	0.71 (10/14)	1.00 (9/9)	1.00 (10/10)	0.29 (4/14)	-	0 (0/14)	0 (0/9)	0 (0/10)	0 (0/14)
Upper-ocean Subregions+	-	0.60 (3/5)	1.00 (9/9)	0.71 (5/7)	0.67 (4/6)	-	0 (0/5)	0 (0/9)	0 (0/7)	0 (0/6)
Species features, by category - proportion (number) meeting replication target										
Conservation Concern Species	-	0.54 (7/13)	0.86 (19/22)	0.54 (7/13)	0.56 (10/18)	-	0.54 (7/13)	0.86 (19/22)	0.46 (6/13)	0.44 (8/18)
Significant Areas+	-	0.71 (5/7)	0.86 (6/7)	0.71 (5/7)	0.50 (3/6)	-	0 (0/7)	0 (0/7)	0 (0/7)	0 (0/6)
Forage Species	-	1.00 (2/2)	1.00 (1/1)	1.00 (2/2)	1.00 (1/1)	-	1.00 (2/2)	1.00 (1/1)	0.50 (1/2)	1.00 (1/1)
Habitat-forming Species	-	0.57 (4/7)	1.00 (6/6)	0.71 (5/7)	0.57 (4/7)	-	0.57 (4/7)	0.83 (5/6)	0.43 (3/7)	0.29 (2/7)
Mammals	-	1.00 (5/5)	1.00 (7/7)	0.86 (6/7)	0.67 (4/6)	-	1.00 (5/5)	1.00 (7/7)	0.86 (6/7)	0.67 (4/6)
Nutrient-transporting Species	-	1.00 (2/2)	1.00 (1/1)	1.00 (2/2)	1.00 (1/1)	-	1.00 (2/2)	1.00 (1/1)	0.50 (1/2)	1.00 (1/1)
Species features, by species group - proportion (number) meeting replication target										
All Species Features	-	0.52 (13/25)	0.91 (31/34)	0.56 (15/27)	0.58 (19/33)	-	0.52 (13/25)	0.91 (31/34)	0.44 (12/27)	0.42 (14/33)
Birds	-	0.27 (3/11)	0.85 (17/20)	0.25 (3/12)	0.53 (10/19)	-	0.27 (3/11)	0.85 (17/20)	0.17 (2/12)	0.32 (6/19)
Fish	-	1.00 (2/2)	1.00 (1/1)	1.00 (2/2)	1.00 (1/1)	-	1.00 (2/2)	1.00 (1/1)	0.50 (1/2)	1.00 (1/1)
Invertebrates	-	0 (0/1)	-	1.00 (1/1)	0 (0/1)	-	0 (0/1)	-	0 (0/1)	0 (0/1)
Mammals and Reptiles	-	0.83 (5/6)	1.00 (8/8)	0.86 (6/7)	0.71 (5/7)	-	0.83 (5/6)	1.00 (8/8)	0.86 (6/7)	0.71 (5/7)
Plants and Algae	-	0.60 (3/5)	1.00 (5/5)	0.60 (3/5)	0.60 (3/5)	-	0.60 (3/5)	1.00 (5/5)	0.60 (3/5)	0.40 (2/5)
Ecological Intactness Proxy										
Loss of ecological roles captured in scenario due to interactions										
Average n ecological roles per site	5.1	-	-	-	-	3.8	-	-	-	-
Total roles	622	-	-	-	-	463	-	-	-	-
Number (proportion) of sites with fewer than 6 roles (i.e., fewer than maximum possible)	64 (0.53)	-	-	-	-	97 (0.8)	-	-	-	-
Number (proportion) roles lost	-	-	-	-	-	159 (0.26)	-	-	-	-
Number (proportion) sites with lost roles	-	-	-	-	-	73 (0.6)	-	-	-	-
Representation of First Nations Cultural Conservation Priorities										
Area of FNCCPs in scenario; km2 (proportion of FNCCP area)										
All Features+	10390 (0.60)	3439 (0.77)	4175 (0.54)	2388 (0.61)	388 (0.27)	2 (0.00)	0 (0.00)	0 (0.00)	2 (0.00)	0 (0.00)
Critical+	4031 (0.73)	2580 (0.76)	436 (0.97)	1015 (0.61)	-	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	-
Very High+	2658 (0.54)	337 (0.85)	1188 (0.53)	910 (0.53)	223 (0.39)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
High+	3700 (0.53)	523 (0.79)	2550 (0.51)	463 (0.90)	165 (0.20)	2 (0.00)	0 (0.00)	0 (0.00)	2 (0.00)	0 (0.00)
Proportion (number) of FNCCPs in scenario, counting only FNCCPs with 75 percent or more area in scenario										
All Features+	0.53 (93/177)	0.67 (38/57)	0.68 (27/40)	0.46 (23/50)	0.17 (5/30)	0 (0/177)	0 (0/57)	0 (0/40)	0 (0/50)	0 (0/30)
Critical+	0.72 (49/68)	0.73 (24/33)	0.88 (14/16)	0.58 (11/19)	-	0 (0/68)	0 (0/33)	0 (0/16)	0 (0/19)	-
Very High+	0.42 (28/66)	0.77 (10/13)	0.69 (9/13)	0.26 (5/19)	0.19 (4/21)	0 (0/66)	0 (0/13)	0 (0/13)	0 (0/19)	0 (0/21)
High+	0.37 (16/43)	0.36 (4/11)	0.36 (4/11)	0.58 (7/12)	0.11 (1/9)	0 (0/43)	0 (0/11)	0 (0/11)	0 (0/12)	0 (0/9)

Note:

* Some sites span multiple subregions, so in some cases subregional calculations may not sum to NSB values.

^ Size and spacing calculations use scenario data transferred onto a 50m grid which results in minor changes to the overall area footprint.

^^ Identification of zones in high protection is limited to existing MPAs at this time. Although it is anticipated that the area in high protection will increase as a result of implementation of the Network, the exact location and size of the increase will be influenced by the results of finer scale risk assessments undertaken during implementation, and by any resulting mitigation measures identified and applied by management. All proposed new or modified zones are categorized as "Moderate/Limited IUCN IV-VI" at this time.

** New Area refers to area within the scenario that is not currently covered with an existing MPA (federal or provincial Marine Protected Area), RCA (Rockfish Conservation Area), or PMZ (Marine Plan Partnership [MaPP] Protection Management Zone). Because MPAs, RCAs, and PMZs often overlap in space, proportions for each type will not sum to 1.

+ 'Incorporating Human Activities' for rows marked with + refers to area or features within High Protection zones only. For all other rows, 'Incorporating Human Activities' refers to the 'scaled' values resulting from the Conservation Gaps Analysis.

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