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Lessons from cumulative effects assessment and management initiatives on the North Pacific Coast of British Columbia

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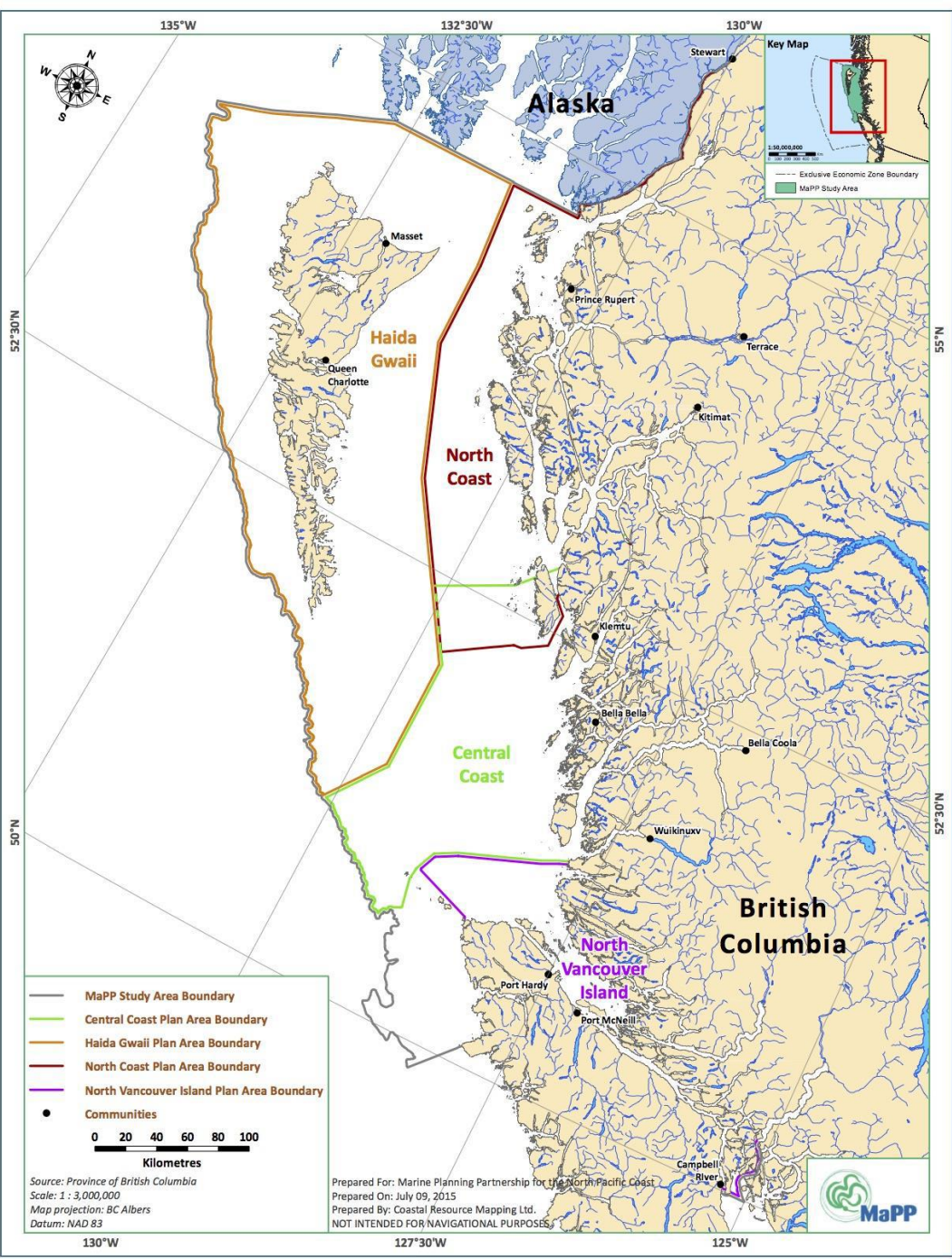
Martone, Rebecca; Bones, John; Diggon, Steve; Crawford, Stuart; Paul, Maya; and McGee, Gord, "Lessons from cumulative effects assessment and management initiatives on the North Pacific Coast of British Columbia" (2018). *Salish Sea Ecosystem Conference*. 161.

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Speaker

Rebecca Martone, John Bones, Steve Diggon, Stuart Crawford, Maya Paul, and Gord McGee



Lessons from Cumulative Effects Assessment, Monitoring and Management Initiatives on the North Pacific Coast of British Columbia

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 Province of British Columbia

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Janine Lemire – Gitga'at First Nation

Sarah Duggan – Ministry of Energy, Mines and
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Quinton Ball – Kitsumkalum First Nation

Anna Usborne – Metlakatla First Nation

James Herbert – Gitxaata First Nation

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Ethan Griesbach - North Coast-Skeena First Nations
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Caroline Butler – Gitxaata First Nation

Mike Jacobs – Haisla First Nation

Candice Wilson – Haisla First Nation

John Bones – Nanwakolas Council

Karen Topelko - Ministry of Forests, Lands, and
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Steve Diggon – Coastal First Nations – Great Bear
Initiative

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Natural Resource Operations and Rural
Development

Gord McGee – Central Coast Indigenous Resource
Alliance

Romney McPhie – MaPP





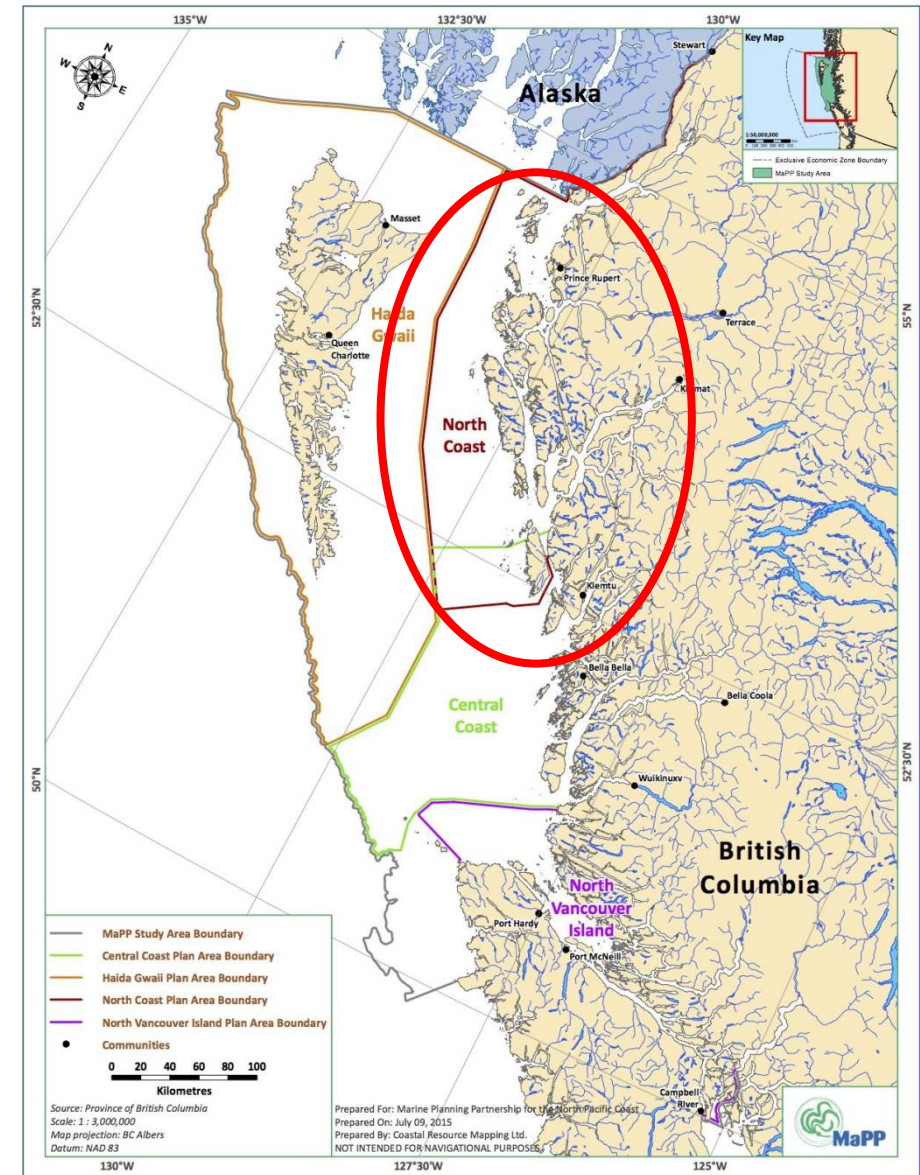
Marine Planning Partnership for the North Pacific Coast

Enter Keywords ... SEARCH

Haida Gwaii North Coast Central Coast North Vancouver Island Regional

A collaborative marine planning partnership between First Nations and the Province of British Columbia

www.mappocean.org



Marine Plan Partnership

- Collaboration between Provincial Government and 17 First Nations
- Regional Action Framework and 4 subregional marine plans
- Goals:
 - Protect marine environment;
 - Promote sustainable economic development;
 - Support coastal community well-being



ENVIRONMENTAL
STEWARDSHIP
INITIATIVE

ESI

Environmental Stewardship Initiative: North Coast Region

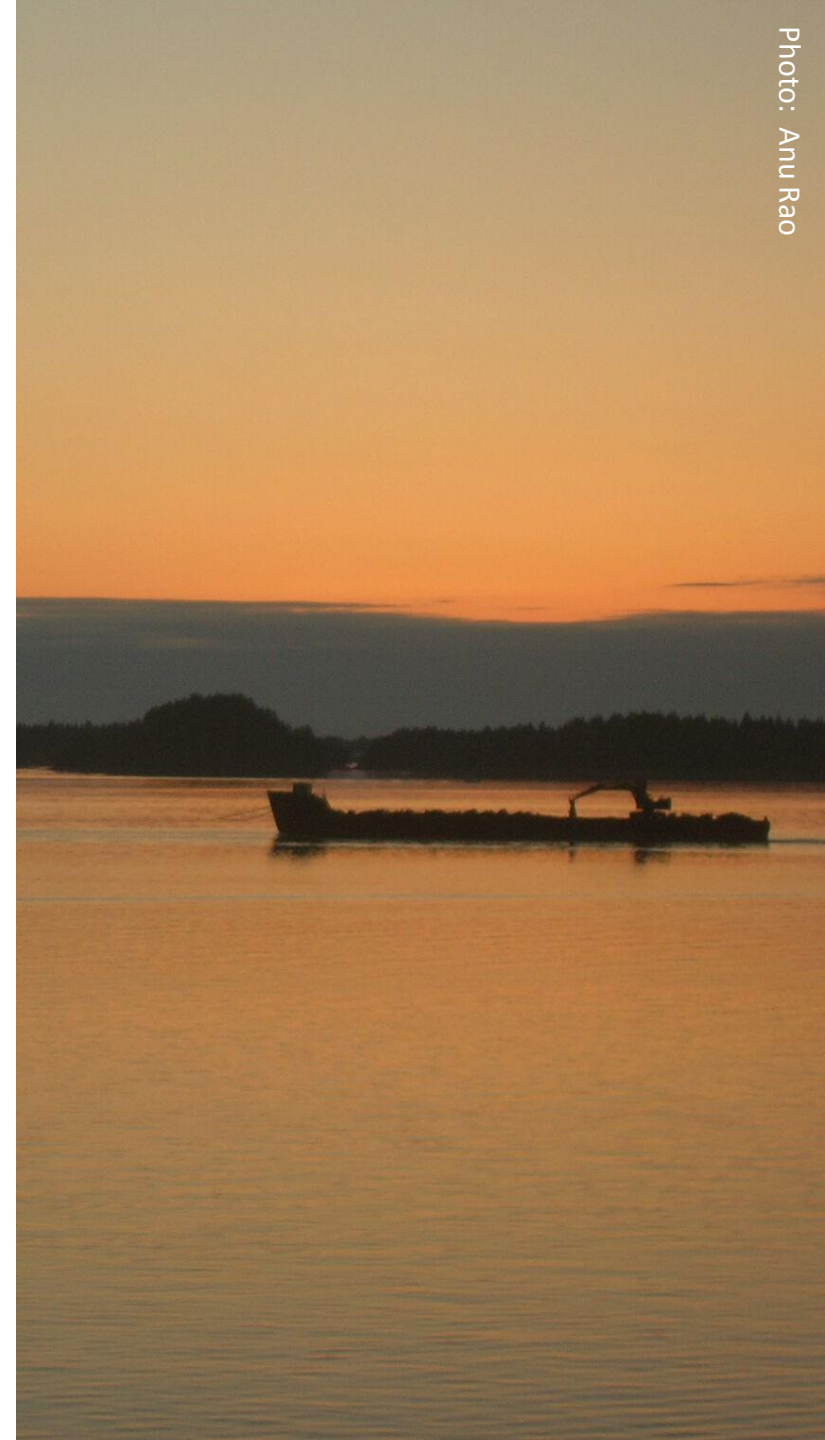
Collaboration between Provincial Government, First Nations,
and Industry (2014)

- 4 Regional Stewardship Forums

North Coast Regional Stewardship Forum

6 First Nations in North Coast (Gitga'at, Gitxaala, Haisla,
Kitselas, Kitsumkalum, & Metlakatla)

- Scope:
 - Ecosystem Assessment and Monitoring
 - Ecosystem Restoration and Enhancement
 - Ecosystem Research and Knowledge Exchange
 - Stewardship Education and Training



Why is Cumulative Effects a Priority?

- Northern Shelf Bioregion is physically and ecologically complex and supports a range of ecosystem types

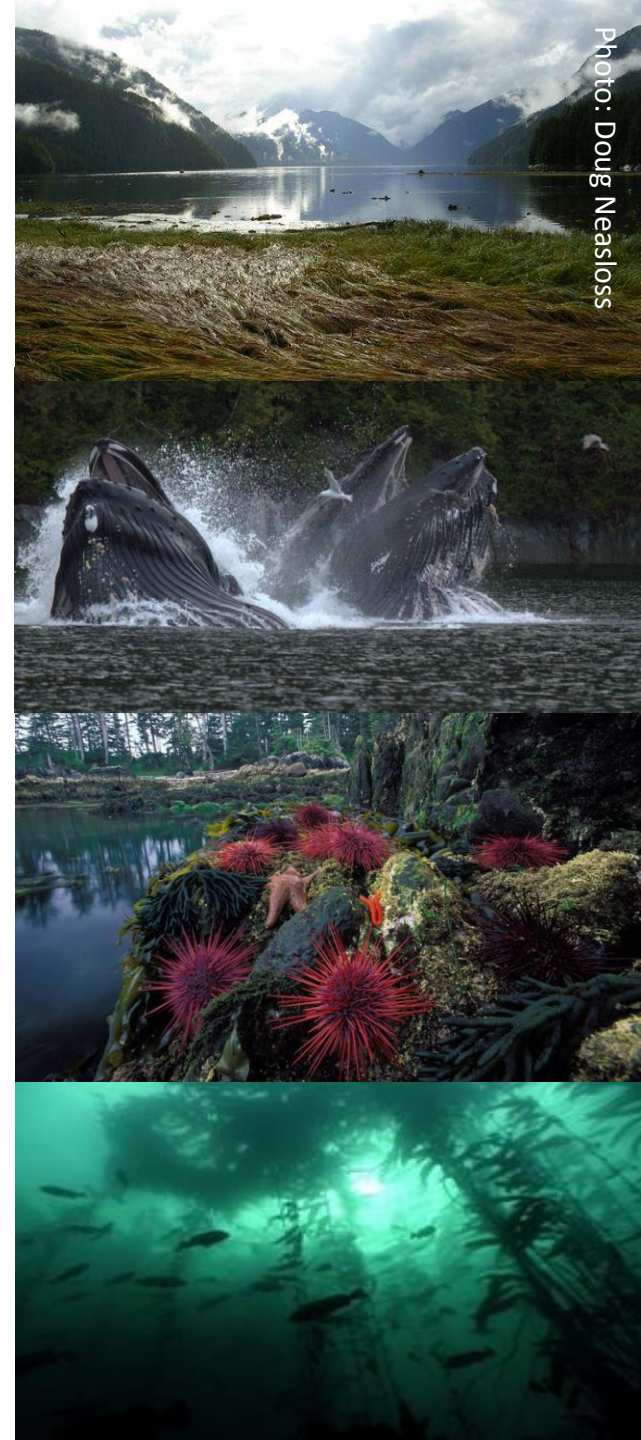


Photo: Doug Neaslross

Why is Cumulative Effects a Priority?

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- Supports a number of coastal communities and associated cultural, spiritual and economic aspects of human well-being

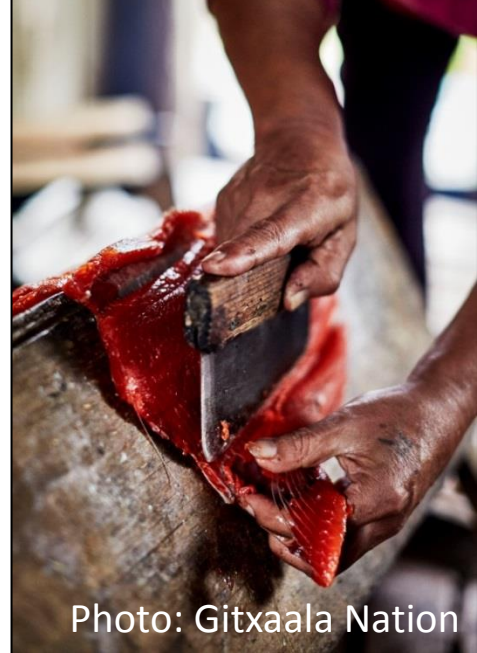


Photo: Gitxaala Nation

Why is Cumulative Effects a Priority?

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- Supports a number of coastal communities and associated cultural, spiritual and economic aspects of human well-being
- Wide range of economic activities occur: Commercial fisheries, processing, logging, port activities, rec fishing and tourism. These activities are also important to the wellbeing of coastal communities.



Why is Cumulative Effects a Priority?

- Northern Shelf Bioregion is physically and ecologically complex and supports a range of ecosystem types
- Supports a number of coastal communities and associated cultural, spiritual and economic aspects of human well-being
- Wide range of economic activities occur: Commercial fisheries, processing, logging, port activities, rec fishing and tourism. These activities are also important to the wellbeing of coastal communities
- Currently subject to intensive development pressure: LNG, port development and expansion, oil export, renewable energy.
- Proposed projects are assessed project by project, not in a sufficient way to assess cumulative effects



CUMULATIVE EFFECTS ASSESSMENT FRAMEWORK (WILSON 2017) (DRAFT)

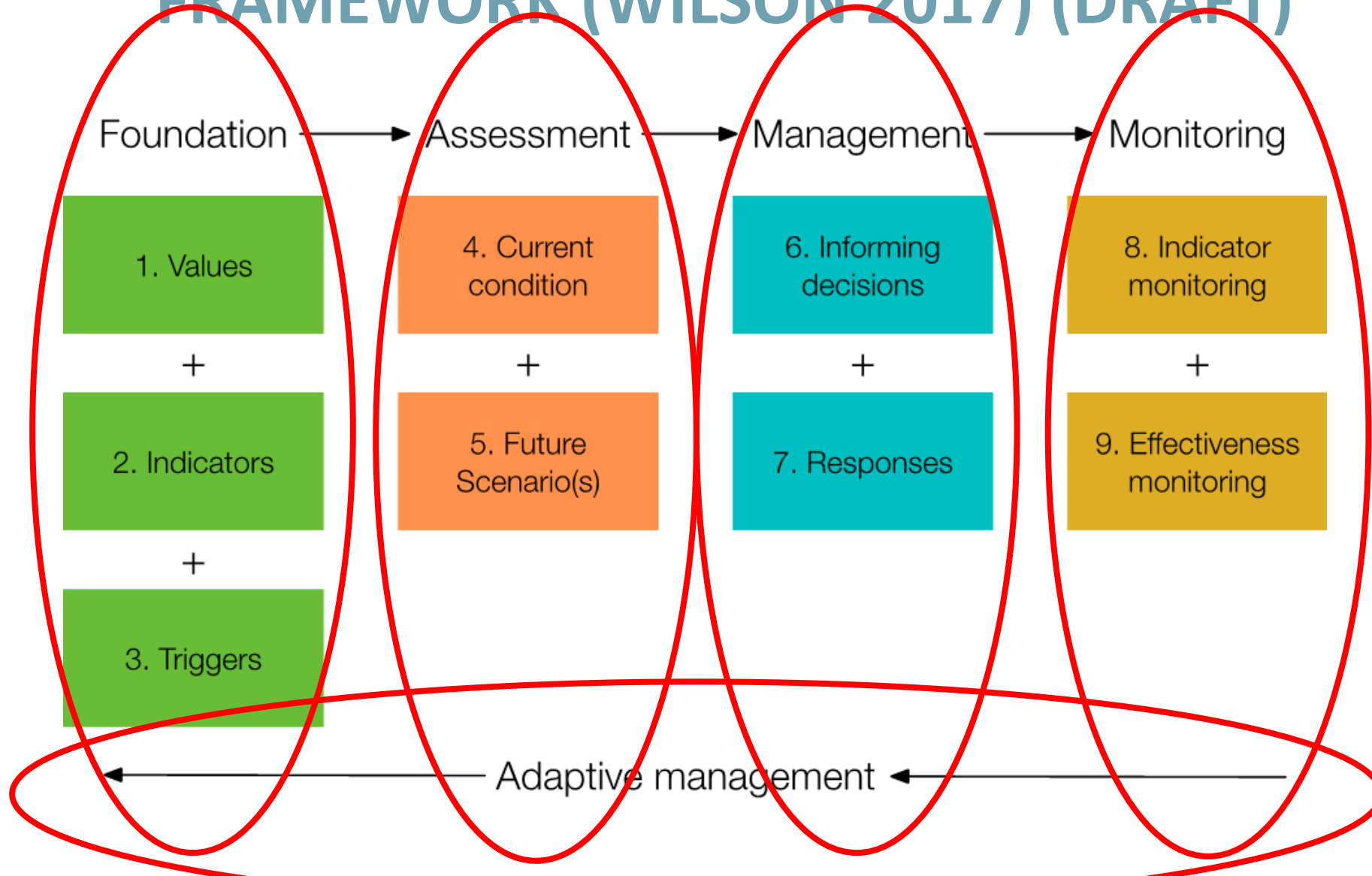


Photo: Greg Tamblin

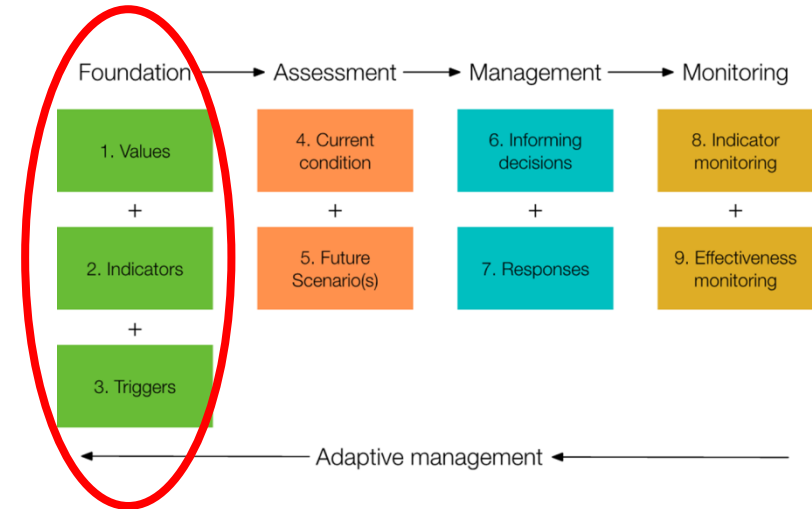
CUMULATIVE EFFECTS ASSESSMENT ACHIEVEMENTS (ESI AND MAPP)

1. Draft Cumulative Effects Assessment Framework completed;



CUMULATIVE EFFECTS ASSESSMENT ACHIEVEMENTS (ESI AND MAPP)

1. Draft Cumulative Effects Assessment Framework completed;
2. Foundation Phase initiated:



FOUNDATION: IDENTIFYING VALUES

- ▶ 33 Values identified by First Nations and local communities through multiple phases of engagement;

Common North Coast First Nations Cumulative Effects Values: December 7th 2016		
1	Herring - including eggs, spawn on kelp	Species
2	Salmon (all species)	
3	Halibut (and other groundfish)	
4	Bivalves - including butter clams, cockles, mussels	
5	Eelgrass	
6	Marine vegetation (seaweed and kelp)	
7	Dungeness crabs	
8	Eulachon	
9	Abalone	
10	Terrestrial mammals (moose, deer, bear)	
11	Seabirds	
12	Marine mammals	
13	Marine and Freshwater quality	Environment
14	Air quality	
15	Aquatic habitat - intertidal, subtidal, pelagic, benthic, estuarine, freshwater, wetland and riparian areas, coastal and inland old growth forests, glass sponge reefs	
16	Marine safety and navigability - wake, access	
17	Marine sediments	
18	Qualitative experience	
19	Acoustics (underwater noise, noise pollution)	SocioEconomic
20	Human health and health services (including crime)	
21	Access to resources	
22	Food security (preferred places/time/means) Where/what you want and quality and amount	
23	Commercial fisheries and marine based economy	
24	Indigenous trade	
25	Cultural identity (including cultural recognition)	
26	Knowledge transmission	
27	Resource management authority	
28	Community infrastructure/services	
29	Employment and Training (including education)	
30	Economic access	
31	Integrated knowledge (including cultural recognition)	
32	Housing	
33	Traditional governance systems (including relationships)	

*Numbers do not indicate ranking of importance/priority.

FOUNDATION: IDENTIFYING VALUES

- ▶ 33 Values identified by First Nations and local communities through multiple phases of engagement;
- ▶ Identified and engaged collaborators to advance this work: ESI

MaPP Yr 4 implementation Focus	Foundation	Assessment	Management	Monitoring
Aquatic Habitat (Skeena Estuary) Water Quality Marine Vegetation	ESI focus ESI/MaPP	ESI focus	MaPP focus	ESI Skeena/ MaPP NC Plan Area
Access to Resources	ESI focus	ESI focus	MaPP focus	MaPP focus
Salmon	ESI focus	ESI focus	MaPP focus	MaPP focus
Food Security	MaPP focus	MaPP focus	MaPP focus	MaPP focus
Economic Access	MaPP focus	MaPP focus	MaPP focus	MaPP focus

Dark text indicates a primary area of focus and greyed text indicate a secondary area of focus.

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FOUNDATION: IDENTIFYING VALUES

- ▶ Identified/drafted broad objectives for 3 values:
 - ▶ Aquatic Habitat: Estuaries
 - ▶ First Nations Access to Resources
 - ▶ Pacific Salmon

e.g., Aquatic Habitat: Estuaries value

“Protect and restore habitats and ecosystem function for species that are highly valued for their ecological and cultural significance”



FOUNDATION: IDENTIFYING INDICATORS

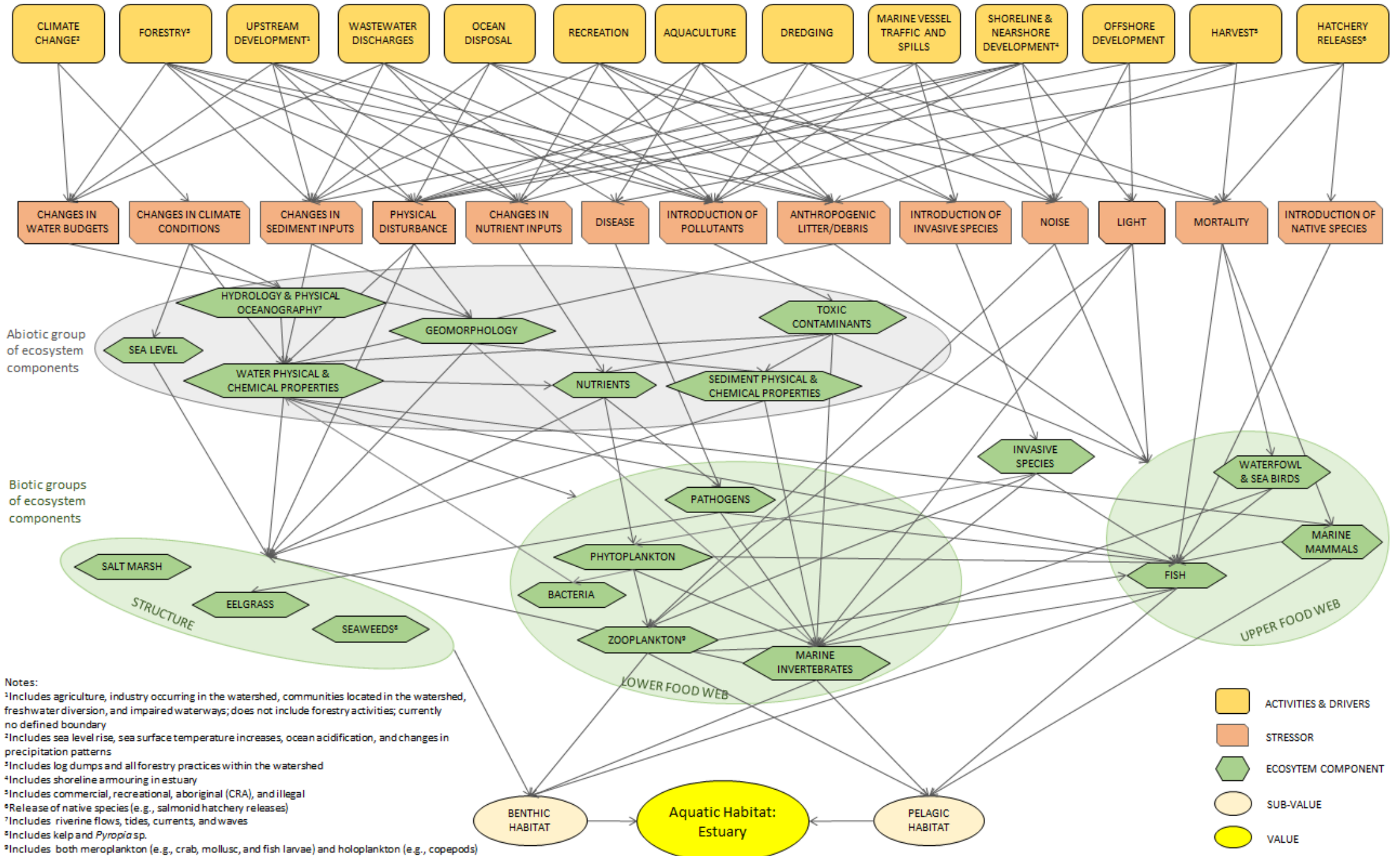
- ▶ Initiated development of Conceptual Models of system for 2 values (Estuaries & FN Access to Resources)



Photo: Jessica Hawryshyn

Conceptual Model Aquatic Habitat: Estuary

Objective: Protect and restore habitat and ecosystem function for species that are highly valued for their ecological and cultural significance



FOUNDATION: IDENTIFYING INDICATORS

- ▶ Initiated development of Conceptual Models of system for 2 values (Estuaries & FN Access to Resources)
- ▶ Identified a suite of potential indicators for *Estuaries* value (43 pressure indicators; 59 state indicators)



FOUNDATION: IDENTIFYING INDICATORS

- ▶ Initiated development of Conceptual Models of system for 2 values (Estuaries & FN Access to Resources)
- ▶ Identified a suite of potential indicators for *Estuaries* value (43 pressure indicators; 59 state indicators)
- ▶ Created a draft portfolio of indicators based on a set of criteria, relevance to management, number and intensity of pathways, and broad vs. specific
 - ▶ 13 state indicators:
 - ▶ 8 abiotic (e.g., Turbidity; Nitrate Concentrations)
 - ▶ 5 biotic (e.g., Native eelgrass extent; Native fish diversity)
 - ▶ 9 pressure indicators (e.g., Permitted waste discharge; Dredging areas and extent)

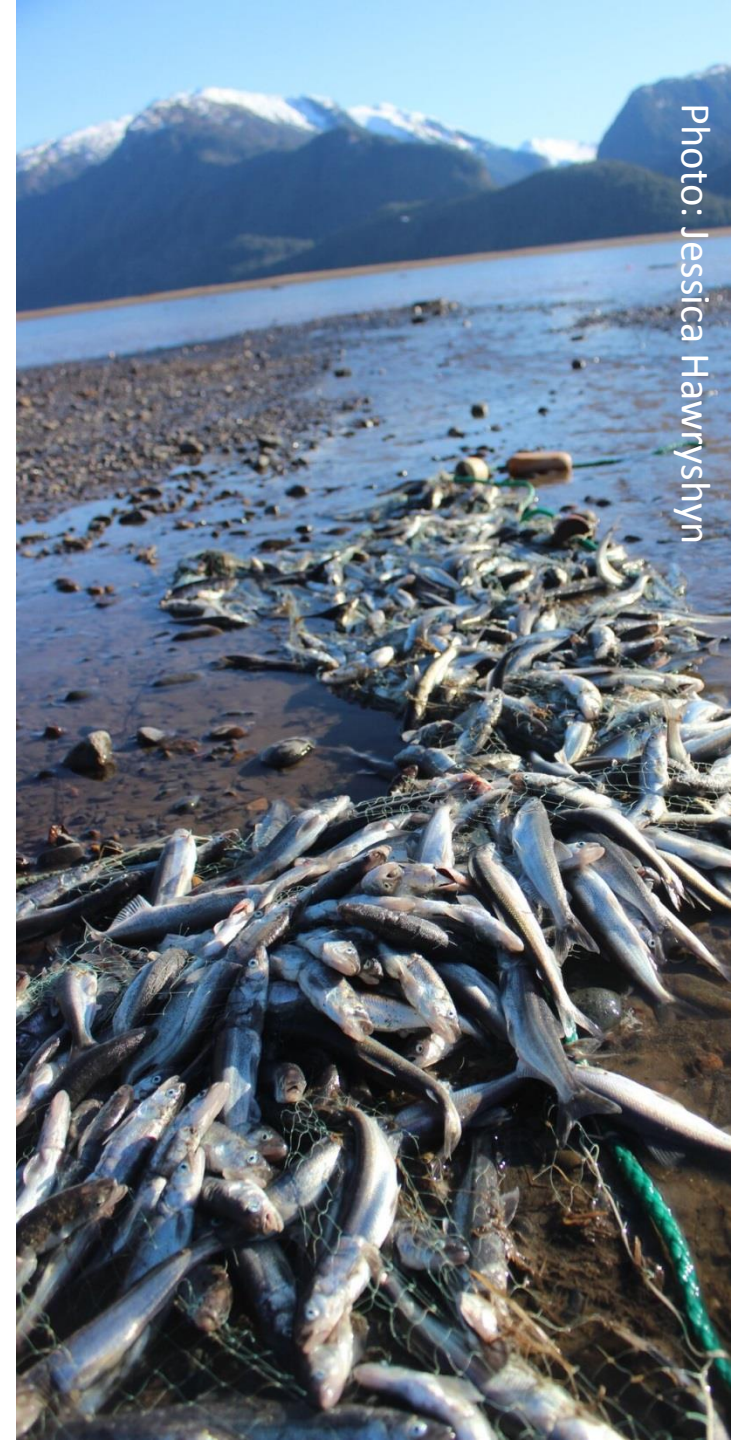
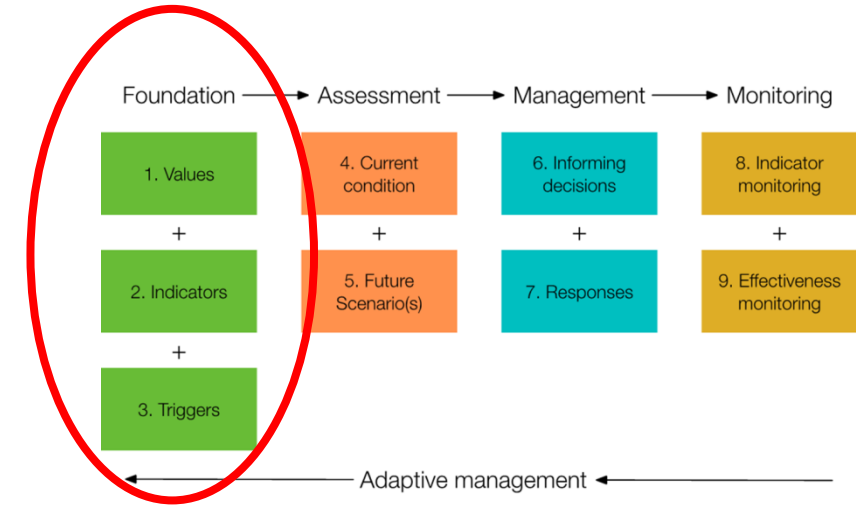


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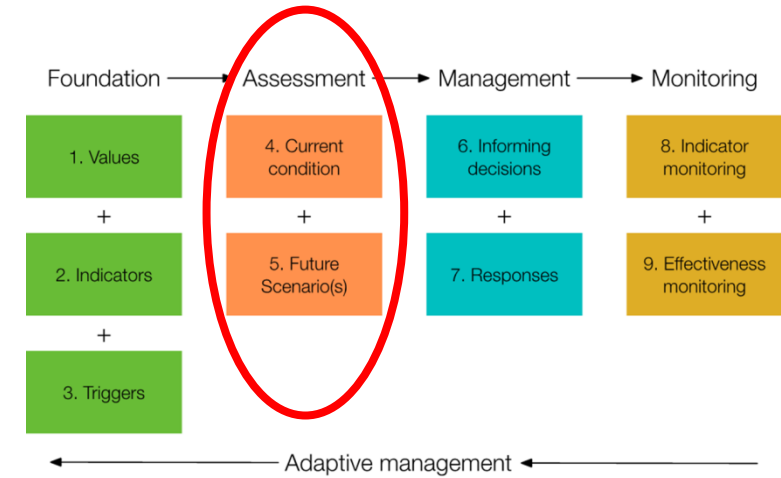
CUMULATIVE EFFECTS ASSESSMENT ACHIEVEMENTS (ESI AND MAPP)

1. Draft Cumulative Effects Assessment Framework completed;
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 - ▶ Initial values identified
 - ▶ Draft state and pressure indicators identified;
 - ▶ Triggers and benchmarks, in progress;



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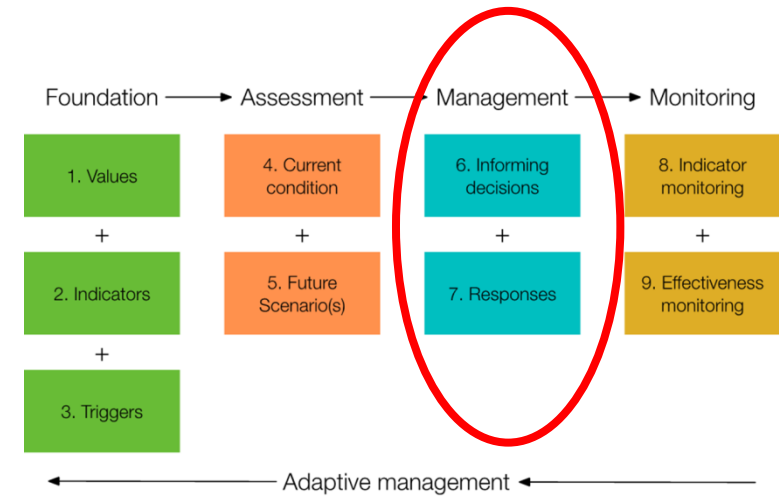
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 - ▶ Draft state and pressure indicators identified;
 - ▶ Triggers and benchmarks, in progress;
3. Assessment phase initiated:
 - ▶ Draft current condition protocol, in progress;



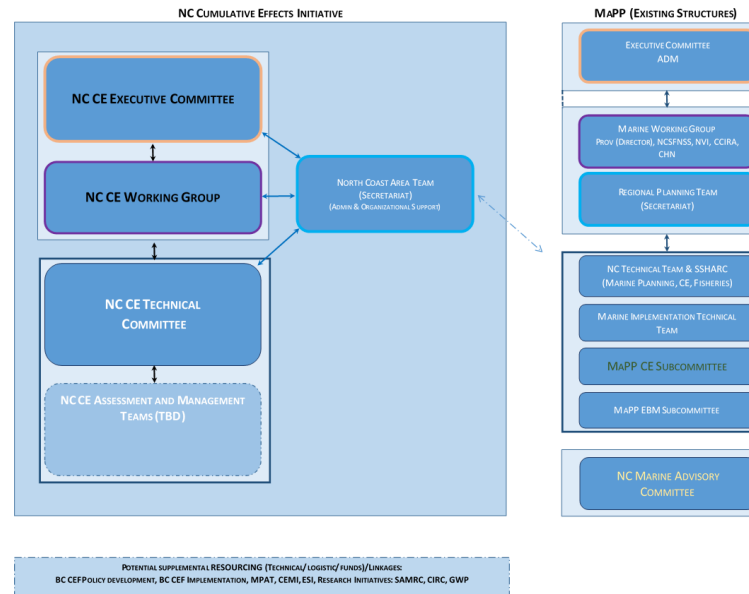
CUMULATIVE EFFECTS ASSESSMENT ACHIEVEMENTS (ESI AND MAPP)

4. Management Phase initiated:

- ▶ Governance arrangements and TOR developed (MaPP);
- ▶ Management Reporting structure, in progress;



MaPP NC CE Governance Plan



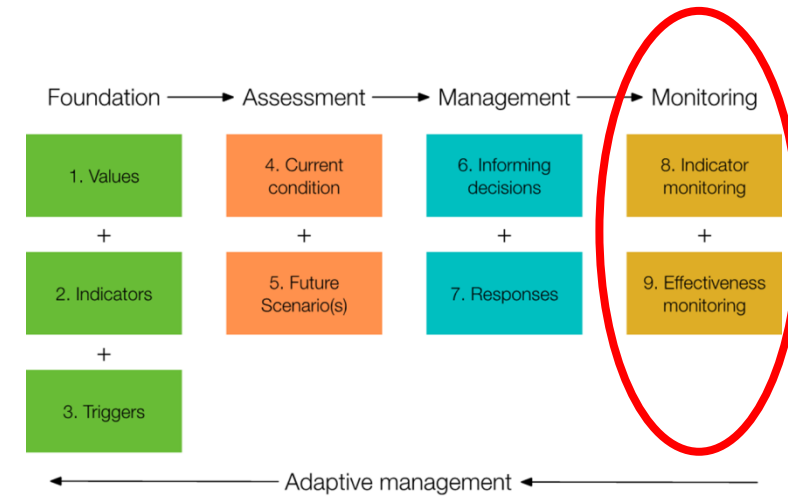
CUMULATIVE EFFECTS ASSESSMENT ACHIEVEMENTS (ESI AND MAPP)

4. Management Phase initiated

- ▶ Governance arrangements and TOR developed (MaPP);
- ▶ Management Reporting Structure, in progress;

5. Monitoring Phase initiated:

- ▶ Indicator monitoring program, in progress;



LESSONS LEARNED

- ▶ Multi-jurisdictional space with overlapping and distinct responsibilities requires clear governance arrangements
 - ▶ Build off what is there if possible (momentum and trust)
 - ▶ Avoid and/or mitigate confusion / controversy through keeping products 'implementable' via respective authorities – jurisdictional clarity

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- ▶ Multi-jurisdictional space with overlapping and distinct responsibilities requires clear governance arrangements
 - ▶ Build off what is there if possible (momentum and trust)
 - ▶ Avoid and/or mitigate confusion / controversy through keeping products 'implementable' via respective authorities – jurisdictional clarity
- ▶ Match Scope with existing capacity and budget
 - ▶ High degree of internal and external coordination within and across processes
 - ▶ Requires a high degree of human resource and fiscal management;
 - ▶ Requires technical expertise (lends credibility and ensures consistency)
 - ▶ Don't underestimate capacity and time required from technical team, communities, and decision makers

LESSONS LEARNED

- ▶ Ensure relevance and buy-in through community engagement
 - ▶ Carve out a significant portion of budget to meaningfully engage;
 - ▶ Include meaningful engagement in work plans

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 - ▶ Recognize timelines and prepare for delays
- ▶ Ensure process & end products are adaptable, nimble and resilient

Key Next Steps

- ▶ Implement MaPP CEF framework for 4 initial values;
- ▶ Better integrate similar initiatives - efficiency;
- ▶ Engage federal government on shared interests;

THANK YOU

Rebecca Martone | Marine Biologist | Marine and Coastal
Resources Group

Province of British Columbia

www.mappocean.org

