

PNCIMA PLANNING OFFICE

**PNCIMA PLAN:
ISSUE OUTPUTS
AND TASKS**

REVIEW & RECOMMENDATIONS



PNCIMA
INITIATIVE

FEBRUARY 14, 2011

IMPORTANT NOTE

This document identifies key issues, outputs and tasks to be addressed in the PNCIMA Plan and is intended as a reference guide in the development of the Plan. It should be used with the accompanying review table reflecting the responses of the stakeholder Integrated Oceans Advisory Committee (IOAC) to confirm their perspectives on the content of this document.

1.0 INTRODUCTION AND PURPOSE

The 2009 Issues, Challenges and Opportunities Paper identified key issues and the planning scales at which they might be addressed in PNCIMA. However, the specific outcomes to be generated for these issues have not yet been determined.

A question also exists about whether or how a plan for the entire PNCIMA region should reflect issues being addressed at the sub-regional and coastal planning scales, and the degree of interest and authority of participating government departments, agencies, First Nations and stakeholders.

This paper is intended to provide a basis for further discussion and resolution of these questions. More specifically, this paper:

- Outlines the potential outputs (products and services) for issues relevant at the Regional (PNCIMA) planning scale;
- Identifies the general tasks involved in generating the PNCIMA outputs;
- Identifies the implications for structures and processes to achieve the outputs.

2.0 PNCIMA PLANNING AREA AND SCALES/LEVELS

The PNCIMA is approximately 112,000 km² in size. It covers the nearshore and offshore areas of the Pacific Coast from Alaskan (Canada's jurisdictional limit) southward to the end of Johnstone Strait on eastern Vancouver Island, and to Brooks Peninsula on the west coast of Vancouver Island. The PNCIMA boundary reflects a variety of factors, with ecological considerations a major determinant of its southern boundary.

On December 11, 2008 the First Nations, represented by Coastal First Nations (CFN) and the North Coast-Skeena First Nations Stewardship Society (NCSFNSS), signed a **PNCIMA Collaborative Oceans Governance Memorandum of Understanding (MOU)** with DFO. The Province of British Columbia and the Nanwakolas Council signed the MOU in September and October, 2010, respectively. The MOU recognizes that PNCIMA may entail a “nested” hierarchy of planning at different scales, including the Sub-regional scale (Haida Gwaii, North Coast, Central Coast, and Northern Vancouver Island) and the Local/Coastal Management Area scale. The MOU confirms that many First Nations are already involved in local, community-level planning and have organized themselves into aggregate bodies to develop Sub-regional planning (referred to as Geographic Management Area-scale planning in the MOU).

The Large Ocean Management Area (LOMA) level covers the entire region and may be referred to as the Regional planning level or scale. It generally addresses region-wide issues, primarily associated with the broader marine ecosystems and activities. Management recommendations are usually broad and strategic in nature.

Planning at the Sub-regional or Geographic Management Area (GMA) level is intended to address issues that affect marine areas, straits and inland waters of the Haida Gwaii, North Coast, Central Coast, and Northern Vancouver Island sub-regions of PNCIMA. It may also reflect common issues found in more localized planning work or issues common to other sub-regions.

The Local or Coastal Management Area (CMA) planning level is intended to address resource management issues of strong local or community-level importance. In PNCIMA, CMA plans represent First Nations’ plans for their individual territories, completed provincial government and local government official plans and by-laws. Some areas have benefited from local community association and non-government plans. Local plans generally focus on more detailed foreshore, nearshore and intertidal areas rather than the straits and open ocean areas. Management recommendations for marine values, uses and activities are usually more specific in coastal plans than in Sub-regional and Regional plans. In the case of First Nations’ plans, many combine elements of both Local and Sub-regional planning, due to the extent of their traditional territories.

3.0 PNCIMA ISSUE TOPICS

The 2009 Issues, Challenges and Opportunities Paper identified ten Marine-related Activity or Use Issues and seven Marine Environment and Culture Issues as topics for PNCIMA plan product development. Since then, the PNCIMA Planning Office has combined some issues, and added two overarching issues, namely the integration of economic strategies across PNCIMA, and the definition and application of a marine ecosystem-based management (EBM) framework to all values and activities.

The resulting sixteen new issue topics have been organized into the following three categories:

Over-Archiving Issues

- Marine Ecosystem-Based Management (EBM)
- Integrated Economic Strategies
- Marine Climate Change Effects
- Existing Plan Integration

Marine Activity & Use Issues

- Marine Transportation and Vessel Safety
- Commercial, Recreational and First Nations' Marine Fisheries
- Marine Recreation and Tourism
- Marine Aquaculture
- Renewable Ocean Energy
- Non Renewable Ocean Energy
- Maritime Defence and Security

Marine Environment & Culture Issues

- Marine Protection
- Species at Risk and Species of Concern
- Invasive Aquatic Marine Species
- Marine Pollution (including spills)
- Cultural Resources

Each issue topic was reviewed by the Planning Office using the following key considerations:

- The intended scope of integrated ocean management planning at the Regional or LOMA scale.
- The degree to which the issue is addressed through other planning scales or processes.
- The level of known or apparent risk of not addressing this issue.
- The level of shared interest among participating interests and governments in addressing the issue in PNCIMA.
- The ability of relevant authorities to implement the recommended outcomes.

- The degree to which desired issue outputs relate to the intended outputs of the ecosystem-based management framework being developed for PNCIMA.
- The relatively short two year time frame for developing a plan.
- The capacity limitations of government staff and stakeholders.

As a result, five topics are recommended for more detailed work. The recommended issue topics are:

- 1. Marine Ecosystem-Based Management**
- 2. Integrated Economic Strategies**
- 3. Marine Transportation and Vessel Safety**
- 4. Fisheries (Commercial, Recreational and First Nations)**
- 5. Marine Protection.**

These recommended key topics (besides EBM) are those considered more likely to require additional management direction (spatial and aspatial) than will be found under the goals, objectives, indicators and other aspects of the PNCIMA EBM framework.

It should be noted that EBM is considered a key underpinning of the marine planning approach as well as an issue to be addressed.

The work required for the proposed five key issues could potentially be assisted by formation of dedicated working groups. These working groups would be charged with development of recommendations and advice to the Integrated Ocean Advisory Committee (IOAC) and Planning Office on the proposed PNCIMA outputs for each issue.

4.0 STRUCTURE AND PROCESS CONSIDERATIONS

A number of existing and potential structures are identified below as those that could be assigned responsibility for completing tasks and achieving the intended PNCIMA outputs described in the previous section of this document.

4.1 WORKING GROUPS

Working groups are intended to provide an opportunity for stakeholders, as well as government and First Nation's organizations, scientists and technical experts to engage in review and development of recommendations on specific topics identified as priority PNCIMA products.

Terms of Reference will be required for each individual working group, outlining rules of engagement, reporting relationships, specific deliverables and timelines. However, the basic functions of a working group are:

- Review background materials and information;
- Formulate advice and recommendations for consideration by the Integrated Oceans Advisory Committee (IOAC);
- Report progress, advice and recommendations to the IOAC and Planning Office.

The composition of each working group will vary, depending upon the nature of the topic to be addressed. Working groups are intended to be a blend of stakeholders, independent science and technical expertise. Each working group should consist of no more than 12 members, one of whom is to be elected as chairperson. The working group may be supplemented for specific discussions and tasks by technical expertise from federal and provincial agencies and PNCIMA MOU First Nations, as well as Planning Office staff.

The specific tasks of a working group will be drawn from the list of anticipated tasks identified in the issue topic review of this document.

Remuneration should be provided for travel expenses, and honoraria may also be required for non-federal or non-provincial government participants.

4.2 PLANNING OFFICE

In relation to the working groups, the PNCIMA Planning Office responsibilities should be to:

- Develop Terms of Reference for the working groups;
- Prepare a preliminary list of potential members for IOAC review and support;
- Provide logistical assistance for working group meetings and functions;
- Lead specific meetings and discussions of a working group when requested;
- Prepare or coordinate necessary background materials and studies, including summaries of existing plans and other information to assist a working group in its discussions;
- Provide technical support to a working group upon formal request, including provision of socioeconomic assessment of working group recommendations;

- Integrate and assess recommendations by the IOAC as part of the broader PNCIMA plan document.

4.3 INTEGRATED OCEANS ADVISORY COMMITTEE

In relation to the working groups, the Integrated Oceans Advisory Committee (IOAC) should be responsible for:

- Review of working group Terms of Reference and membership;
- Review of working group findings and recommendations, including consideration of the implications for other plan components such as potential marine designations and activities;
- Providing recommendations to the Planning Office regarding level of support for working group recommendations;
- Ensuring constituencies are fully apprised of working group activities and recommendations.

4.4 WORKSHOPS AND SUB-REGIONAL ADVISORY FORUMS

Issue-specific workshops will be an important and valuable tool for receiving additional information, advice, perspectives and confirmation of work being developed through an individual work group or the Planning Office on an issue. Workshops are especially useful in engaging “communities or practice” (other experts or practitioners engaged in a specific field of work), as well as in providing for broader input from stakeholders and the public who may have a special interest in the issue.

Workshops should be considered in the formulation of work plans and terms of reference for priority issue work, whether conducted by a working group or the Planning Office.

The PNCIMA Engagement Strategy (2010) includes a commitment to hold annual or semi-annual advisory “forums” in geographic sub-regions of PNCIMA. These forums provide an excellent opportunity to report out to the general public and stakeholders on PNCIMA activities, but also give the opportunity for specific working groups and the Planning Office to discuss and receive input on the work being done on priority topics.

The inclusion of sub-regional advisory forums in work plans for development of priority issue recommendations will ensure a linkage to PNCIMA process and working group timelines.

4.5 MARINE TECHNICAL ADVISORY TEAM (MTAT)

Many of the PNCIMA outcomes and tasks will benefit from specific scientific and technical advice from independent parties or bodies. The PNCIMA Steering Committee has decided to establish a standing body to provide scientific and technical advice for specific issues. The MTAT activities will be incorporated into work plans and processes associated with completion of PNCIMA outcomes.

4.6 PROCESS IMPLICATIONS

Timelines for completion of priority issue recommendations should follow the same general timelines, whether conducted by a special working group or by the Planning Office. A general outline of steps and timelines is provided below in relation to the overall PNCIMA process timelines:

1. Inform IOAC of issue topic approach and responsible bodies by June 30, 2010.
2. Prepare PNCIMA draft terms of reference and work plan for IOAC information by June 30, 2010.
3. Confirm key issue topics, outputs, outcomes and tasks by November 30, 2010.
4. Confirm working group terms of reference and members by January 30, 2010.
5. Convene working groups and MTAT, and confirm specific work plan for approval by February 28, 2011.
6. Commence work by March 31, 2011 and prepare preliminary recommendations by December 31, 2011.
7. Preliminary recommendations and work reviewed and discussed with IOAC between January 1, 2012 and March 31, 2012.
8. Working groups/Planning Office revisions and final recommendations provided to IOAC by April 30, 2012.
9. IOAC comments to PO by May 31, 2012.
10. Draft Plan developed by Planning Office by July 31, 2012.

4.7 NEXT STEPS

Step 1: Confirm the key issues to be addressed in the PNCIMA process. The key issues could be adjusted in accordance with any adjustments to the evaluation and rating process used.

Step 2: Confirm the outputs and tasks associated with each key issue.

Step 3: Confirm the structures responsible for addressing the outputs and tasks associated with the key issues. The structure could be a specific working group, Planning Office, Marine Technical Advisory Team, or combinations of these groups.

Step 4: Develop a specific work plan for any structures established to deliver outputs and tasks identified with key issues. Each work plan should be linked to, and consistent with the broader PNCIMA process work plan, and incorporate linkages to the IOAC, Planning Office, working groups, MTAT, and to sub-regional advisory forums and focused workshops.

APPENDIX 1. KEY TOPICS

These topics represent the overarching, marine activity and use, and marine environment and culture issues that warrant special discussion and attention in the PNCIMA process.

1.1 MARINE ECOSYSTEM-BASED MANAGEMENT

1.1.1 Description

Most definitions of ecosystem-based management (EBM) incorporate the concept of an integrated management approach that considers ecological, social, and economic goals and recognizes humans as key components of the ecosystem. The goal of EBM is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need. It considers ecological boundaries, addresses the complexity of natural processes and social systems, and uses an adaptive management approach in the face of resulting uncertainties.

1.1.2 Outputs and Tasks for Ecosystem-Based Management

MARINE ECOSYSTEM-BASED MANAGEMENT FRAMEWORK	
Outputs	Tasks
<p>1. Goals & objectives for healthy ecosystems, sustainable human use/human well being, & collaborative and integrated management.</p>	<ul style="list-style-type: none"> • Review other EBM planning processes, reports & studies on EBM framework, principles, goals & objectives for ecosystem functioning, health, resiliency, protection and harvesting levels (as appropriate). • Review management strategies from work being done on other PNCIMA issues to ensure adherence to EBM approach and principles. • Incorporate climate change considerations into EBM goals & objectives.
<p>2. Tools to guide decision-making on marine activities & uses within marine ecosystems.</p>	<ul style="list-style-type: none"> • Research existing EBM tools, methodologies & classification systems. • Confirm marine ecosystem boundaries for marine management. • Prepare ecosystem assessment report for PNCIMA ecosystems for management application, including economic, cultural importance & sensitive, vulnerable sites & time periods, risks and hazards. • Prepare a compatibility guide to assist decision-makers in assessing & permitting new activity/use proposals. • Identify components of an integrated data network for access to key data sets by decision-makers & stewards.
<p>3. Cumulative effects framework.</p>	<ul style="list-style-type: none"> • Prepare a cumulative effects assessment framework for uses & activities that may affect ecosystem health, human well-

	<p>being & integrated management.</p> <ul style="list-style-type: none"> • Identify indicators of cumulative effects for ongoing monitoring in ecosystems & communities.
4. Adaptive management, monitoring and research.	<ul style="list-style-type: none"> • Develop an adaptive management plan, including indicators (ecological, socio-economic, governance) & monitoring approach, evaluation plan & regular updates. • Develop priorities and topics for increased ecological research for adaptive management & improved decision making.
5. Strategies for collaborative management & governance for marine ecosystem-based management.	<ul style="list-style-type: none"> • Develop a process for incorporating First Nations' traditional knowledge & local knowledge into decision-making. • Compare marine EBM direction to adjacent terrestrial EBM land use direction; & make appropriate adjustments where required. • Review governance & collaborative management recommendations from existing plans. • Develop information sharing and management agreements.

1.2 INTEGRATED ECONOMIC STRATEGIES

1.2.1 Description

Integrated economic strategies within PNCIMA are intended to harmonize, reinforce and rationalize individual strategies that exist within First Nations' organizations, regional districts, federal and provincial agencies and non-government organizations for specific economic sectors, communities, or geographic areas.

1.2.2 Outputs and Tasks for Integrated Economic Strategies

INTEGRATED ECONOMIC STRATEGIES	
Outputs	Tasks
1. Strategies for integration of existing geographic area / sector economic strategies.	<ul style="list-style-type: none"> • Assemble and review existing strategies established or proposed in PNCIMA, both area-based & sector-based. • Review recommendations from existing plans. • Identify common & complementing & competing strategies. • Prepare an economic opportunity & constraint assessment for PNCIMA sub-regions. • Review existing socioeconomic trends & implications for economic development in PNCIMA. • Develop recommended options for combining strengths, prioritizing economic opportunity areas & avoiding competition.
2. Strategies and spatial designations to address interaction among major marine-related economic activities.	<ul style="list-style-type: none"> • Assemble and review maps of existing & potential future marine-related economic activities. • Identify locations, time and duration of existing & potential conflicts among new economic activities. • Review recommendations from existing plans.
3. Strategies for reinforcing diversified & sustainable community viability & economic development.	<ul style="list-style-type: none"> • Perform socioeconomic assessment of integrated strategies to determine costs and benefits to communities & sustainable economic development in region. • Identify constraints to improving community & economic sustainability of marine-based economic activities, (including policies, location, services & infrastructure). • Link to EBM framework information. • Develop recommendations for enhancing community, economic & cultural objectives for sustainable activities (including fishing, marine tourism & transportation).
4. Strategies for collaborative management & governance for integrated economic strategies.	<ul style="list-style-type: none"> • Identify existing economic development boards, commissions & advisory groups, First Nations economic development structures, etc. • Identify potential processes & structures for increased coordination & integration of strategies.

1.3 MARINE TRANSPORTATION AND VESSEL SAFETY

1.3.1 Description

Marine transportation is the movement of goods and people on marine vessels, and includes cruise ships, ferries, container ships, tanker traffic, barges, commercial fishing vessels, and marine transportation infrastructure associated with port development projects. Marine facilities such as ports, docks and harbours are included. Vessel safety refers to the safe operation and movement of vessels.

1.3.2 Outputs and Tasks for Marine Transportation and Vessel Safety

MARINE TRANSPORTATION AND VESSEL SAFETY	
Outputs	Tasks
1. Strategies for management of marine waste.	<ul style="list-style-type: none"> • Assemble and review relevant federal & international regulations and industry standards (e.g., liquid & solid waste disposal, etc). • Review recommendations from existing plans. • Link to EBM framework information.
2. Strategies and spatial designations to address interaction with other activities, species and sensitive habitat and ecosystems.	<ul style="list-style-type: none"> • Assemble & review maps of existing transportation patterns and corridors, & user interactions at different time periods. • Identify locations, time & duration of potential conflicts with other marine activities, species & ecosystems. • Review risk modeling approaches & recommendations on how to apply risk modeling to management plans. • Evaluate government & industry management regulations and policies for vessel safety and traffic management & for avoidance of sensitive areas & proposed marine protection areas. • Review recommendations from existing plans.
3. Strategies for monitoring contributions of marine transportation to cumulative ecosystem effects.	<ul style="list-style-type: none"> • Assemble, review & report on potential & known marine environmental impacts from transportation activities. • Review existing ecosystem sensitivity information. • Identify baseline information requirements, indicators, & monitoring opportunities/systems. • Link to EBM framework information.
4. Strategies for collaborative management & governance for marine transportation and vessel safety.	<ul style="list-style-type: none"> • Review current advisory groups, boards, commissions, role of communities, First Nations, etc. • Review recommendations from existing plans.

1.4 COMMERCIAL, RECREATIONAL & FIRST NATIONS' FISHING

1.4.1 Description

Commercial fishing activity in this context refers to the regulated harvesting of wild finfish and invertebrate species. Recreational fishing (or sport fishing) is the range of activities and experiences that involve fishing for personal leisure, personal consumption or sport purposes. It includes tidal water angling, and the gathering of shellfish. First Nations' marine fishing is the activity of gathering and harvesting marine fish, plants and invertebrates by Coastal First Nations for traditional uses, often referred to as food, social and ceremonial (FSC) uses.

1.4.2 Outputs and Tasks for Commercial, Recreational & First Nations' Fishing

COMMERCIAL, RECREATIONAL & FIRST NATIONS' FISHING	
Outputs	Tasks
1. Strategies for ecosystem-based commercial, recreational and First Nations' fishing in PNCIMA.	<ul style="list-style-type: none"> • Review regulations and policies relevant to ecosystem-based fishing management. • Assemble & review recommendations & zones from existing plans that may affect fishing activities. • Draw on key documents to develop a single set of EBM principles & objectives for all marine activities to provide guidance to Integrated Fisheries Management Plans (e.g., DFO <i>Sustainable Fisheries Framework</i>).
2. Strategies to address interaction among fishing activities & with other marine activities, species and sensitive habitat and ecosystems.	<ul style="list-style-type: none"> • Assemble and review (1) maps of existing fishing management units, (2) fishing agreements, (3) activity areas, and (4) closures & interactions at different time periods for fishery user groups (including First Nations). • Develop approach to reduced time & space conflict among the three fisheries & with other marine activities. • Develop space & time-explicit approaches to minimize fishing impacts & conflicts with non-fishing users or ecosystem values, including areas for enhanced management, drawing on existing strategies (e.g., <i>Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas</i> and the <i>Coral and Sponge Conservation Strategy</i>.)
3. Strategies for ocean climate change adaptation measures in fisheries management.	<ul style="list-style-type: none"> • Assemble information on potential climate change impacts on fishing in PNCIMA, including fish stocks and benthic features. • Review fishery management policy, program & research initiatives that may support or detract from adaptation to climate change. • Identify additional potential fisheries adaptation approaches for commercial, recreational & First Nations' fishing.
4. Strategies for monitoring	<ul style="list-style-type: none"> • Assemble & review potential & known marine

<p>contributions of marine fishing to cumulative ecosystem effects.</p>	<p>environmental impacts from fishing activities.</p> <ul style="list-style-type: none"> • Review existing ecosystem sensitivity information. • Identify baseline information requirements, indicators & monitoring opportunities/systems. • Link to EBM framework information.
<p>5. Strategies for collaborative management & governance for fishing activity.</p>	<ul style="list-style-type: none"> • Work with existing, sector-specific advisory committees where possible and appropriate. • Identify policy & decision-making conflicts between recreational, commercial & First Nations' fishing. • Review current advisory groups, boards, commissions, role of fisheries sectors, First Nations, etc. • Review existing plans, including sector-specific fishery management plans. • Develop approaches to improved integration & collaboration. • Develop information sharing & management agreements.

1.5 MARINE PROTECTION

1.5.1 Description

Marine protection refers to the protection, using various legal or management techniques, to protect areas of the sea surface, water column, seabed, and/or associated plant and animal life, recreational, scientific, cultural and historical features by limiting or restricting activities.

1.5.2 Outputs and Tasks for Marine Protection

MARINE PROTECTION	
Outputs	Tasks
1. Recommended marine protection candidate areas, legal designation tools, management and implementation objectives.	<ul style="list-style-type: none"> • Review existing information & reports, including background EOAR, EBSA & SECOA reports, federal-provincial gap analysis & BC Marine Conservation Analysis products. • Review maps of existing, candidate & interim marine protection areas. • Review recommendations from existing plans. • Confirm desired goals, objectives & functions of marine protection areas in PNCIMA. • Identify priorities & criteria for selection of candidates, including ecosystem functions, climate change adaptation, cultural requirements, special features, etc. • Undertake scan of threatened, endangered, rare and endemic species. • Identify management objectives & general boundaries for each marine protection candidate area. • Review existing interim management & protection tools.
2. Strategies for potential management enhancements in existing MPAs.	<ul style="list-style-type: none"> • Review existing legal management tools for marine protection. • Review recommendations from existing plans. • Review existing protection areas for management tool deficiencies and concerns. • Confirm management deficiencies in existing MPAs, & recommend tools for addressing them.
3. Strategies for monitoring cumulative ecosystem effects of marine protection.	<ul style="list-style-type: none"> • Assemble, review & report on potential and known marine ecological benefits from marine protection. • Review existing ecosystem sensitivity information. • Identify baseline information requirements, indicators, & monitoring opportunities/systems. • Identify potential spatial & temporal adaptation strategies. • Perform a socioeconomic analysis on marine protection

	<p>candidates to identify socioeconomic & community effects & link to EBM framework & economic strategy integration work.</p>
<p>4. Strategies for collaborative management & governance for marine protection.</p>	<ul style="list-style-type: none"> • Review current collaborative management structures, agreements & processes for marine protection, including roles of First Nations, stakeholders, etc. • Develop & confirm approach to coordinated MPA planning and management processes, including alignment with & delivery of regional & national framework. • Develop models for enforcement of areas under marine protection. • Develop information sharing & management agreements.

APPENDIX 2. OVERARCHING TOPICS

2.1 MARINE CLIMATE CHANGE EFFECTS

2.1.1 Description

Climate change refers to changes in the distribution of weather in modern times, and includes (but is not limited to) the effects of "global warming." For PNCIMA, the observed and predicted effects of climate change include changes in patterns of major Pacific coast currents, sea level rise, ocean warming, ocean acidification, reduction in mixing and oxygenation of waters, habitat alteration, and shifts in marine species distributions. These effects are compounded by the effects of climate change on land, such as changes in stream flow patterns and sediment load.

2.1.2 Outputs and Tasks for Marine Climate Change Effects

See Section 2.3 for general outputs and tasks anticipated for marine climate change effects.

2.2 EXISTING PLAN INTEGRATION

2.2.1 Description

Several parts of the PNCIMA have been the subject of significant planning effort in both terrestrial areas and the coastal zone, primarily at the 'strategic' level. Planning direction has been provided by the provincial government's strategic-level terrestrial plans, by provincial government and First Nations' coastal-level plans, by local government plans and plans of various stakeholder organizations. This work has been supplemented by recent coastal planning work of First Nations, which is being aggregated into sub-regional planning direction for marine resource management in PNCIMA.

2.2.2 Outputs and Tasks for Existing Plan Integration

See Section 2.3 for general outputs and tasks anticipated for existing plan integration.

2.3 GENERAL OUTPUTS & TASKS FOR OVERARCHING TOPICS

OVERARCHING TOPICS	
Outputs	Tasks
<p>1. Strategies for ocean climate change adaptation that reflect an EBM approach.</p>	<ul style="list-style-type: none"> • Assemble & review existing, relevant background reports & information on climate change effects. • Identify potential impacts on species, species distribution, habitat, marine activities, communities & other key aspects of ocean management. • Identify trends, issues & opportunities associated with climate change effects. • Identify potential environmental, cultural, community effects of current use & trends. • Review recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
<p>2. Vision, goals, objectives & management strategies / designations for PNCIMA regional plan.</p>	<ul style="list-style-type: none"> • Review existing plans according to PNCIMA issue topic. • Address conflicting recommendations emerging from different plans overlapping an area. • Assemble summaries of vision, goals, objectives, strategies & zones/designations by issue. • Develop map designations and categories to represent the integration of sub-regional plans. • Provide information to inform EBM & other issue work.
<p>3. Strategies for collaborative management & governance for overarching topics.</p>	<ul style="list-style-type: none"> • Review current legislative & management efforts. • Review structures established for implementation, review, monitoring & governance of existing coastal & terrestrial plans. • Review governance & collaborative management recommendations from existing plans. • Review management guidance from EBM issue work. • Identify additional recommendations on integration of structures & responsibilities, where necessary.

APPENDIX 3. MARINE ACTIVITY AND USE TOPICS

3.1 MARINE RECREATION AND TOURISM

3.1.1 Description

Marine recreation and tourism includes public and commercial activities based on the use of the ocean environment and resources. It involves such activities as ocean kayaking, recreational boating, diving, marine-based camping and visits, private resource harvesting, wildlife viewing, sport fishing and marine cruising by large ships, pocket cruisers and smaller vessels. (Recreational fishing is discussed elsewhere).

3.1.2 Outputs and Tasks for Marine Recreation and Tourism

See Section 3.6 for general outputs and tasks anticipated for marine recreation and tourism.

3.2 MARINE AQUACULTURE

3.2.1 Description

Marine aquaculture refers to the growing or culture of marine plants, shellfish and finfish for commercial purposes, using a variety of culture techniques and environments. In PNCIMA, marine aquaculture consists of finfish (primarily salmon) and shellfish.

3.2.2 Outputs and Tasks for Aquaculture

See Section 3.6 for general outputs and tasks anticipated for renewable ocean energy.

3.3 RENEWABLE OCEAN ENERGY

3.3.1 Description

Renewable ocean energy addresses commercial activities as well as research and development activities related to wind, wave and tidal energy resources. Offshore wind energy is used by wind turbines installed to the ocean floor to generate electricity. Tidal and ocean energy can be utilized to generate electricity by using tidal currents to drive turbines, or other techniques. Wave power harnesses the energy in waves, using either onshore-fixed or offshore-floating technology.

3.3.2 Outputs and Tasks for Renewable Ocean Energy

See Section 3.6 for general outputs and tasks anticipated for renewable ocean energy.

3.4 NON-RENEWABLE OCEAN ENERGY

3.4.1 Description

Non-renewable ocean energy refers to liquids, gases and solids buried beneath the ocean floor that are used for generating energy and are non-replenishing. Non-renewable ocean energy sources in the PNCIMA are primarily potential petroleum and natural gas deposits.

3.4.2 Outputs and Tasks for Non-Renewable Ocean Energy

See Section 3.6 for general outputs and tasks anticipated for non-renewable ocean energy.

3.5 MARITIME DEFENCE AND SECURITY

3.5.1 Description

Maritime defence and security operations reflect Canada's requirement to maintain national sovereignty. These operations are necessitated in the PNCIMA due to its proximity to international borders and its length of unpopulated, accessible shoreline. Maritime defence and security operations include dealing with such situations as security threats, illegal immigration, encroachment of foreign fishing vessels, and drug smuggling, as well as the subsequent need for naval exercises to improve combat readiness of Canadian forces.

3.5.2 Outputs and Tasks for Maritime Defence and Security

See Section 3.6 for general outputs and tasks anticipated for maritime defence and security.

3.6 GENERAL OUTPUTS AND TASKS FOR MARINE ACTIVITY & USE TOPICS

MARINE ACTIVITY TOPICS	
Outputs	Tasks
1. Strategies for marine activities that reflect an EBM approach.	<ul style="list-style-type: none"> • Assemble & review existing, relevant background reports & information on marine activities. • Identify trends & issues associated with different activity sectors. • Identify potential environmental, cultural, community effects of current use & trends for an activity. • Review activity recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
2. Strategies to address interaction within an activity.	<ul style="list-style-type: none"> • Identify space & time information on sectors within an activity. • Identify locations with high potential for future development. • Assess times & locations of sector conflicts. • Review recommendations on conflict reduction from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
3. Strategies to address interaction between an activity & other marine activities & ecosystems.	<ul style="list-style-type: none"> • Identify space & time information on a specific activity. • Identify locations with high potential for future development. • Assess times & locations of user conflicts or ecosystem sensitivities associated with an activity. • Review recommendations on conflict reduction from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
4. Strategies for collaborative management & governance for marine activities and uses.	<ul style="list-style-type: none"> • Assemble & review relevant government strategies, programs and policies. • Review role of current associations, groups, boards, commissions, communities, First Nations, etc. • Assess potential for local benefits & revenue-sharing. • Review governance & collaborative management recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements/strategies.

APPENDIX 4. MARINE ENVIRONMENT & CULTURE TOPICS

4.1 SPECIES AT RISK & SPECIES OF CONCERN

4.1.1 Description

Species at risk and species of concern are ocean-dependent birds, fish and mammals officially recognized as rare, endangered, threatened or vulnerable at federal, provincial or international levels. Rare and endemic species are included in this topic.

4.1.2 Outputs and Tasks for Species at Risk and Species of Concern

See Section 4.5 for general outputs and tasks anticipated for species at risk and species of concern.

4.2 AQUATIC INVASIVE SPECIES

4.2.1 Description

Aquatic invasive species are non-native species, whose unintended or uncontrolled introduction affects marine ecosystems and native species, the economy and/or human well-being. Aquatic invasive species thrive in the absence of their native predators.

4.2.2 Outputs and Tasks for Aquatic Invasive Species

See Section 4.5 for general outputs and tasks anticipated for aquatic invasive species.

4.3 MARINE POLLUTION AND SPILLS

4.3.1 Description

Marine pollution refers to the contamination of marine ecosystems and species health from a wide variety of biological, chemical, hydrocarbon and organic discharges on sea or land (point source) and from non-specific locations (non-point source). Key contaminants affecting the PNCIMA are urban and rural sewage, persistent organic pollutants (POPs), heavy metals, shore-based and ship-source discharge of oils and hydrocarbons, nutrients, contaminated sediments, and litter. These contaminants enter the marine environment through atmospheric discharge, stream discharge and runoff from land, and from direct dumping from ocean and land-based activities. Shore-based and ship marine spills are large and small petroleum and chemical product spills into the ocean, either from marine vessels or marine-based infrastructure.

4.3.2 Outputs and Tasks for Marine Pollution and Spills

See Section 4.5 for general outputs and tasks anticipated for marine pollution and spills.

4.4 CULTURAL RESOURCES

4.4.1 Description

Cultural resources in PNCIMA are heritage features that reflect the culture of past and existing aboriginal and non-aboriginal society. They can be grouped into three categories: archaeological sites, First Nations traditional use sites, and historic sites. Archaeological sites are those which show physical evidence of past human activity. First Nations traditional use sites include geographically defined sites (on land or water) used traditionally by Aboriginal people. Historic sites identify significant post-contact heritage events and may be non-Aboriginal or Aboriginal in nature.

4.4.2 Outputs and Tasks for Cultural Resources

See Section 4.5 for general outputs and tasks anticipated for cultural resources.

4.5 GENERAL OUTPUTS AND TASKS FOR ENVIRONMENT & CULTURE TOPICS

ENVIRONMENT & CULTURE TOPICS	
Outputs	Tasks
1. Strategies for environment & culture resource management that reflect an EBM approach.	<ul style="list-style-type: none"> • Assemble & review existing, relevant background reports & information on specified resource value. • Assemble information on current management, including legislation, policy & programs. • Identify trends & issues associated with different values. • Identify potential environmental, cultural, community effects of current use & trends. • Identify high risk areas. • Identify special plans & strategies (e.g. recovery strategies). • Review recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
2. Strategies to address interaction between environment & culture resource management & other marine activities.	<ul style="list-style-type: none"> • Identify space & time information on marine activities & specified values. • Assess times & locations of user conflicts & threats related to specified values. • Review recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements.
3. Strategies for spill preparedness and response capability.	<ul style="list-style-type: none"> • Evaluate government and industry management regulations, policies, plans & programs in PNCIMA. • Evaluate current state of preparedness & response. • Review recommendations from existing plans.
4. Strategies for monitoring contributions of marine spills to cumulative ecosystem effects.	<ul style="list-style-type: none"> • Assemble, review & report on potential & known marine environmental impacts from marine spills. • Review existing ecosystem sensitivity information. • Identify baseline information requirements, indicators, & monitoring opportunities/systems. • Link to EBM framework information.
5. Strategies for collaborative management & governance for marine environment and culture.	<ul style="list-style-type: none"> • Assemble & review relevant regulations, policies and management structures. • Review roles of associations, groups, boards, commissions, communities, First Nations, etc. • Review governance & collaborative management recommendations from existing plans. • Review management guidance from EBM issue work & identify any additional requirements/strategies.