



NATIONAL ADVISORY PANEL ON MPA STANDARDS PRESENTATION

**A Model For Providing Coordinated
Commercial Fishing Industry Advice
on Marine Planning Zoning**

April 8, 2018

Current Approach

- Management agencies wish to develop marine protected areas or networks to protect important cultural and ecological features and processes to support stated objectives
- After identifying ecological and cultural targets, management agencies need to determine how best to achieve those targets through closures while minimizing the socio-economic impacts
- The management agencies will use tools such as Marxan to generate heat maps that guide the agencies on identifying zoning boundaries that best achieve the identified targets while using limited data on socio-economic impacts
- Management agencies will then present the generated zoning maps to potentially impacted parties (commercial fishing, recreational fishing, tourism) and ask they to submit advice on how to improve on the zoning while maintaining the targets

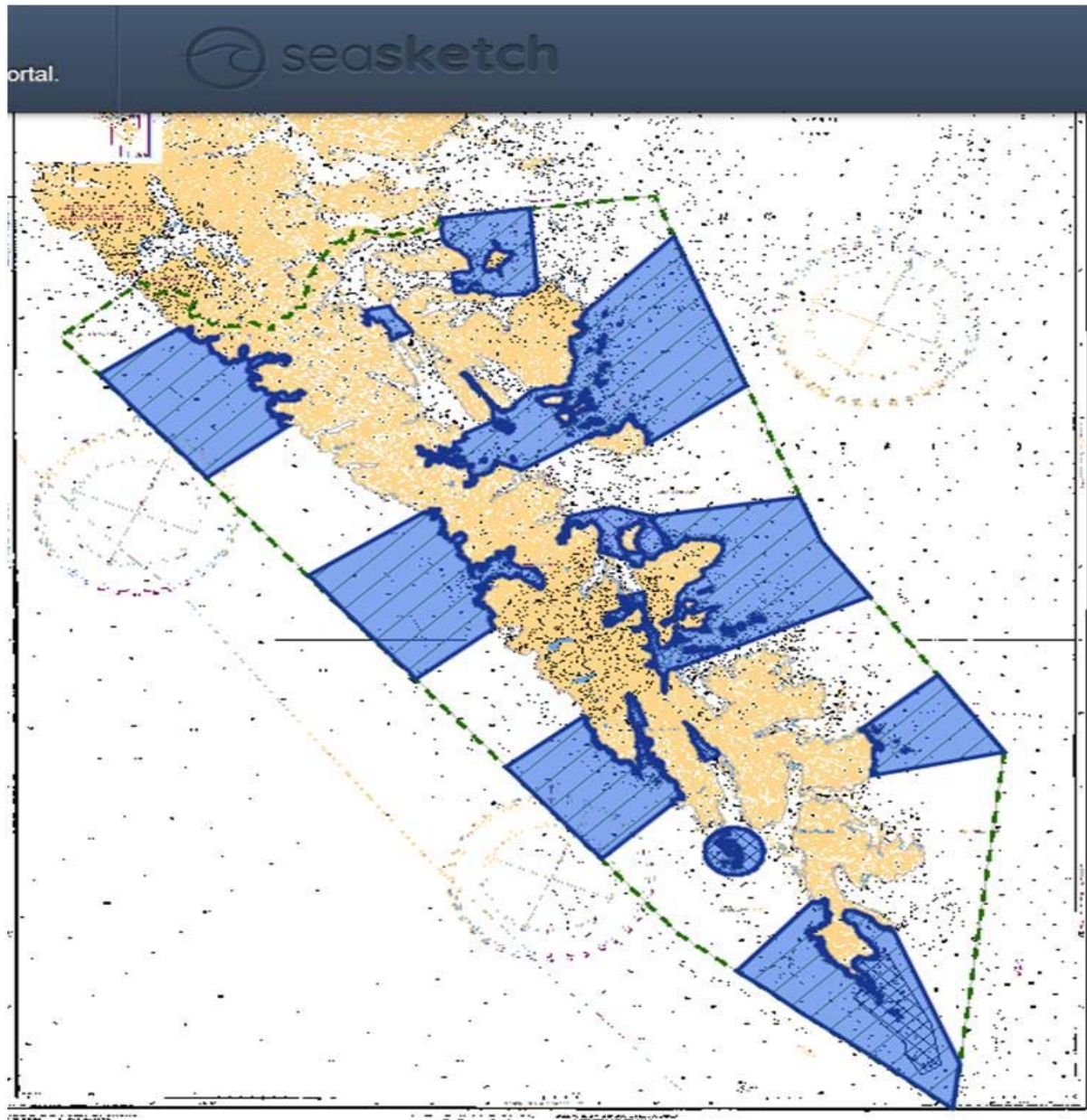
The Problem

- The Optimization Model doesn't measure all of the relevant economic values and is unable to measure and determine tradeoffs between different user values
- The Management Agencies receive many suggestions for how to revise the zoning boundaries while achieving targets but will not have the knowledge and ability to assess the value of one recommendation versus any other or to determine what an acceptable compromise between recommendations would be

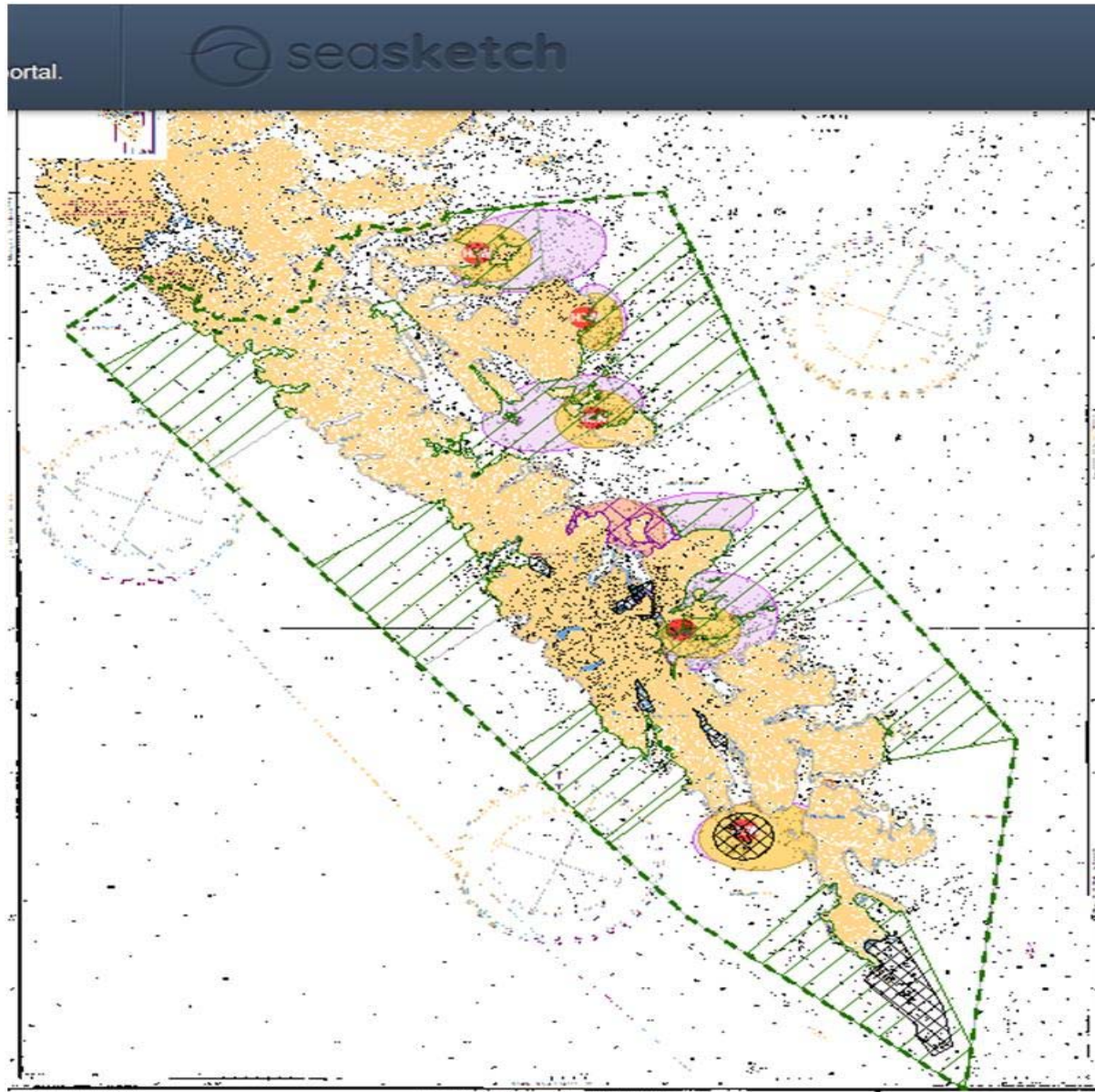
The Approach used for Gwaii Haanas

- On November 9, 2017 the AMB (Archipelago Management Board) presented a proposed zoning plan for Gwaii Haanas that closed 49% of the Gwaii Haanas area to commercial fishing for the purpose of protecting important cultural and ecological features
- The AMB advised they were seeking advice on their zoning proposal by December 8, 2017 from all and any affected parties
- In addition to recreational fisheries and tourism activities, there are 19 distinct commercial fisheries that have historically fished in Gwaii Haanas
- Commercial fishing representatives approached the AMB with a proposed process that would avoid the AMB receiving dozens, if not hundreds, of diverse disaggregated and uncoordinated recommendations and maps that would be difficult to compare, evaluate and assess

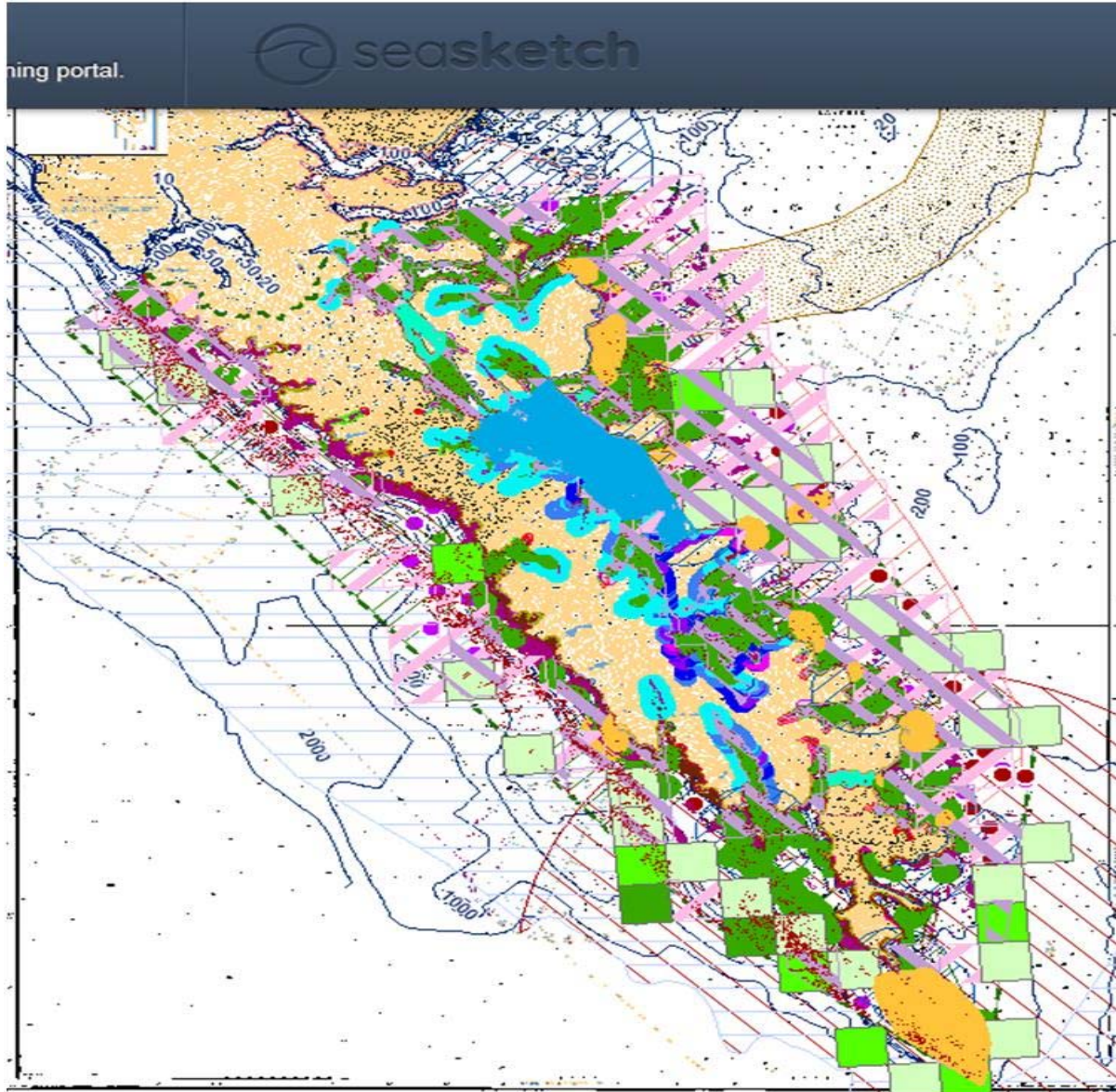
Map – Gwaii Haanas AMB Draft Proposal November 2017



Map – Gwaii Haanas AMB Cultural Targets



Map – Gwaii Haanas AMB Ecological Targets



The Approach used for Gwaii Haanas

- The commercial fishing industry agreed to run a comprehensive process that would provide coordinated commercial fishing industry advice by the end of February 2018 using the AMB proposed zoning as the starting place and respecting the AMB cultural and ecological targets
- The AMB advised the commercial fishing industry in December 2017 that they would extend the consultation period until the end of February 2018 and allow the commercial industry to undertake the proposed process
- The AMB and DFO also agreed to provide technical support to the process with respect to Seasketch mapping and analyzing map layers against socio-economic metrics
- In logical progressive steps, the process allows experienced active commercial fishermen to provide consensus advice, based on their extensive experience and knowledge of the fishing grounds, regarding how to adjust the proposed zoning boundaries to meet the AMB targets while reducing the impact on commercial fishing opportunities and access

The Approach used for Gwaii Haanas

- The understanding from the AMB was that:
 - The AMB Proposal was to be the starting point for developing the industry map;
 - The AMB was willing to consider changes to the zoning boundary lines but wanted achievement of the cultural and ecological targets.
- As a result, the Commercial Industry set the following priorities for the process:
 - **First Priority:** Achieve % overlap cultural and ecological target scores close to, equivalent, or greater than achieved in the AMB zoning proposal;
 - **Second Priority:** Balance achievement of the objective for continuity and connectivity of the boundary lines from land to the outer Gwaii Haanas boundary with the objective to reduce the socio-economic impact on commercial fishing access and opportunity.

The Approach used for Gwaii Haanas

- All known commercial fishing organizations were contacted and asked to identify experienced active fishermen from their respective fisheries to participate in the following step wise process:
 - **Step 1:** Have each commercial fishery develop a proposed zoning map (an individual fishery layer) that met the cultural and ecological targets. This resulted in 11 different maps (layers) being developed. Each map produced cultural and ecological scores very close to the proposed AMB map. An estimated total of 120 experienced fishermen participated in Step 1.
 - **Step 2:** The maps generated from the groundfish fisheries (5 different map layers) were overlaid to show the commonalities (areas all agreed to close) and differences (areas where there wasn't consensus on closure). The area of commonality did not achieve the cultural and ecological targets identified in the AMB proposal. Therefore, a meeting was held with approximately 35 experienced groundfish fishermen from all the different groundfish fisheries to agree on where to increase closed areas consistent with the priorities identified. The product of this work was a consensus agreement on a ***Final Offshore Fishery Map*** (layer).

The Approach used for Gwaii Haanas

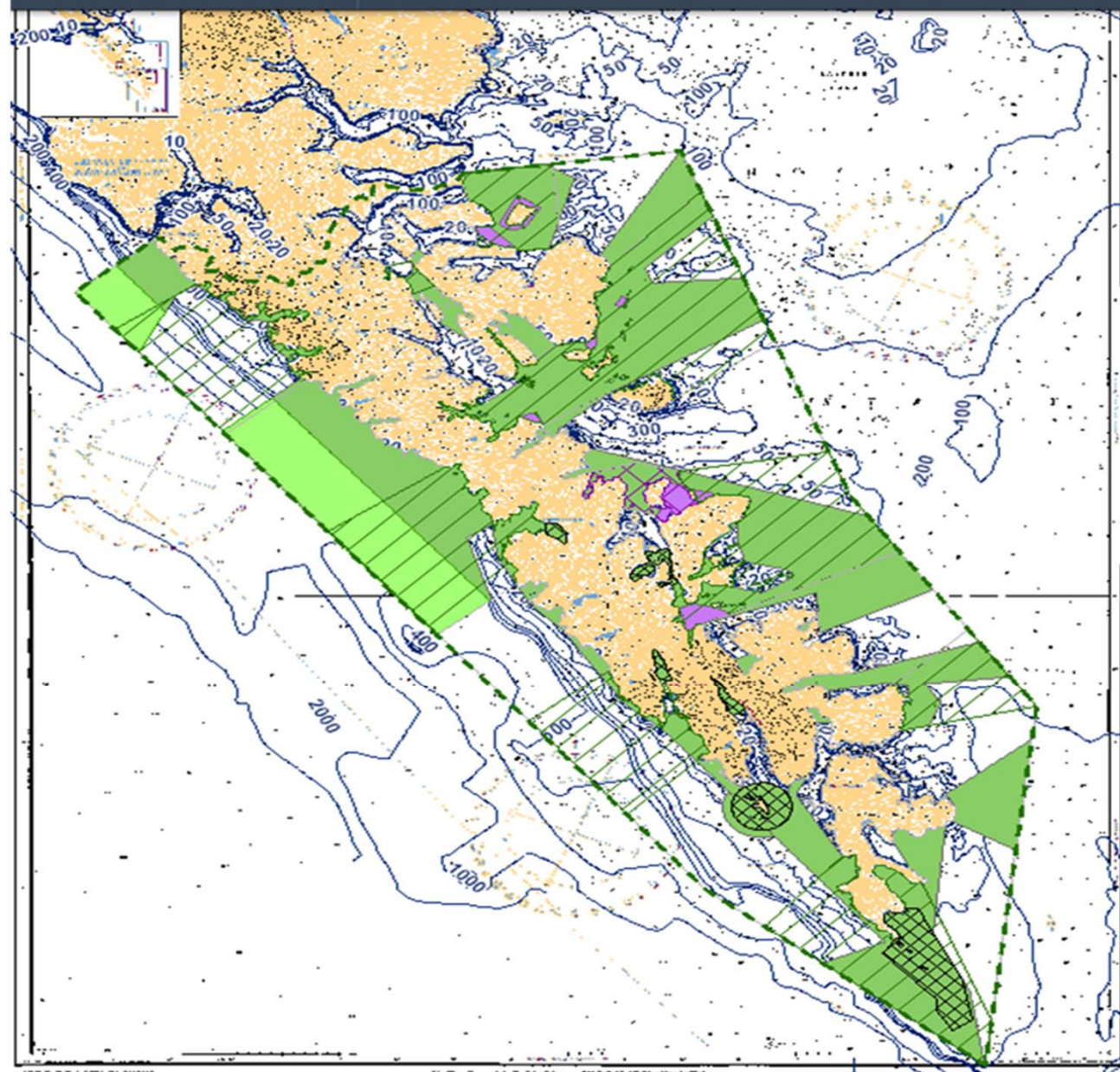
- **Step 3:** The maps generated from the shellfish, salmon and herring fisheries (5 different map layers) were overlaid to show the commonalities and differences. The area of commonality did not achieve the cultural and ecological targets so a meeting was held with 40 experienced shellfish, salmon and herring fishermen from the different fisheries to agree on where to increase closed areas consistent with the priorities identified. The product of this work was a consensus agreement on a ***Final Inshore Fishery Map*** (layer).
- **Step 4:** The Final Offshore Fishery Map, Final Inshore Fishery Map, and Tuna Fishery Map were overlaid to show the commonalities and differences. The area of commonality did not achieve the cultural and ecological targets so a meeting was held with approximately 40 experienced groundfish, shellfish, salmon, herring and tuna fishery fishermen from to agree on where to increase closed areas consistent with the priorities identified. The product of this work was a consensus agreement on a ***Draft Commercial Fishery Map*** (layer).

The Approach used for Gwaii Haanas



- **Step 5:** The Draft Commercial Fishery Map was reviewed with the AMB, ENGO organizations, and local commercial Haida Fishermen. Their feedback was adopted after consultation with industry participants showed the changes improved on target achievement and did not undermine the compromises reached between commercial fisheries.
- **Step 6:** A series of general commercial fishing industry meetings were held to:
 - explain the process used to develop the commercial industry advice;
 - present the Draft Commercial Fishery Map;
 - communicate the importance of the cultural and ecological features;
 - explain how each zone boundary was achieved and the associated compromises within and between fisheries that reduce, remove and maintain fishing access and opportunity;
 - show how the Final Commercial Fishery Map performed against the AMB proposal at achieving the cultural and ecological targets.

The Approach used for Gwaii Haanas

- **Step 7:** The Coordinated Commercial Fishing Industry Advice (CCFIA) was presented to the AMB. The submission included a comprehensive description of the process, including each map layer and overlay, where compromises were made, estimated economic impact analysis, a comparison between the AMB and CCFIA at achieving the cultural and ecological targets, and recommendations regarding:
 - Involving the commercial industry in how to change any specific boundary line
 - Regular review and assessment
 - Stock assessment surveys in zoning areas
 - Identifying research opportunities
 - Enhanced relations and communications regarding the cultural and ecological targets



Commonality: Total 62.5%
East 72.8%
West 50.1%

Legend:  CCFIA score is 90% or greater of the AMB Proposal score
 CCFIA score is less than 90% of the AMB Proposal score

Category	GH Overlap km ²	CCFIA Overlap km ²	CCFIA % of GH
Total Area (km ²)	1700.05	1686.43	99
Cultural Targets:			
Conc. Harvest/Use Cultural (yellow, primary zone)	138.58	162.62	117
Conc Harv Use Cultural (pink, secondary zone)	327.18	318.87	97
Archeological Areas	35.59	35.82	101

Ecological Targets:

Category	GH Overlap km ²	CCFIA Overlap km ²	CCFIA % of GH
Ecological Features: EBSA within Gwaii Haanas	1863.83	1707.21	92
Ecological Features: EBSA in Region	1864.13	1712.65	92
Habitats	585.01	714.65	122
Estuaries (wetland shoretype)	51.73	71.21	138
Areas of high tidal current (exposed)	162.49	147.21	91
Areas of high tidal current (sheltered)	7.41	14.98	202
Salmon Stream Estuaries	1.68	2.11	126
Herring Spawning Areas (kgs)	36113803.00	40026533.00	111
Rare/Sensitive Abalone	40.64	49.65	122
Cetaceans	2017.27	1553.29	77
Important Bird Areas	526.54	540.07	103
Important Seabird Areas	229.86	256.99	112
Rare / Sensitive Habitat	924.70	913.38	99
Corals and Sponges	32.00	35.00	109