Capacity for Co-Management of Fisheries and Aquatic Resources: A Discussion Document

Prepared for
B.C. First Nation Communities
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INTRODUCTION

Purpose of this Discussion Document

The purpose of this discussion document is to provide a structure for thinking about roles or functions that First Nations may play at different levels – community (individual nation) or aggregate (an organization serving more than one First Nation) - in aquatic resource co-management. This Discussion Document is designed to assist First Nations in B.C. with assessing their readiness to take on co-management of fisheries and aquaculture, freshwater habitats and marine environments, including ecosystem-based management.[1]

The Discussion Document is prepared for the First Nation Fisheries Council (FNFC) to support its work in furthering dialogue on co-management. The FNFC was established in 2007 as an outcome of the B.C. First Nations Fisheries Action Plan (the "Action Plan"). The FNFC continues to be guided by the Action Plan, and is mandated to work with all B.C. First Nations on issues related to fisheries and the health and protection of aquatic resources. At the February 2009 Fisheries Assembly, a new mandate for the FNFC was supported:

The First Nations Fisheries Council works with and on behalf of B.C. First Nations to protect and reconcile First Nations rights and title as they relate to fisheries and the health and protection of aquatic resources. The Council will achieve this mandate by working to:

- *Advance and protect First Nations title and rights related to fisheries and aquatic resources, including priority access for food, cultural and economic purposes;*
- *Support First Nations to build and maintain capacity related to fishing, planning, policy, law, management, and decision-making at a variety of scales (local, regional, national, international);*
- *Facilitate discussions related to the development of a British Columbia-wide First Nations-based collaborative management framework that recognizes and respects First Nations jurisdiction, management authority and responsibilities.*

One of the objectives of the Action Plan and the FNFC mandate is the development of a B.C. wide fisheries co-management framework. B.C. First Nations have repeatedly articulated that they view their title and rights as including a right (and obligation) to play a key role in natural resource management within their territories. This vision of co-management is one that actively engages and accommodates First Nations' role in fisheries, ocean, marine and river management and decision making processes.

The intent of the FNFC's work is to facilitate discussions among B.C. First Nations in order to support community based approaches to co-management. The FNFC also supports collaborative work with DFO in order to move forward on this issue. To support this work on a B.C.-wide scale a Co-Management Working Group (CMWG) and workplan are being developed. This workplan will support First Nations communities around B.C. to participate fully in co-management discussions, including B.C.-wide meetings or assemblies focussed on the issue of co-management.

In order to support First Nations in their role in fisheries, ocean, marine and river management and decision making processes the Council commissioned this work to answer this question,

> ***"When First Nations are considering the readiness to co-manage aquatic resources, what are the elements that go into determining necessary capacities?"***

[1] This range of management themes is usually abbreviated to "fisheries and aquatic resources" in this paper.

This paper is designed to assist First Nations to identify and plan to bridge the gaps between current and desired capacity for aquatic resource co-management. Moreover, this paper includes multiple examples of capacity assessment processes.

Potential benefits of co-management

There are many potential benefits of co-management for First Nations. Co-management can support First Nations taking on their rightful role in decisions that affect their livelihood and culture. As a result, First Nations can benefit more fully from their rights to fish for food, social and ceremonial use, as well as increased access to economic fisheries. More effective management through cooperation can lead to a healthier ecosystem and greater harvests all round. If co-management is effectively implemented, many of the benefits listed below can be realized – depending on aspirations and circumstances.

Improved Relationships	• Internally within an organization/community • Between communities/organizations • With other governments, and other resource users
Increased Engagement in Decision Making	• Community members and nation governments are engaged and participating in decision making for fisheries • Increased ability of First Nations to influence the pace and form of resource development and utilization
Better Information Gathering and Sharing to Support Fisheries Management	• Maximum use of indigenous knowledge and expertise to provide information on the resource base and to complement scientific information for management • Improved information exchange, giving both sides the information on which to base a decision and reducing misinformation • Expanded information/knowledge/data – especially ability to take into account ecological complexities through a more comprehensive understanding of the resource • Improved harvesting decisions (e.g. licensing, timing, location and vessel or gear restrictions)
Progress Toward Full Recognition of Rights and Title – To Include the Inherent Obligation to Manage and Steward Resources	• Self-regulation • Greater control over employment in community • First Nations no longer objects of an administrative process, rather directing it as it applies to some of their key interests • Opportunity to address local concerns; better, localized solutions to local problems • Opportunity to experiment with possible mechanisms for resolving rights and title before such mechanisms are dealt with through treaty and/or legislatively entrenched

Increased Protection and Enhancement of the Resource	• Closer attention to local ecological factors and local populations of species which are central to ecosystem health • Improved stewardship/protection of aquatic and coastal resources, including habitat • Cooperation in planning the improvement or conservation of fish stocks, fishery enhancement • Benefits from improved enhancement, planning and protection of the resource circulate back into the community
Better Decision Making Processes	• More transparent, inclusive, accountable and autonomous processes • More democratic and participatory management • Improved long-term planning • More informed decisions around allocation and integrated planning
Improved Long Term Sustainability of Resources	• Options for regulation that reduce inefficiencies for fishermen • Appropriate and effective implementation of policy • Plans that are more appropriate to local conditions

Co-management and the spectrum of engagement

The spectrum of ways that First Nations can be engaged in the management of fisheries and other resources ranges from being informed about government[2] decisions to the assumption of authority. To many First Nations, their desired level of co-management lies towards the end where First Nations share decision making and take on responsibility and authority.

There are policy and legal frameworks which support aspects of co-management, such as promoting shared decision making and localized management[3]. However, until these mechanisms are further explored and implemented, constraints on co-management possibilities for various fisheries management functions exist.[4] Typically, some of the functions related to governance, such as national policy making, are not considered to be suitable for co-management by the federal and provincial governments, while technical functions such as data gathering are. The injustice of this situation in terms of Aboriginal rights and title is a topic beyond the scope of this document. This Discussion Document encompasses most capacities related to meaningful engagement in co-management.

With an emphasis on decision-making and management, the Discussion Document does not address capacity to do the on-the-ground activities of harvesting, facility operation or business management.

Figure 1 illustrates the spectrum of engagement in decision-making, moving from centralized government management on the left to meaningful shared decision making on the right. On the spectrum, co-management can include an advisory relationship between First Nations and government, but ideally First Nations will at least take on a role in decision-making and eventually will assume authority. Simply being informed of decisions by government does not, in the analysis of most First Nations, constitute co-management.

[2] In this document, the term "government" usually refers to the federal government, in particular, Fisheries and Oceans Canada (DFO).
[3] See Ratliff and Co. Legal Mechanisms of Co-Management, FNFC 2010.
[4] See page 21 for more on "enabling factors" for co-management.

Figure 1: Spectrum of potential engagement in co-management

Centralized Government Management	***← Spectrum of Engagement →***			***Community Self-Governance***
Informing	**Information Exchange**	**Advisory**	**Partnership / Shared Management**	**Devolution**
Government Management		**Co-Management**		
DFO informs First Nations and stakeholders of decisions No input into decision making process	DFO informs First Nations and stakeholders of management actions it intends to take First Nations and Stakeholders may provide comment	DFO outlines what it intends to do but does seek comment or input from FNs and stakeholders Assume that there is an analysis of options, trade-offs, risk management Government makes the final decisions	Joint commitment to identify issues and processes for resource management activities and decisions Shared decision-making by DFO, First Nations and stakeholders	Government delegates the authority for resource management to First Nations and/or stakeholders

What is capacity assessment?

One of the enabling factors for effective co-management is capacity. First Nations need capacity to properly engage in decision making processes and to articulate and formulate perspectives to inform decision making. First Nations need capacity if they are going to gain the benefits of co-management listed above.[5]

Generally speaking, **capacity** is the ability of people and organizations to manage their affairs successfully. Components of capacity include skills, structures, processes, resources and powers that together provide a range of governance, managerial and technical capabilities.

Capacity assessment is the analysis of desired capacities as compared with existing capacities.

The next step, **capacity building**, is the process to unleash, strengthen, create, adapt and maintain capacity over time.

> *The objective of capacity building, as it pertains to aquatic resources, is to improve not only the quality of decision-making, but also the sectoral efficiency of management performance in planning and implementation. It does not seek to resolve problems, but instead seeks to develop the capacity within people, communities, governments, and other organizations to resolve their own problems.*[6]

[5] Other enabling factors are listed on page 21

[6] Sustainable Strategies for Oceans: A Co-Management Guide. National Round Table on the Environment and the Economy 1998

Capacity development is a large field of inquiry, with heavy involvement of international aid organizations like the United Nations.[7]

How different scales of organization come into play

Various fisheries and aquatic management functions occur at the local or community scale, the area or region scale and the province-wide scale. Different co-management roles or functions will be appropriate to different types of First Nation organizations.

The capacity and available resources of B.C. First Nations to engage in co-management at each scale is different. Various technical fisheries and aquatic management functions occur at the local or community scale (such as stock assessment and enumeration), as do local capacities to engage community members and elders.

At the area or region or province-wide scales there is the opportunity to have capacity which is more strategic in nature (for example policy and legal analysis to review DFO policies and capacity to hold B.C. wide meetings). Differing co-management roles or functions will be appropriate to different types of First Nation organizations. Some roles will be appropriate to individual First Nations (the 203 Bands, Tribes or communities) and others will be more appropriate to aggregate First Nations bodies (Tribal Councils, AAROM bodies, Treaty groups, etc.), and to province-wide organizations (FNFC, etc.).

We can also think about scales as potentially being nested (Figure 2), or fitting within one another or complementing each other. Some functions cut across the different levels. Building capacity to move into decision-making roles in co-management can itself lead to connections between the community and the aggregate scales. Aggregate level organizations might respond to key gaps in capacity at the local level by taking on responsibilities on behalf of groups of First Nations or by increasing efficiency through responding to issues commonly shared by various First Nations. However, aggregate organizations must constantly be linking back to communities, as this is where the strength of authority lies.

The latter half of STEP 2 below illustrates how different functions can suit the different levels.

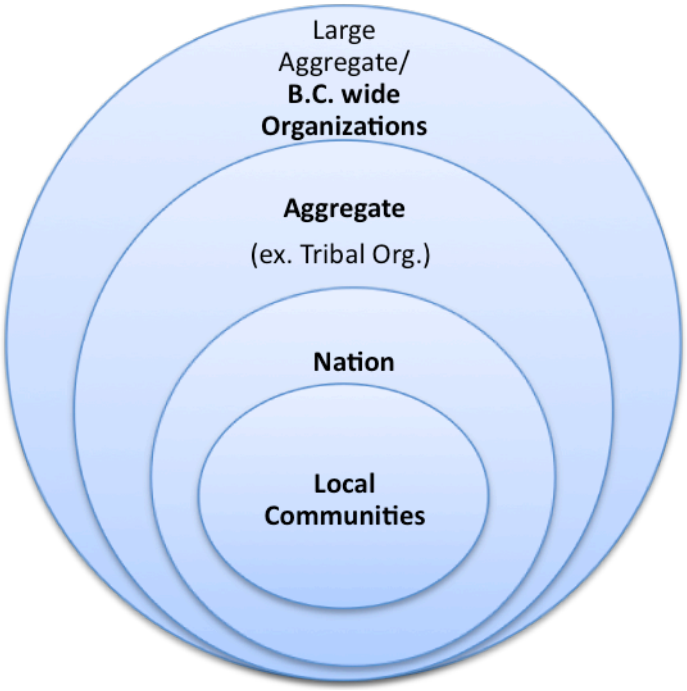


Figure 2: Nested Scales

[7] For a list of several resources on capacity development that can be downloaded, go to http://ncsa.undp.org/report_detail.cfm?Projectid=211

STEPS IN CAPACITY ASSESSMENT

There is a broad continuum of capacity in First Nations communities and organizations. Some have been working on fisheries and aquatic management effectively over a long time with relatively stable funding and expert personnel. Others – often the smaller ones – have less experience and are not as well endowed with resources.

Working through the steps set out in this Discussion Document provides a way to start thinking about what functions or roles a community or organization aspires to and how what they have now contrasts with what is needed to take on desired co-management functions. In other words, it is a Discussion Document for getting ready to do a capacity assessment. It has many open-ended choices – it does not prescribe one path because each community or organization will have a different course to follow according to its own circumstances and objectives.

Four basic steps are suggested, as follows.

1. Identify co-management aspirations

The starting point is to decide what is important to your community or organization in terms of fisheries and aquatic co-management. Step 1 provides more ideas on this.

2. Consider functions or roles for which capacity is required

Based on these aspirations, consider what functions or roles you anticipate playing in the future. It is appropriate to also include current roles or responsibilities that you would like to strengthen. Step 2 lays out a "menu" to point out the array of functions you might consider.

3. Examine types of capacity in terms of competencies and resources

For each of the functions identified, examine the capacities required to take on those responsibilities or tasks. Step 3 provides a list of competencies and resources to feed into the analysis.

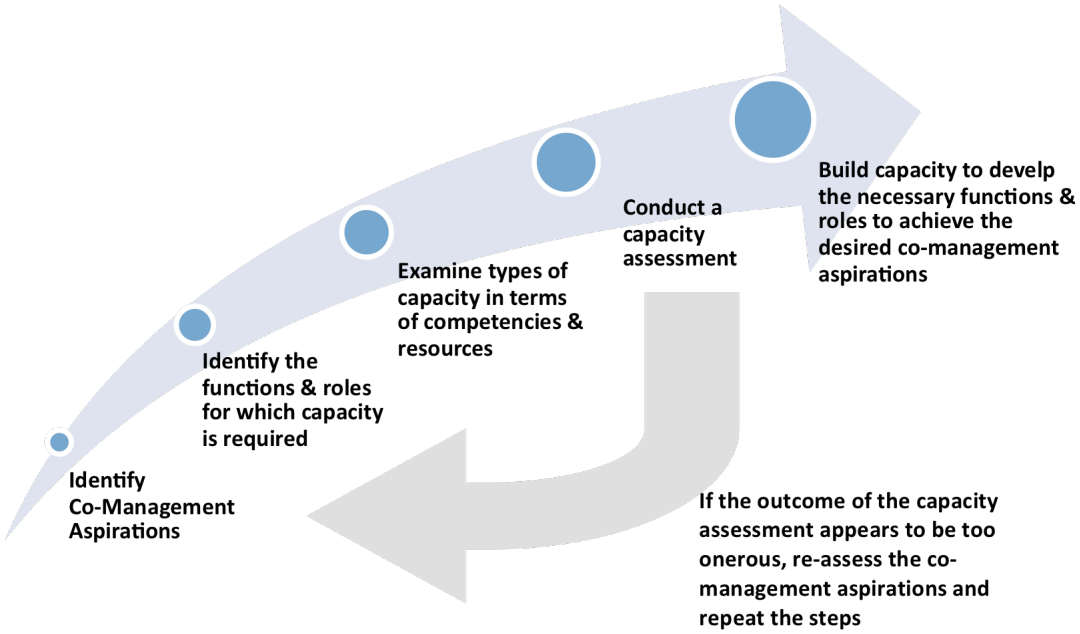
4. Find tools for doing capacity assessment

The actual capacity assessment looks at what your community or organization already has in terms of the required capacities. Step 4 provides some resources to help with the assessment.

Looking ahead…

Later comes the work of filling the gap between current capacity and the capacities required to perform the functions that will meet your goals. If this *capacity development* work looks too onerous, co-management aspirations can be revised. Along the same line of thinking, once you have a clear picture of your current capacity – your community's or your organization's assets, this knowledge can clarify what functions/responsibilities you would like to take on. Both a short term and a longer term plan are worth considering. As your capacity builds, you are then more prepared to work towards taking on additional roles or functions.

Figure 4: Overview of the Steps in Capacity Assessment



STEP 1: IDENTIFYING CO-MANAGEMENT ASPIRATIONS

Aspiration in this setting means your community or organization's aims, targets, goals, vision etc. Not all communities are going to do everything in fisheries and aquatic management. Each community or organization has individual understandings of the level of involvement they want in the management of their resources.

Have the discussions that will clarify your goals or objectives for fisheries and aquatic resource management. Ask questions such as:

- What is the shared understanding of your duties and obligations?
- What issues, problems or challenges do you want to address?
- What potential do you want to fill?
- What opportunities do you want to take up?

Some aspirations might already be written down in a community's or organization's plans, policies or studies. The potential benefits of co-management listed in the introduction are another source of ideas about what to aim for.

Whether a community or organization desires particular responsibilities or not will vary. Some bands and organizations will wish to engage in different functions than others. Those at the aggregate and B.C.-wide levels work within their prescribed mandates and take direction from the First Nations that they serve.

Having co-management responsibility for some functions might be viewed as essential, others non-essential but desirable, or optional, etc. This depends on priorities, opportunities and issues. One starting point is to focus on areas in which current management approaches clearly need improvement. There may be others where it is best for the federal or provincial government to continue to carry the workload. In any case, picture what co-management might look like down the road. Even if small steps in that direction are enough for now, keep in sight a vision of co-management that draws your community or organization forward. The vision could be encompassed in traditional knowledge, rule systems, connection to food fisheries and/or current ways of participating in fisheries management. One step at a time, that vision is attainable, as long as the way forward is guided by a clear understanding of what is needed to close the gap – starting with capacity assessment.

This clear image of the destination is the basis for identifying what sort of functions a community or organization is going to take on as it engages more fully in fisheries and aquatic co-management.

STEP 2: IDENTIFYING THE FUNCTIONS OR ROLES FOR WHICH CAPACITY IS REQUIRED

Aspirations for co-management determine what co-management functions, tasks or responsibilities your community or organization will aim to take on.[8] This part of the Discussion Document lists potential functions in three categories: governance, management and technical. The governance and management levels are typically associated with decision-making roles, while the operational/technical functions are more procedural, taking direction from management.

The following table provides an overview of the types of functions. This system of classification is somewhat arbitrary but it helps make a lot of information accessible.

Table 1: Categories of functions in fisheries and aquatic resource management

Governance functions	Planning and management functions	Operational and technical functions
• Setting direction	• Planning	• Administration
• Accountability functions	• Ecosystem stewardship	• Science and research
• Institutional functions	• Fisheries management	• Monitoring and assessment
	• Enforcement	• Enhancement

After laying out the "menu" of more specific functions under each of the categories in

Table 1, the last part of STEP 2 looks at how some of the functions work at the different levels of First Nation organization. The following pages provide examples of functions under the three categories.

[8] See also "Components of fisheries programs" in the FNFC report, Human Resources - First Nations Fisheries Programs.

Category 1: Governance functions

Governance functions relate to having an authority or jurisdiction not just to make a decision within structures and processes, but also to alter and influence the greater management and decision-making framework of how decision-making occurs. Governance deals with co-management issues of a higher order, setting up the way decisions should be made and implemented. It includes institutional arrangements, and mechanisms to promote adherence to the rule of law, accountability, participation, transparency and responsiveness. Good governance practices and structures provide a foundation for long-term success. Governance functions include those outlined below.

Categories	Examples of Functions
Direction Setting:	• Setting long-term vision, mission • Evaluation of actual and potential impacts of policies • Policy-making • Generating legal frameworks supportive of co-management (e.g. MoUs, agreements, regulations) • Codification (expressing in writing) of relevant First Nations laws and protocols • Setting access rules (e.g. regulations for licensing) • Setting rules for harvest management (e.g. setting openings and areas for harvesting) • Design of systems or strategies for planning and management functions (e.g. methods of Marine Use Planning)
Accountability[9] functions	• Conflict/dispute resolution • Reporting (establishing clear lines of responsibility and reporting systems such as Council meetings, Annual General Meetings, written project reports) • Consultations with resource users • Engaging community members (facilitating participation) • Meeting responsibilities to third parties • Liaison between fisheries programs • Community education/outreach[10]
Institutional functions	• Ability to form partnerships, joint ventures • Ability to form First Nations aggregated bodies • Personnel management (hiring, contracting, training, staff assessment, etc.) • Performance assessment/evaluation • Program management

[9] Aspects of accountability apply within the other types of functions as well.
[10] Outreach is related to accountability but also to various planning and management functions.

Category 2: Planning and management functions

Planning and management functions allow the governance systems to develop and achieve objectives in an accountable way. Science, research and monitoring functions are related to planning and management, but they are classified under technical functions in this document. Planning and management functions relevant to fisheries and aquatic co-management are listed here.

Categories	Examples of Functions
Planning[11]	• Integrated fisheries management planning • Local stock management planning • Long range stock recovery planning • Species recovery planning (strategies) • Watershed planning • Habitat rehabilitation, enhancement, or stewardship planning • Area use or spatial planning (zoning) showing where different uses should occur; e.g.: • Large Ocean Management Area planning; Estuary/harbour planning; Coastal Use Planning; Siting of aquaculture operations
Ecosystem stewardship	• Ecosystem-based management – planning for overall ecosystem health • Species protection/recovery • Habitat protection/rehabilitation • Watershed stewardship programs
Fisheries management	• Managing/authorizing fishery access (licensing, allocation of harvest, reporting systems) – for commercial fisheries • Managing/authorizing fishery access (licensing, allocation of harvest, reporting systems) – for food fisheries • Managing/authorizing harvesting in season (openings, closings) • Coordinating potentially conflicting resource uses and management activities (sport, commercial, subsistence fisheries; harvest and enhancement activities)
Enforcement	• Monitoring/verifying harvest or other resource use activities and compliance • Bylaw and regulation enforcement • Censure of non-compliance (penalties)

[11] Planning generally includes analysing information in relation to goals to determine where a particular resource activity should be located and/or how it should be undertaken to reach the goals.

Category 3: Operational and technical functions

Operational functions in this context are the tasks of fisheries and aquatic resource management that translate into action, implementing direction from management. Many of them are technical, requiring specialized expertise on a particular topic or method. They include things government could contract out to consultants. Because the emphasis of this Discussion Document is on decision-making and management, the functions listed below do not go into detail for the on-the-ground activities of harvesting, facility operation or business management.[12]

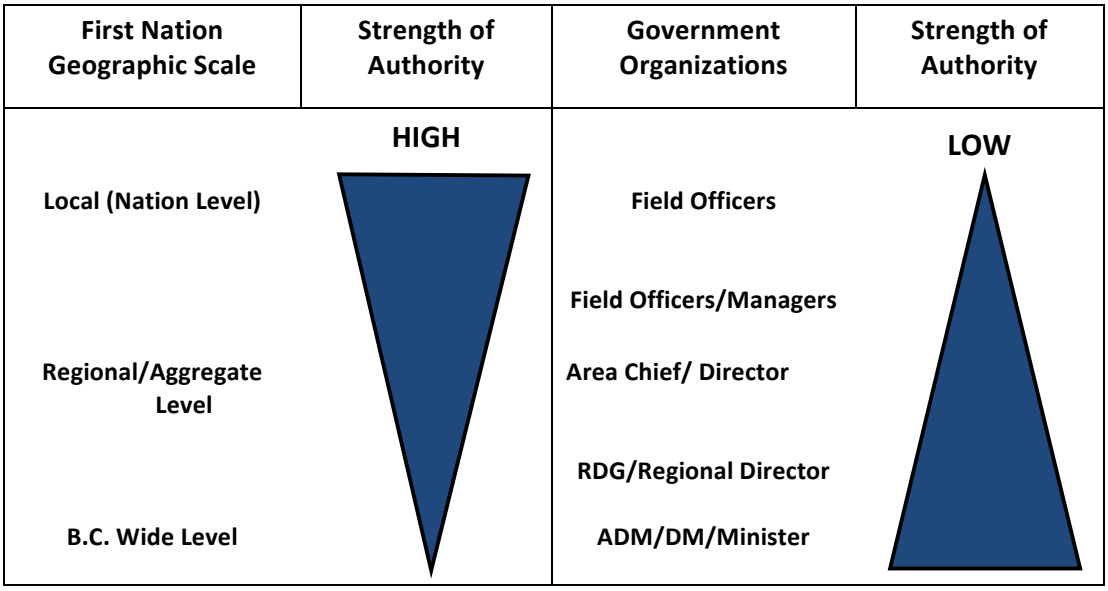
Categories	Examples of Functions
Administration	• Clerical functions (e.g. keeping records, supporting communications, issuing of licences) • Supervising (e.g. supervising technicians) • Reporting to leadership • Project management • Implementation of programs (e.g. guardians, monitoring)
Science and research	• Scientific assessments, recommendations, reporting • Indicator/benchmark systems design • Data analysis (e.g. using models) • Data processing (e.g. organizing information using data bases) • Mapping (e.g. using GIS)
Monitoring and assessment	• Stock inventory, assessment, monitoring • Stock enumeration (e.g. counting fish at a counting fence) • Stock sampling (e.g. trapping and doing scale samples) • Monitoring food fishery catch (food fish reporting) • Monitoring commercial fishery catch (commercial fishery reporting) • Habitat or ecosystem assessment, monitoring • Environmental assessment (i.e. impact assessments)
Enhancement	• Stock enhancement/ rebuilding • Habitat enhancement/ rebuilding • Running hatcheries

[12] For example: capacity to operate modern business systems, ability to build and operate facilities, processing, supply management, quality enhancement

How do *Functions* Relate to *Scales*?

The following diagram shows how current fisheries management positions in government organizations are typically distributed across the three levels – local, aggregate and B.C.-wide. It illustrates how the strength of authority for First Nations is out of sync with the strength of authority delegated to local scales by government organizations such as DFO.

Figure 5: Current distribution of authority for fisheries and aquatic management



The strongest scale of authority for First Nations is at the individual Nation scale, because rights and title are held by First Nations at that scale rather than at the aggregate or province-wide scale. In contrast, for a Federal Ministry like DFO, the strongest authority is concentrated at the B.C.-wide scale (even stronger at the national scale), with minor levels of responsibility assigned to the local scale.

This is not to say that all of co-management depends on strengthened authority for First Nations. Many benefits to First Nations and the ecosystems of their territories can be achieved through co-management that focuses on shared decision-making, especially shared decision-making at the higher scales that affects policy and regulatory frameworks. Yet increased sharing of decision-making, especially at the higher scales, has been hindered by the lack of geographical connection between First Nation and senior government decision-makers, as shown in the diagram – Nations are locally distributed while the Regional Director General, Ministers, Deputy Ministers, etc. are centrally situated. Establishing and supporting aggregate and B.C.-wide organizations who are mandated and accountable to local First Nations is one way to help bridge this gap.

Strength of Authority is one factor which influences the desired scale at which a function should occur. Other factors to consider include:

- The geographical scale of a resource (e.g. a migratory fishery, at risk species or stock in watershed)
- The distribution of First Nations with an interest in and rights to the resource (e.g. multiple First Nations with territories in a large watershed)
- Third party interests (e.g. recreational sector, commercial sector)
- How specialized and/or resource-intensive a particular function is (i.e. efficiency may require the pooling of resources, and/or sharing of expertise)

The table below gives examples of how functions or roles might be distributed across the three scales when co-management of fisheries and aquatic resources is in place, with appropriate sharing of decision-making. *Note that this is just to illustrate a way of organizing ideas, and not a prescription for what functions have to happen at what levels.*

Table 2: Example of how different functions might be assigned to different levels

Level	Governance	Planning and Management	Operational and Technical
Nation	• Setting long-term vision, mission • Codification of relevant First Nations laws and protocols • Conflict/dispute resolution • Engaging community members Community education/outreach • Personnel management • Performance assessment/evaluation	• Local stock management planning • Watershed planning • Habitat rehabilitation, enhancement, etc. • Estuary/harbor planning • Siting of aquaculture operations • Ecosystem-based management – planning for overall ecosystem health • Habitat protection/rehabilitation • Managing/authorizing fishery access (licensing, allocation of harvest, reporting systems) – for food fisheries	• Clerical functions • Supervising • Reporting to leadership • Project management • Implementation of programs • Data processing • Stock inventory, assessment, monitoring • Monitoring food fishery catch (food fish reporting) • Habitat or ecosystem assessment, monitoring • Habitat enhancement/ rebuilding • Running hatcheries • Mapping (e.g. using GIS)
Aggregate[13]	• Reporting systems • Evaluation of impacts of policies • Generating legal frameworks supportive of co-management • Design of systems or strategies for planning and management • Consultations with resource users • Meeting responsibilities to third parties • Liaison between fisheries programs • Ability to form partnerships • Ability to form First Nations aggregated bodies •	• Watershed stewardship programs • Species protection/recovery • Coastal Use Planning • Large Ocean Management Area planning • Managing/authorizing fishery access (licensing, allocation of harvest, reporting systems) – for commercial fisheries • Managing/authorizing harvesting in season (openings, closings) • Coordinating potentially conflicting resource uses and management activities	• Scientific assessments, recommendations, reporting • Indicator/benchmark systems design • Data analysis • Monitoring commercial fishery catch (commercial fishery reporting) • Stock enhancement/ rebuilding • Environmental assessment (i.e. impact assessments) • Monitoring/verifying harvest/resource use activities and compliance • Bylaw and regulation enforcement
Province-wide[14]	• Policy-making • Setting access rules • Setting rules for harvest management • Program management	• Integrated fisheries management planning • Long range stock recovery planning • Species recovery planning	• Censure of non-compliance

[13] Acting on behalf of Nations
[14] Acting on behalf of Nations

STEP 3: EXAMINING TYPES OF CAPACITY IN TERMS OF COMPETENCIES AND RESOURCES

After selecting the fishery and/or aquatic resource management functions your community or organization would like to take on or strengthen based on priorities for the future, it is time to get more specific about the capacities required to hold that responsibility and do the required work. [15]

What are the varying types of Capacity?

This section organizes capacities under seven headings. These elements of capacity to fill particular functions can be used as a checklist. For each of the functions selected to focus on, use the checklist to consider what are the required capacities to take on those responsibilities, functions or tasks – *what do you need?*

1. Personnel

All fisheries and aquatic management functions require people to take on responsibilities as staff, employees, managers or leaders – i.e., who are:

- Have the needed background/experience
- Have motivation, initiative, work ethic, local enterprise
- Have the skills and knowledge
- Are healthy enough
- Are available (have time to take on a role, even if only to prepare for, and attend meetings)

People who take on various responsibilities also have to have knowledge and/or expertise that enables them to carry out the responsibilities effectively (given sufficient resources). These aspects of "human resources" are listed below.

Note that consultants or short-term employees recruited from outside your organization or community can play a key role in carrying out all, or portions of various functions. This takes the pressure off needing certain competencies within the community or organization, but it may require more financial resources.[16] Consultants can also provide short-term capacity in an interim period, while the community or organization builds it own capacity to take over certain roles and functions.

2. Possessing Aboriginal/traditional knowledge

Having persons whom have Aboriginal/traditional knowledge (ATK), local knowledge[17], as it applies across geographic scales and management functions, including knowledge of laws and protocols as well as ecosystems is an important form of capacity to be considered.

3. Other Expertise

It is important to have people whom have other forms of expertise, such as:

[15] The sample job descriptions for fisheries positions in the FNFC report, Human Resources - First Nations Fisheries Programs, provide more detail on the range of skills and competencies required in fisheries management.
[16] Ways of ensuring that consultants build capacity as they carry out their contracts should be considered.
[17] ATK is associated with a long history of resource use in a particular area and is developed over multiple generations, refining and growing in a non-linear fashion. It includes the continuing transmission of knowledge, skills and values (worldviews) from one generation to the next.

- Understanding of accountability and legal concepts such as property rights
- Planning (e.g. strategic planning)
- Knowledge of Fisheries management
- Ecosystem-based management
- Science (e.g. biology, ecology, oceanography)
- Research, data collection, information gathering
- Inventory, sampling, surveying
- Information management systems[18]
- Cartography, GIS
- Information/data analysis
- Report writing

4. Information

A forth type of capacity is information. Accurate and timely information is necessary in order to inform decision-making.

- Quantitative and qualitative data/information on issues, topics of interest
- Information that is rigorous, reliable, up-to-date
- Information that is accessible (e.g. accessible database)

5. Organizational competencies

Another form of capacity is organizational capacity. Skills under this category include:

- Administrative skills (e.g. supervision of staff, reporting, project management)
- Decision-making tools, expertise (e.g. risk management, modeling)
- Understanding of terms and job descriptions
- Consensus-building, dialogue, negotiation abilities/skills
- Leadership
- Facilitation
- Ability to work in groups, on teams
- Training abilities (e.g. train the trainer, development and implementation of training plans)
- Event management (e.g. meeting organization)

6. Financial resources

Another category of capacity is financial capacity. Funds are needed to pay salaries, and run programs.

- Budget, money – e.g., to pay appropriate wages/salaries, do projects and keep the lights on
- Funding with continuity/flow/certainty
- Funding from various sources (government, foundations, licence fees, etc.)
- Knowledge of funding sources such as grants, government programs

7. Physical infrastructure

Also necessary is physical infrastructure – tangible items necessary to conduct business. This includes:

- Supplies (e.g. stationery, monitoring/sampling supplies)
- Structures (e.g. enhancement facilities, offices)
- Equipment (computers, offices, research vessels, etc.)

[18] e.g. see a toolkit at http://fnB.C..info/FNTC/information_management

How do *Capacities* Relate to *Functions*?

What types of competencies and resources – the specific capacities – are likely be required for the various functions? The table below shows how the types of capacities or competencies listed above connect with the general categories of functions listed in Step 2 . Please note that these are generic examples, and you will need to get more specific about the capacities required to do a rigorous capacity assessment Step 4.

Table 3: Illustration of how various capacities are required for different functions

FUNCTIONS	CAPACITIES		
	Aboriginal/traditional knowledge Other expertise Information	**Organizational competencies**	**Financial resources Physical infrastructure**
Governance functions			
Setting direction	• ATK, local knowledge • Strategic planning	• Leadership • Consensus-building	
Accountability functions	• Understanding of accountability and legal concepts	• Understanding of terms and job descriptions	
Institutional functions	• Information management systems	• Administrative skills • Ability to work in groups, on teams • Training abilities • Event management	• Funding with continuity/flow/ certainty • Structures
Planning and management functions			
Planning	• Planning expertise • Cartography, GIS • Information/data analysis skills • Report writing skills	• Facilitation • Ability to work in groups, on teams • Consensus-building	• Budget, money • Equipment
Ecosystem stewardship	• ATK, local knowledge • Ecosystem-based management expertise	• Ability to work in groups, on teams	• Budget, money • Local enterprise
Fisheries management	• ATK, local knowledge • Fisheries management expertise • Data/information • Accessible database	• Decision-making tools, expertise • Ability to work in groups, on teams • Administrative skills	• Funding with continuity/flow/ certainty
Operational and technical functions			
Administration	• Information management systems • Accessible database	• Understanding of terms and job descriptions • Administrative skills • Training abilities	• Funding with continuity/flow/ certainty

Science and research	• Science expertise • Research expertise • Cartography, GIS • Information/data analysis skills • Report writing skills		• Equipment • Budget, money
Monitoring and assessment	• ATK, local knowledge • Inventory, sampling, surveying		• Supplies • Equipment • Funding with continuity/flow/ certainty
Enhancement	• ATK, local knowledge		• Local enterprise • Equipment • Structures
Enforcement	• Understanding of accountability and legal concepts		• Equipment • Funding with continuity/flow/ certainty

STEP 4: TOOLS FOR UNDERTAKING CAPACITY ASSESSMENT

Steps 2 and 3 have suggested ways that communities or organizations can analyze which fisheries and aquatic management functions a community or organization may like to take on, and what general capacities or competencies might be required to carry out those functions. The next step is to assess which and how much of those capacities you currently possess as compared to those which are missing. This gap has to be defined in order for a plan to be developed to get from where we are now to where we want to be.

A General Approach to Capacity Assessment

The steps to assess your current capacity, in general terms are as follows.

1. Get a more specific understanding of the capacities to investigate.

Prepare a table like Table 3, but be much more specific.

Instead of using general categories of functions (e.g. planning, science), use more specific roles, responsibilities or functions from the lists of categories in Step 2 (e.g. coastal use planning, indicator system design). Or generate the more specific functions based on knowledge of the actual functions or roles you wish to take on (e.g. develop a recovery plan for eulachon).

Within the generic types of capacities listed under Step 3, think out what particular personnel, knowledge, expertise, information, organization, resources and infrastructure would be needed for the specific functions of interest. In connection with each function be as precise as possible, including estimates of the type and amount of the capacity needed (e.g. how many personnel, what type of scientific expertise).

Sources of information that could help get more specific about the competencies required for certain roles include:

- Job descriptions[19]
- Program managers or employers' experience/opinions
- Records of past consultancies or contracts and their requirements
- Terms of reference of different types (e.g. terms of reference for members of committees)
- Training programs or curricula related to fisheries and aquatic management that spell out the knowledge, skills and expertise required (e.g. an outline of a course on ecosystem-based management)
- Policies, plans and project descriptions (examine these to determine capacities that would be needed to, for example, implement a coastal use plan, carry out an enhancement project that has been described on paper, or take on roles spelled out in the Wild Salmon Policy)

2. Determine where to get the information on the specific, current capacities, and go out and collect it.

Within an aggregate organization, staff can investigate current capacities and competencies related to the required ones identified in step 1, directly above.

In a community/band/nation, existing sources of information to be tapped might include:

- Census data, if available
- Community profile or other information gathered through research, planning or impact assessment projects
- Capacity assessments or descriptions of personnel, resources, etc. done for other, related purposes (e.g. for grant applications, community forest proposals)
- Economic development corporation or human resource/employment agency data

Ways of gathering new information include:

- Interviews of community leaders
- Surveys of community members
- Asking employers for their opinions based on their experience

Sources of information will vary from one organization or community to the next – use imagination! A team approach that engages community members and leaders can help tap a wide range of information sources, and contribute to a shared understanding of capacity assessment.

3. Organize the information on current capacity.

Describe and summarize the capacity and competency currently available to carry out the functions of interest in text, tables, diagrams and photos, as appropriate. Compile quantitative data into spreadsheets.

Clearly lay out the results of all the research in a series of short reports or just one with a clear table of contents and details in appendices.

4. Compare current capacity to required capacity.

Compare the capacity currently available to the capacity you determined would be required to carry out the functions of interest. This difference is the gap that needs to be filled through capacity development.

[19] See, for example, the sample job descriptions for fisheries positions in the FNFC report, Human Resources - First Nations Fisheries Programs.

The next step is to figure out how to do that development to fill the gap, or to revise your aspirations to make them more in tune with current capacity.

Other Capacity Assessment Resources:

Following are some tools for assessing capacity, and some references otherwise related to capacity assessment.

Appreciative inquiry (AI)

The following description of AI comes from this website, which has links to more information on AI, http://appreciativeinquiry.case.edu/intro/whatisai.cfm

AI seeks to build a constructive connection between a whole people and what people talk about as past and present capacities: achievements, assets, unexplored potentials, innovations, strengths, opportunities, benchmarks, high point moments, lived values, traditions, strategic competencies, stories, expressions of wisdom – and visions of valued and possible futures. Taking all of these together, AI seeks to work from accounts of this "positive change core" – and it assumes that every living system has many untapped, rich and inspiring accounts of the positive. Link the energy of this core directly to any agenda for change and changes never thought possible are democratically mobilized.

Other websites about AI include:

http://www.axi.ca/tca/jan2004/facilitationrole_1.shtml

http://www.iisd.org/ai/

Asset based community development (AB.C.D)

AB.C.D builds on appreciative inquiry. It is a community-driven approach to community-based development based on appreciating and mobilizing individual and community talents, skills and assets. It involves amplifying what's working well and finding solutions that already exist rather than focusing on problems and needs.

A classic book on this approach is:

John P. Kretzmann and John L. McKnight, *Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets* (Center for Urban Affairs and Policy Research, 1993)

Some websites about AB.C.D are:

http://www.synergos.org/knowledge/02/aB.C.doverview.htm

http://www.aB.C.dinstitute.org/

SWOT

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats.

Current capacity fits best in the strengths category, but doing a full SWOT analysis can put capacity in context. The analysis can be done on an organization or a proposal – e.g., a proposal for a fishery enhancement project. Following is a picture of the SWOT format. The first step is to fill in the four boxes in the template. The next step is to figure out how to use your strengths, remedy your weaknesses, capitalize on opportunities and avoid threats.

Table 4: SWOT Template

	Favorable	Unfavorable
Internal	*Strengths:* Assets, resources, etc. that are helpful	*Weaknesses:* Gaps, drawbacks, etc. that are shortcomings
External	*Opportunities:* External conditions that could be helpful	*Threats:* External conditions that could be harmful

A variation on the SWOT Discussion Document is Mapping Achievable Tomorrows (MAT) – see http://www.engagingcommunities2005.org/abstracts/Jones-CJ-final.pdf . This method was developed in Australia in response to a perceived need for an improved tool to overcome the often alienating aspects of traditional planning and engagement methodologies. In MAT, the term Blockers is used instead of Threats and Weaknesses, which can be difficult to distinguish. In MAT, a section called Dream encapsulates the Opportunities section of a SWOT.

Participatory research

Participatory research engages local people in research projects that aim for results of interest to those same people. Research into current capacity could be undertaken this way. Most capacity assessment tasks are not so technical as to require experts. This "do it yourself" approach has the advantages of keeping community control over the assessment, having a priority on incorporating local and traditional knowledge, and building community commitment to the outcomes.

Participatory research in the fisheries context has been described by Pomeroy and Rivera-Guieb in an IDRC handbook (2006) – see http://www.idrc.ca/openebooks/184-1/#page_94. Some guidelines they set out are:

- Build on previous information gathered.
- Crosscheck and probe to ensure reliability of information.
- Analyze and validate on the spot.
- Avoid collecting information that is not necessary.
- Avoid bias.
- Be creative.

LOOKING AHEAD: BUILDING ON THIS DISCUSSION DOCUMENT

Test the Discussion Document

The Discussion Document laid out a process that is a new one that needs to be tested and improved based on the experience of using it in a few situations – with at least one individual First Nation and one aggregate organization. Those involved in testing the Discussion Document would then share their experience of what works and what needs changing.

Consider broader qualities related to capacity, including resilience and self-determination

The following qualities are not so much specific capacities as broader factors that overarch a range of capacities. At the same time they can be an outcome of effective co-management. They are:

- Self-determination of First Nations (self-government, rights and title)
- Positive relationships (e.g. trust, appreciation of different knowledge frames)
- Integration (horizontal and vertical into other management processes)
- Diversification
- Continuity (e.g. funding certainty)
- Sustainability, self-sufficiency

Take into account enabling factors for effective co-management

This capacity assessment Discussion Document presents a modest part of the larger co-management picture. Consideration of the context for capacity assessment is critical to the success of the next step: capacity development. In particular, enabling factors for effective co-management should be considered. These principles or provisions are as important as capacity. They include:

- Political Will And Leadership
- Benefits Accruing To Parties Involved
- Attention To Rights
- Inclusiveness
- Thorough Participation By Parties Involved
- Serious Consideration Of The Parties' Perspectives
- Limited Number/Diversity Of Participants
- Flexibility To Match Unique Circumstances
- Limited Geographic Area
- Adaptive Approach
- Transparency And Accountability
- Clear Procedural And Structural Guidelines/Agreements
- Opportunity For Relationship Building
- Integration Of Local/Indigenous Knowledge
- Consensus Decision-Making

CONCLUSION

This is a new Discussion Document that needs testing and improvement based on experience with trying it out. Its focus, capacity assessment, is but one step on the road to appropriate co-management of resources in the traditional territories of First Nations. Some of the other "enabling factors" for effective co-management could be pursued in a purposeful way – e.g. clear procedural guidelines. Others are less straightforward – e.g., political will and leadership. Regardless of these other factors' affect on the success of co-management, using this Discussion Document should help clarify many puzzle pieces, such as who wants to perform which functions in fisheries co-management, and how aggregate organizations can best assist the Nations they report to.

Fisheries and aquatic resource management are complex undertakings that co-management will improve in many ways as it brings decision-making closer to the ecosystem and re-invigorates the application of local and aboriginal knowledge. The whole endeavor is "not rocket science" – it is probably even more difficult! But this one step, assessing current capacity to take on co-management responsibilities, is quite do-able. The First Nations Fisheries Council offers this Discussion Document in the spirit of furthering progress in co-management for the stewardship of fisheries resources for current and future generations.