

VALUING COASTAL GUARDIAN WATCHMEN PROGRAMS: A BUSINESS CASE





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1. EXECUTIVE SUMMARY

Purpose and Approach

As the original stewards of their territories, the Coastal First Nations along British Columbia's North Coast, Central Coast and Haida Gwaii have been working to establish and grow Guardian Watchmen programs, in some cases for several decades. These programs have come to play an important role in contemporary environmental stewardship. Though they differ from Nation to Nation, the mandate of the programs is to safeguard the Coastal First Nations' natural and cultural resources, so that these Nations can continue to sustain viable, healthy communities for generations to come.

Guardian Watchmen programs require financial support from their Nations and other funding partners. As such, it is reasonable to ask: are they worth it? To help answer this question, a **business case analysis** of Coastal Guardian Watchmen programs was undertaken. Key findings are included in this report, which examines the net value of program costs and benefits from the perspective of the First Nations that have these programs.

The business case was conducted by EcoPlan International (EPI) and commissioned by the Coastal Stewardship Network, a program of Coastal First Nations – Great Bear Initiative,¹ and TNC Canada.² EPI worked in partnership with all seven member Nations of the Coastal First Nations to undertake the research and data collection required for the analysis. Its development required three components:

1. An understanding of what was being valued (i.e., a well-defined understanding of the Guardian Watchmen programs; including input costs and associated program activities);
2. Identification of the relevant benefits resulting from these programs;³ and
3. Quantitative measures for deriving monetary equivalents for these benefits, from which overall program value could be calculated.

In this report, program costs and benefits are discussed both qualitatively and quantitatively, with the overall value generated by Guardian Watchmen programs described as a return on investment ratio.

DEVELOPING A MORE COMPLETE BUSINESS CASE: INCLUDING NON-MARKET VALUES

In this report, dollars (\$) provide a single metric to help clarify the magnitude and significance of the total value generated by the Coastal Guardian Watchmen programs. However, this business case differs from conventional approaches in that it includes both market and non-market costs and benefits in the analysis. This means that in addition to identifying and measuring financial costs and benefits, this assessment also evaluates costs and benefits associated with a wide range of other value dimensions as well (social, political, cultural, etc.). While these non-market costs and benefits are described in qualitative terms throughout the report, they have also been translated into dollar terms using methods from applied research in the fields of decision analysis and behavioural economics. EPI has used these methods to evaluate both market and non-market costs and benefits in Indigenous contexts for over 20 years. They are further described in Section 3: Project Approach.

1 The Coastal First Nations – Great Bear Initiative is an alliance of First Nations on British Columbia's North and Central Coast and Haida Gwaii.

2 With funding support from Tides Canada.

3 The analysis also examined adverse impacts and unintended consequences. No significant negative effects were identified.

Key Findings: Value Generation in Coastal First Nation Communities

The key finding of this business case analysis is that investments in Coastal Guardian Watchmen programs generate significant value for their Nations and communities. When net value generation is calculated across affected Nation-held values,⁴ Coastal Guardian Watchmen programs achieve, at the low end, **a 10 to 1 annual return on investment for the Nations that have the programs**. In other words, for each dollar invested in a Guardian Watchmen program on an annual basis, the respective First Nation benefits at least 10 times that amount. On the high end, some Nations experience **a 20 to 1 return on investment each year**.

For all seven First Nations included in the analysis, program benefits were found to be widespread, extending well beyond the core objectives of the programs. Specifically, the analysis found that the benefits positively contribute to many of the Coastal

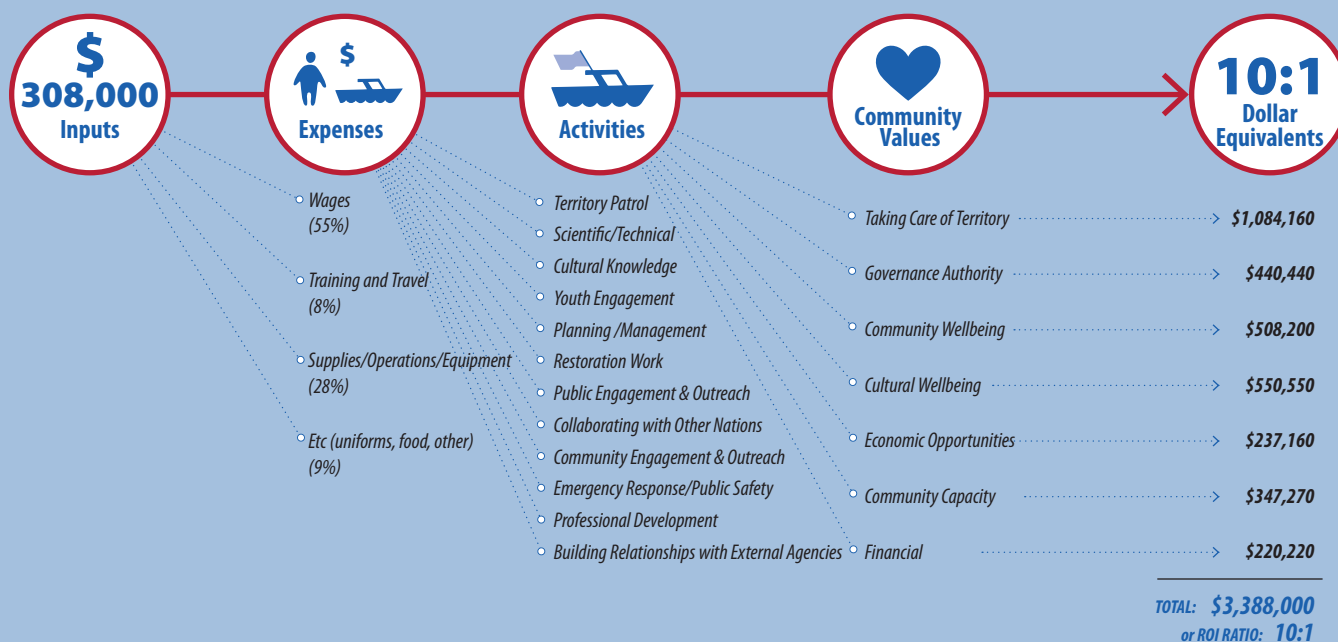
First Nations' values, including:

-  **Taking care of territory;**
-  **Nurturing cultural wellbeing;**
-  **Improving general health and community wellbeing;**
-  **Advancing governance authority;**
-  **Increasing community capacity;**
-  **Opening and promoting economic opportunities in both Indigenous and conservation economies; and**
-  **Providing much needed financial capital inflows into the community.**

⁴ Identified by First Nation representatives from the participating communities.

EXAMPLE: VALUE GENERATED BY AN AVERAGE GUARDIAN WATCHMEN PROGRAM

The figure below illustrates the value generation from an average Guardian Watchmen program. Developed from the data gathered during this project, this example depicts the value generated by a relatively new program (<5 years in operation), with a staff of 3-5 Guardian Watchmen, a single boat, and an operational budget of \$308,000. Based on the analysis presented in this report, the overall value generated by this program over the course of one year would be approximately \$3,388,000. In other words, for every \$1 invested in the program, the Nation would receive \$10 in total benefits, or a 10.0 to 1.0 investment return ratio.



In this report, community-specific data is not shared so as to protect the confidentiality of the Nations that participated.



Photo: © Sandra Thomson

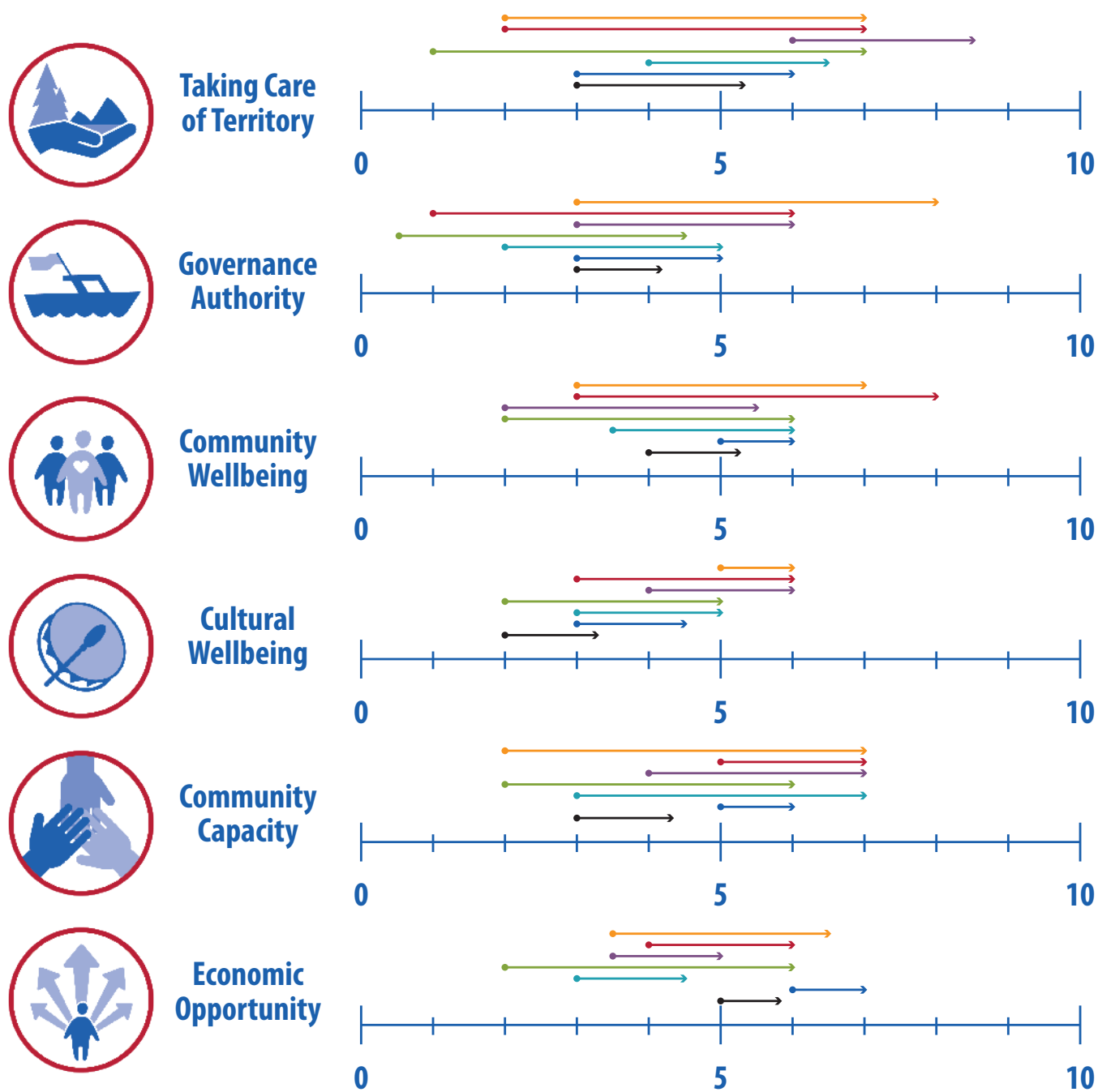
For example, by protecting the important sites and resources in their traditional territories and holding resource users accountable, Guardian Watchmen help to alleviate anxiety in coastal First Nation communities about whether or not vital food, social and cultural resources are being “taken care of” appropriately. By providing First Nation leaders with critical information, Guardian Watchmen also help to ensure that the Coastal First Nation governments are in a strong position to make informed decisions and engage effectively in planning, management, and negotiations regarding their territories. In addition, Guardian Watchmen programs provide meaningful, in-community employment opportunities. Through their work and training as Guardian Watchmen, individuals gain new skills; acquire technical, scientific, and traditional knowledge; and take on leadership roles in their communities. Over time, many Guardian Watchmen become more self-confident, more aware of their culture and heritage, and more connected to their identities and Nations. These benefits spread within coastal First Nation communities as skilled members, new leaders, and role models emerge.

Figure 1 on the following page describes the extent of the changes that have occurred in each participating First Nation as a result of their Guardian Watchmen program, as identified by program representatives.⁵ These changes were evaluated in relation to the Coastal First Nation values identified on the previous page.

With respect to both new and more mature programs, the analysis found that the benefits and overall value generated from investment in Guardian Watchmen programs are rapidly achieved, and sustainable over time with continued investment. A more fulsome description of the wide-ranging benefits that coastal First Nations derive from their Guardian Watchmen programs can be found in Section 4.

⁵ In *Figure 1*, '0' signifies worse, and '10' signifies better. See *Figure 16* on p.43 for a complete description of the measures used to evaluate the extent of these changes.

↓ FIGURE 1: Extent of changes for each Nation



Conclusions & Next Steps:

The evaluation framework developed for this analysis is useful for understanding and communicating the range of benefits that Guardian Watchmen programs generate. In addition, it also has strong potential as a planning, design and management tool, as it can be used to support program development across different contexts, and to identify opportunities for higher community value generation in the future.

Finally, Coastal Guardian Watchmen programs align with and contribute to many objectives pursued by other interested parties, partners and stakeholders, including other coastal communities, resource industries, tourists and other resource users, government agencies and the Canadian public in general. While the focus of this report is on the value the programs generate for the Coastal First Nations, Appendix A offers a description of potential next step for exploring these added contributions. Further analysis is required to fully characterize the range of benefits that external (i.e., non-Coastal First Nation) partners and stakeholders receive from Guardian Watchmen programs.



Photos: © Sandra Thomson





COASTAL GUARDIAN WATCHMEN: SIMPLE ACTIONS – MANY BENEFITS

Last year, one Nation's Guardian Watchmen built a cabin for community use at a traditional seaweed-harvesting site within their traditional territory. However, as described by the program manager, this cabin has "so much more to it". It was built on a 5,000-year-old village site, so when community members visit the cabin, they have opportunities to connect with their culture, share oral histories, learn place names, and participate in the transmission of Indigenous knowledge. Multiple generations often stay at the cabin together, which strengthens kinship and community ties, builds awareness in the community about the importance of such sites, and strengthens ties to the territory. Also, the site itself is protected, because Guardian Watchmen and other community members visit it year round and are therefore able to monitor the health of the land, waters, and resources.

This simple action by the Guardian Watchmen allows more community members to harvest wild foods and share them with others in the community. Additional spin-off benefits include improving the quality of celebrations and ceremonies, increasing physical activity and health, and enabling community members to save money by participating in Indigenous economies.

2. INTRODUCTION

2.1 Purpose

EcoPlan International (EPI) was commissioned by the Coastal Stewardship Network, a program of Coastal First Nations – Great Bear Initiative, and TNC Canada⁶ to conduct a business case analysis of Coastal Guardian Watchmen programs. EPI worked in partnership with the seven member nations of Coastal First Nations to undertake the research and data collection required to conduct this study.

The purpose of any business case is to establish the rationale for undertaking, or continuing, a given program or project. It provides decision makers with information to help answer not only the question ‘is it worth the investment?’ but also ‘how do we know?’, or in other words, ‘what is the value generated from this investment?’. It can also be used as a tool to guide program/project design, management and evaluation on an ongoing basis.

Developing such a business case requires an understanding of the relevant costs and benefits associated with the program/project, and a means to translate these effects into a common monetary

6 With funding support from Tides Canada.

metric so that overall return on investment (ROI)⁷ can be calculated. With Coastal Guardian Watchmen programs, some of these benefits and costs are readily evident. Others are not well articulated and may even be invisible to those not directly experiencing them (i.e., those not living in the coastal First Nation communities where Guardian Watchmen programs are active). Business case evaluations that focus solely on tangible, easier-to-measure considerations run the risk of distorting outcomes, misleading decisions makers, and negatively affecting program design and management.

To avoid these problems, a business case should articulate and incorporate a full set of relevant costs and benefits, including the more difficult-to-measure considerations (often described as extra-financial, intangible or incommensurable dimensions of value), such as social equity, cultural vitality, traditional economic prosperity, environmental sustainability, health, and governance authority.

7 ROI in this business case analysis refers to total value generation during the investment period, including extra-financial or intangible values. The value generation is from the First Nation perspective.

WHY DOLLARS?

As described in Section 2.2, there are wide ranging benefits that can be directly attributed to Guardian Watchmen programs. However, many of these benefits are complex and intangible. As a result, the overall value created by the programs can be difficult to measure or quantify. This means that important aspects of Guardian Watchmen programs may not be fully understood or appreciated, even by those who benefit from them (e.g., interested and affected parties such as funders and government agencies, the general public, and – in some cases – community members themselves). Dollar measures are widely understood and help to communicate the business case for these programs, which require significant investment.

While there are methodological and ethical challenges associated with assigning dollar values to costs and benefits that are not typically expressed in these terms, there are nonetheless significant advantages to doing so. These include increased understanding and communication across interested parties and a clearer connection between investments and outcomes.

COMMUNICATION: *Communities, governments, funders, and taxpayers want to know if their money is being well used and if the investment is ‘worth it’. In other words, they would like to understand the value of the outcomes of the investment. Using dollar figures to represent value across multiple dimensions helps to answer these questions and tell the story of program benefits and adverse impacts. And it does so in a language familiar to business and government: money and the value generated from an investment.*

CONNECTION BETWEEN INVESTMENTS AND OUTCOMES: *The direct connection between the investments and the value of the outcomes allows communities and funders to make sound investment decisions that can be rationalized and that have clear impacts.*

This business case analysis has two primary goals:

1. To develop a comprehensive framework for understanding and communicating the range of benefits that flow from Coastal Guardian Watchmen programs;⁸ and
2. To use appropriate and defensible valuation methods to translate these benefits into dollar terms, so that overall value generated can be calculated.

The business case was undertaken from the perspective of coastal First Nation communities where Guardian Watchmen programs are active. Benefits to, and potential negative effects on, other interested parties have been identified, but not quantified and translated into monetary terms for the purpose of this business case. This is a sensible next phase of research to round out the business case analysis.

2.2 Overview: Coastal Guardian Watchmen Programs

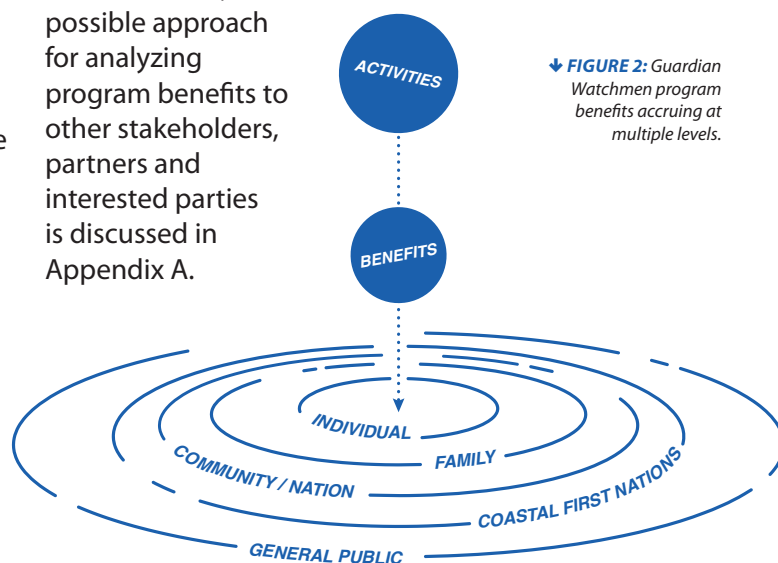
By enabling the Coastal First Nations to have a physical, on-the-ground presence in their ancestral territories, Guardian Watchmen programs provide vital cultural and natural resource stewardship services. As the “eyes and ears” of these Nations’ lands and waters, the Guardian Watchmen monitor resource use within their territories, promote compliance with Indigenous laws and federal / provincial government regulations, and ensure that environmental management, resource development, and recreational activities are all carried out with respect and in accordance with land and marine use plans and agreements.⁹ Among other activities, Guardian Watchmen monitor the health of species that are ecologically and culturally important, track resource use and changes to ecosystems, and engage in public outreach and education.

For the Coastal First Nations, all of whom have Guardian Watchmen programs, investment in these programs provides a broad range of benefits. Guardian Watchmen fundamentally help protect each Nation’s cultural and natural resources, which form the basis for community wellbeing and

resilience. The programs also enable community members to:

- Engage in meaningful in-community employment,
- Share Indigenous knowledge and lifeways,
- Connect with other First Nation communities,
- Strengthen Indigenous economies,
- Open up new opportunities for sustainable businesses,
- Bring financial inflows into the community,
- Allow Nations to assert their rights and title,
- Develop more responsive and responsible stewardship capacity, and
- Build confidence and hope for current and future generations.

Through colonialism, the federal and provincial governments have taken control of the resources on BC’s North and Central Coast, and as such, they have a responsibility to monitor, protect, and manage these resources appropriately. As pressure increases on coastal resources and both governments continue to allot insufficient funds to the agencies tasked with caring for them, Guardian Watchmen programs play an increasingly important role in making sure the Coast is managed responsibly. Therefore, in addition to benefitting the Coastal First Nations, the programs also provide benefits to provincial and federal governments, non-Coastal First Nation resource users, and the Canadian public in general. While this report focuses on the Coastal First Nations’ return on investment, a possible approach for analyzing program benefits to other stakeholders, partners and interested parties is discussed in Appendix A.



⁸ The analysis also examined adverse impacts and unintended consequences. No significant negative effects were identified.

⁹ For more information about Guardian Watchmen programs, visit coastalguardianwatchmen.ca. Also see Hutton and Oro, 2006.

2.3 Audience and Report Organization

This business case report has been developed to provide insight into Coastal Guardian Watchmen programs and is intended for those interested in more clearly understanding the benefits generated by these programs across several dimension of value. The report will be of use to Coastal First Nations that want to better understand how their existing Guardian Watchmen programs benefit their communities. As a business case, it will also be of interest to current and potential program funders, external parties and stakeholders (e.g., the general public; other resource users; non-Coastal First Nation communities along Canada’s coastline; and government agencies that benefit from the work that Guardian Watchmen do, such as DFO and BC Parks), and other Indigenous communities in Canada and elsewhere that are interested in establishing their own on-the-land stewardship programs.

WHAT IS ON-THE-LAND STEWARDSHIP?

The concept of on-the-land stewardship can be broken down into two parts: “stewardship” and “on-the-land”. Stewardship, in its broadest sense, is the recognition of our responsibility to care for and maintain the quality and function of our natural ecosystems. Stewardship includes managing the land, water, air, and biodiversity in a way that supports their long-term integrity, and the environmental, social, cultural and economic values we derive from them. The “on-the-land” part of the equation refers to the importance of engaging with the natural world in our stewardship of it. Effective stewardship requires spending time in the natural environment, observing it and collecting high-quality data, so that we can understand it to the best of our ability. This understanding is essential to high-quality stewardship of our natural world.

The report is organized as follows:

- Section 1, **Executive Summary**, reviews the purpose of the analysis and highlights key findings.
- Section 2, **Introduction** (this section), introduces the business case and provides a brief overview of the role of Guardian Watchmen programs on BC’s North and Central Coast.
- Section 3, **Project Approach**, describes the approach and methods used to generate the business case.

The remainder of the report walks the reader through the complex process of translating costs and benefits to a single metric:

- Section 4, **Understand the Context**, summarizes Guardian Watchmen program objectives, inputs, and activities.
- Section 5, **Identify the Changes**, describes the changes (i.e., benefits) that coastal First Nations have experienced as a result of Guardian Watchmen programs, in relation to community-held values.
- Section 6, **Measure the Changes**, characterizes the *magnitude* of the changes that have occurred in coastal First Nation communities as a result of Guardian Watchmen programs.
- Section 7, **Value the Changes**, identifies the relative *importance* of these changes, from community perspectives.
- Section 8, **Calculate the Overall Return on Investment**, translates the net value of these changes into monetary terms (i.e., dollars).

3.

PROJECT APPROACH

This section describes the approach and methods that EPI used to develop the business case for Coastal Guardian Watchmen programs.



3. PROJECT APPROACH

3.1 Background

To establish the overall value generated by the Guardian Watchmen programs, EPI applied a methodology that builds on several alternative approaches to valuation that have been refined over the past 20 years. These include, but are not limited to, Social Return on Investment (SROI),¹⁰ Corporate Social Responsibility (CSR),¹¹ Multiple Account Benefit-Cost Analysis,¹² and Triple / Quadruple Bottom Line¹³ frameworks. For-profit corporations, government agencies and nonprofit organizations regularly use such frameworks to assess and communicate intangible or non-market value creation, as they help to reveal a more complete range of costs and benefits resulting from a given investment.

All of these approaches have been tested and critiqued over time, resulting in a continued evolution of methods.¹⁴ In designing the approach and methodology for this particular analysis, EPI drew on over two decades of experience in non-market valuation, along with established findings from economics, anthropology, and behavioural psychology. The resulting approach is iterative and participatory, and involved the application of well-established tools, value elicitation techniques, and stated preference methods from the field of decision analysis that help to structure values so that changes to these values (i.e., losses and gains) can be evaluated. Changes to values are the basis for the business case calculations in this analysis.¹⁵

For a business case analysis to be defensible, there are two essential principles that must be adhered to. First, the changes (i.e., benefits and costs) resulting from a given project or program must be identified and confirmed by the affected parties, and second, only the affected parties can say how important these

changes are. These principles are considered essential because benefits and costs cannot be properly evaluated without listening to the affected party, and moreover, evidence gathered elsewhere under a different context cannot be used as the basis for identifying or measuring value creation and /or loss.¹⁶

Grounded in these principles, the basic approach for the Guardian Watchmen program business case followed EPI's participatory, multi-method impact assessment and valuation process, which requires working with the affected parties to:

- Identify their affected values and structure them into a logical and comprehensible evaluation framework;
- Characterize the changes that have occurred from the program in relation to these values, and then measure these changes;
- Elicit value judgments about the relative importance of these changes, in order to create multi-attribute value weights that distinguish their relative importance; and
- Use the value weights and well-defined dollar measures to translate the non-market changes in value into dollar terms.¹⁷

Section 3.2 describes how these methods were applied in this specific context.

3.2 Project Methodology

To identify, measure, and value the changes across multiple dimensions of value that have occurred in coastal First Nation communities as a result of Guardian Watchmen programs, EPI designed a seven-phase, participatory project process. This process is described in the following table, with a description, associated methods, and notes highlighting the key outcomes of each phase.

¹⁰ Millar & Hall, 2012.

¹¹ Saether & Aguilera, 2008.

¹² Shaffer, 2010.

¹³ Slaper & Hall, 2011.

¹⁴ For example, see: Gregory and Trousdale, 2009; or Ackerman and Heinzerling, 2004.

¹⁵ The methods used to calculate the value of the programs and ultimately represent this value in dollar terms are well established in academia, recognized as best practice by professional organizations, and have been used across North America with indigenous groups. For examples, see McDaniels and Trousdale, 2005; Keeney, 1994; Clemens, 1996.

¹⁶ Gregory and Trousdale, 2009.

¹⁷ Keeney & Raiffa, 1993; Gregory et al, 2012.

TABLE 1: Project methodology

PHASE	DESCRIPTION	METHOD	NOTES
Phase 1: Project Scoping	<ul style="list-style-type: none"> Clarify study purpose and scope Identify affected parties (i.e., who benefits from or is adversely affected by the Guardian Watchmen programs) and establish assessment period (i.e., what is baseline? Is it to current and/or future periods?) 	<ul style="list-style-type: none"> Desktop research and literature review Interviews with Coastal Stewardship Network coordinators and supporters, past and present 	<ul style="list-style-type: none"> This phase established that this study would focus on communities as represented by Guardian Watchmen, program managers, and stewardship directors. Only preliminary research into the values and benefits to other groups, such as affected government agencies and the broader Canadian public, would be initiated
Phase 2: Understand the context	<ul style="list-style-type: none"> Define what is being valued: establish Guardian Watchmen program objectives, inputs (i.e., costs, training), structure and activities 	<ul style="list-style-type: none"> Desktop research Interviews and workshops with stewardship directors, program managers and Guardian Watchmen Interviews with Coastal Stewardship Network coordinators and supporters, past and present 	<ul style="list-style-type: none"> This phase established that each Coastal First Nation's Guardian Watchmen program is unique, in that the programs all have different lifespans and histories, and are integrated with other stewardship and governance activities in different ways It was determined that each Guardian Watchmen program considered in this study must be defined and valued independently
Phase 3: Identify and characterize affected values	<ul style="list-style-type: none"> Elicit values (i.e., what matters) from those affected by the Guardian Watchmen programs to understand how it has changed each Coastal First Nation community 	<ul style="list-style-type: none"> Interviews, focus group sessions, and workshops with stewardship directors, program managers and Guardian Watchmen Interviews with Coastal Stewardship Network coordinators and supporters, past and present Benefits-values mapping 	<ul style="list-style-type: none"> This phase involved value elicitation and identification of Guardian Watchmen program effects (i.e., changes) Many tangible and intangible Guardian Watchmen program benefits were identified; no adverse impacts or negative unintended effects were identified From these benefits, seven distinct dimensions of value, also known as "Nation values" (i.e., values that program representatives have indicated are of importance to the communities involved) were identified Nation values include: <ul style="list-style-type: none"> - Taking Care of Territory; - Community Wellbeing; - Cultural Wellbeing; - Economic Opportunities; - Community Capacity; - Governance Authority; and - Financial Inflows to the community
Phase 4: Measure the changes	<ul style="list-style-type: none"> Determine the extent of the changes (positive benefits and adverse impacts) on identified values 	<ul style="list-style-type: none"> Focus group sessions and workshops with stewardship directors, program managers, and Guardian Watchmen Development of measures and scales for values identified by participants 	<ul style="list-style-type: none"> This phase informed the generation of clear, consistent, and meaningful scales and measures for understanding the changes These scales were then used by stewardship directors, program managers, and Guardian Watchmen to assess the change from baseline from a <i>community perspective</i> These changes were screened to ensure they were directly related to the identified Guardian Watchmen activities, and examined in terms of magnitude, duration (i.e., cumulative and drop-off effects)

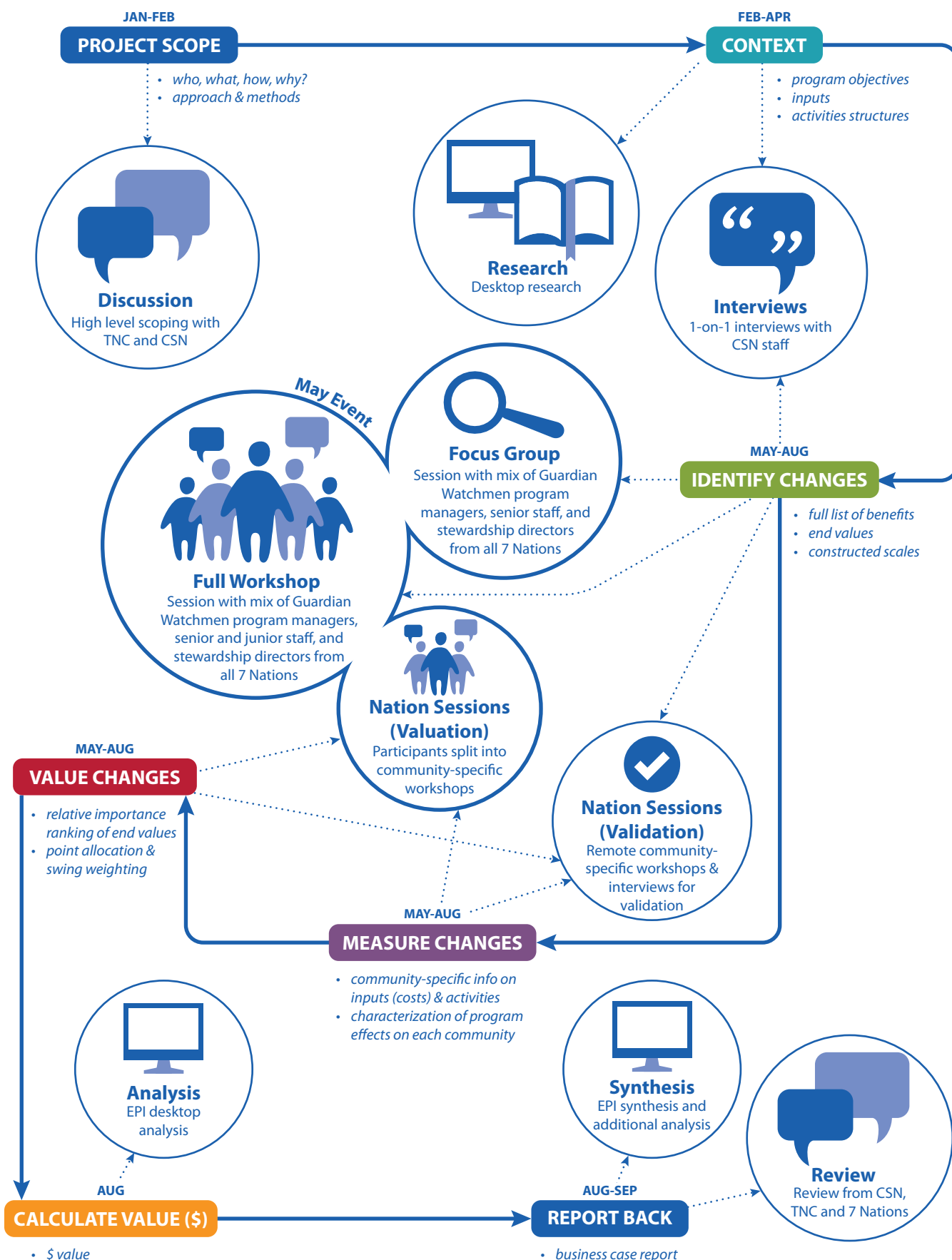
PHASE	DESCRIPTION	METHOD	NOTES																
Phase 5: Value the changes	<ul style="list-style-type: none"> Establish the relative importance of the changes from the perspective of those affected 	<ul style="list-style-type: none"> Interviews and workshops with stewardship directors, program managers, and Guardian Watchmen Interactive, participatory evaluation using multiple methods (i.e., direct ranking, swing weighting, point allocation, reconciliation) to assess the relative significance of the changes 	<ul style="list-style-type: none"> As expected, each community identified a unique level of relative significance to each Nation value On average, and not surprisingly, Taking Care of Territory ranked #1. <table border="1"> <thead> <tr> <th><u>End-Value</u></th> <th><u>Rank</u></th> </tr> </thead> <tbody> <tr> <td><i>Taking Care of Territory</i></td> <td>1</td> </tr> <tr> <td><i>Cultural Wellbeing</i></td> <td>2</td> </tr> <tr> <td><i>Community Wellbeing</i></td> <td>3</td> </tr> <tr> <td><i>Governance Authority</i></td> <td>4</td> </tr> <tr> <td><i>Community Capacity</i></td> <td>5</td> </tr> <tr> <td><i>Economic Opportunities</i></td> <td>6</td> </tr> <tr> <td><i>Financial Inflows</i></td> <td>7</td> </tr> </tbody> </table>	<u>End-Value</u>	<u>Rank</u>	<i>Taking Care of Territory</i>	1	<i>Cultural Wellbeing</i>	2	<i>Community Wellbeing</i>	3	<i>Governance Authority</i>	4	<i>Community Capacity</i>	5	<i>Economic Opportunities</i>	6	<i>Financial Inflows</i>	7
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<i>Community Capacity</i>	5																		
<i>Economic Opportunities</i>	6																		
<i>Financial Inflows</i>	7																		
Phase 6: Calculate the overall return on investment	<ul style="list-style-type: none"> Calculate the value of the changes across multiple dimensions of value in dollars terms Compare to the investment 	<ul style="list-style-type: none"> Use the value attribute measures and well-defined dollar measure associated with Financial Inflows to translate, into dollar terms, the value of change to each Nation value. Calculate overall value generated 	<ul style="list-style-type: none"> Return on investment varied from Nation to Nation, as expected, due to different contexts (age of program, size of program, size of territory, governance and development context, etc.) and different associated value judgments Value generated ranged from 10:1 to 20:1 during a recent annual investment cycle. In other words, for \$1 dollar invested annually, \$10 to \$20 dollars of value was generated at the Nation level. 																
Phase 7: Report back	<ul style="list-style-type: none"> Synthesize the results and present key findings 	<ul style="list-style-type: none"> Produce written report (this report) and community summaries for each participating community, share at conferences and meetings 																	

It is important to note that EPI's research process was non-linear. Rather, research and technical analyses were carried out iteratively to revisit, apply different methods, and confirm / validate results of earlier analyses. This is illustrated in *Figure 3* on the following page.

3.3 Phase 1: Project Scoping

Project scoping took place at a high level, and involved representatives from TNC Canada and the Coastal Stewardship Network. It was at this stage that key potential study participants were identified, and initial discussion and literature review about the types of costs and benefits that might be included in the analysis took place.

Key outcomes of this project phase included establishing that the study would focus on evaluating the effects of the Guardian Watchmen programs from a *community perspective*, and that this perspective would be provided by Guardian Watchmen, program managers, and stewardship directors as the affected parties (collectively referred to as "program representatives" or "study participants" in the remainder of the report). Due to various project limitations, including timing, funding, and logistics, the decision was made to choose "breadth over depth" (i.e., to work with more Nations through their staff, rather than fewer Nations involving their entire communities). Community-wide engagement would be warranted as a next phase evaluation step to understand value generation from more perspectives, and to validate community-level value generation.



↑ FIGURE 3: Project process

The following First Nations participated in the study:

- Heiltsuk Nation
- Haida Nation
- Kitasoo / Xai'xais Nation
- Metlakatla First Nation
- Nuxalk Nation
- Wuikinuxv Nation
- Gitga'at Nation (limited involvement)

While other Indigenous groups within Canada have similar Guardian Watchmen/on-the-land stewardship programs, this assessment is limited to the participating Nations. Each Nation contributed to the development of a common evaluation framework that: (a)

identified a set of program activities that helped to define each program; (b) delineated means-end benefits relationships; and (c) identified a set of affected Coastal First Nation end values.¹⁸ Identifying the magnitude of the changes and the significance of those changes was done at the program/Nation level; that is to say each program's business case analysis to that Nation was conducted independently.

Coastal Guardian Watchmen programs have many similarities, yet they are also each unique. One reason for the variations among them is that the funding that supports Guardian Watchmen programs comes with few to no "strings attached". Rather than receiving direction from a central authority or having to address specific funding constraints, each Guardian Watchmen program responds to the needs and priorities identified by each Nation. This empowers Nations to develop, design and manage targeted and community-appropriate programs.

¹⁸ Described as "Nation values" in the remainder of the document.

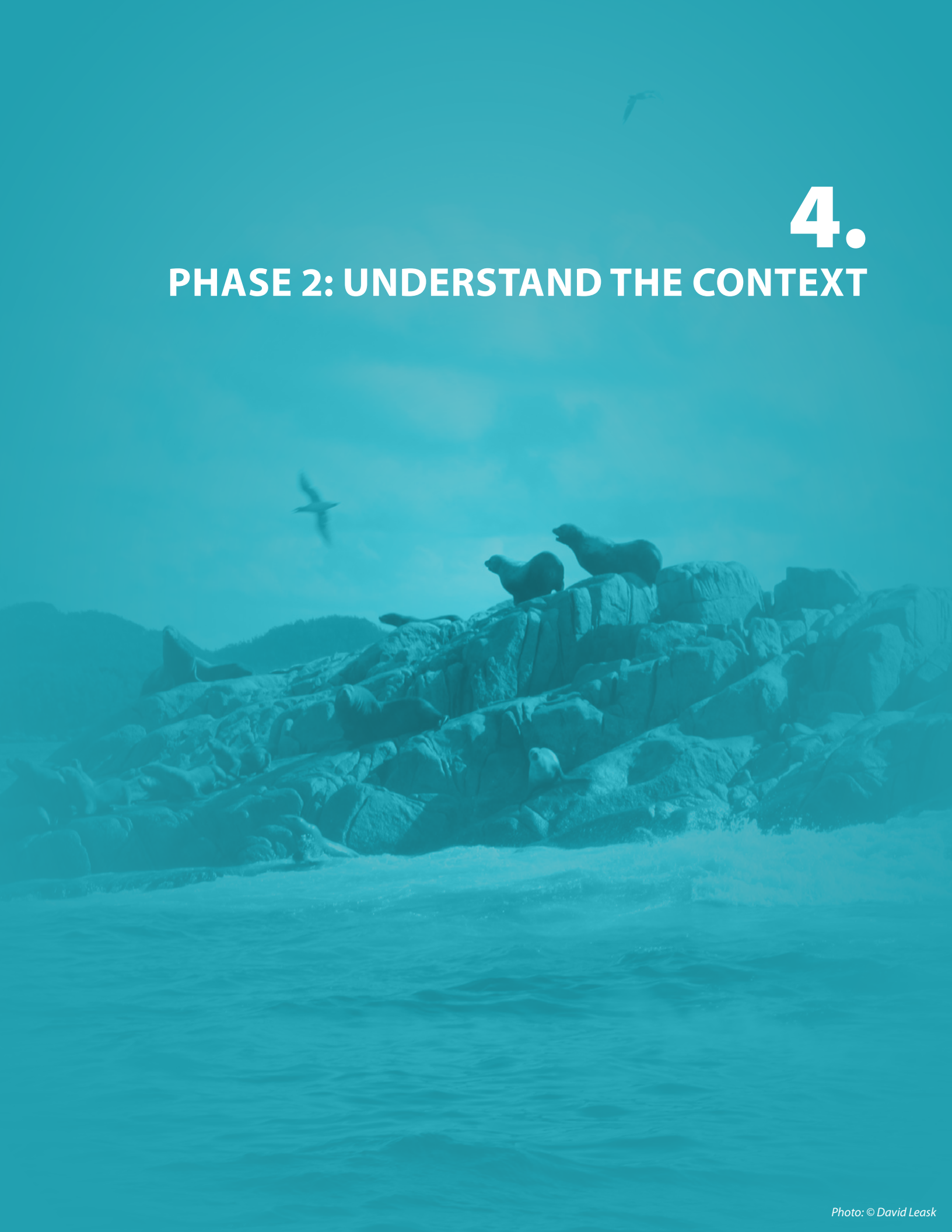


Therefore, each Nation's program differs in varying degrees by scope, activities and corresponding annual operating budgets. This means that there is no "cookie cutter" model that provides one clear definition of what a Coastal Guardian Watchmen program is across all seven Coastal First Nations. In addition, though there is significant regional collaboration and standardization, every Nation has a unique approach to monitoring and stewarding their territory.

Important for this evaluation is that each Nation's program representatives had to define their own program before a business case valuation could be undertaken.

4.

PHASE 2: UNDERSTAND THE CONTEXT



4. PHASE 2: UNDERSTAND THE CONTEXT

As a practical first step, EPI conducted background research through desktop methods and one-on-one interviews with current and former Coastal Stewardship Network staff members. As part of this initial research, EPI reviewed Coastal Guardian Watchmen / Coastal Stewardship Network materials (e.g., websites, training materials, budget templates), internal reports, other relevant published materials, and interviewed three Network staff. While none of the individuals interviewed at this stage were members of the Nations who participated in the study, they all have experience working closely with Guardian Watchmen in their respective roles, and together offer a wealth of knowledge regarding the programs.

In addition, EPI also worked with representatives from each Nation to clarify the specifics of their distinct program. Each Nation has a unique approach to monitoring and stewarding their respective territory. These specifics include attributes such as number of staff (full time, part time, seasonal), annual operating budget, years in operation, and importantly, details regarding the suite of activities that make up the work carried out by each program. Without this information, it would not have been possible to value the programs independently, which was necessary given the significant differences among them.

From this research, EPI developed a comprehensive baseline understanding of the following aspects of the seven Guardian Watchmen programs included in this study:

- Guardian Watchmen program objectives (4.1);
- Guardian Watchmen program inputs (i.e., costs) (4.2); and
- Guardian Watchmen program activities (4.3).

During this phase, EPI was able to begin conceptualizing the relationship between program objectives, inputs, activities, benefits, and Nation values (i.e., the changes experienced in coastal First Nation communities as a result of the Guardian Watchmen programs). This model was synthesized and revised over time through iterative discussions with Coastal Stewardship Network staff and Guardian Watchmen program representatives in subsequent stages of research.

4.1 Guardian Watchmen Program Objectives

Although each program is unique, the Coastal Guardian Watchmen programs all have similar mandates and objectives. Their collective vision is as follows:

As First Nations we govern our ancestral traditional territories and safeguard the health of our ecosystems. We are the Guardians and Watchmen of our territories. We are men and women carrying forward the work of our ancestors to manage and respect our lands and waters through our traditional laws to ensure a vibrant future for generations to come. We work with our neighbouring Nations to create a united and collective presence within our territories. From the Central Coast to the North Coast and Haida Gwaii, we are working together to monitor, protect and restore the cultural and natural resources in our territories.

As the Guardian and Watchmen of our ancestral traditional territories we will steward our marine and terrestrial natural and cultural resources to ensure that they are sustainably managed. To this effect:

- *We will gather data on the ecological health and wellbeing of our ancestral traditional territories;*

↓ **FIGURE 4:** Conceptual model outlining process for identifying relationships between inputs, activities, values and benefits.



- *We will compile and share data that we gather in order to inform decision-making in our ancestral traditional territories;*
- *We will have the authority to carry out compliance and enforcement;*
- *We will have a strong presence throughout our territories so that resource users regularly encounter and interact with us;*
- *We will have access to secure funding to support ongoing year-round Guardian/ Watchmen programs in our communities;*
- *We will play an active role in community outreach and education regarding the protection of our cultural and natural resources; and*
- *We will work with the federal and provincial government (through management agreements that respect the title and rights of First Nations) to ensure coordinated and robust monitoring and enforcement throughout our territories.*

We derive our authority and jurisdiction from our traditional laws to manage and safeguard the lands and waters of our territories for the health of future generations.¹⁹

4.2 Guardian Watchmen Program Inputs

The seven programs included in this study ranged from smaller programs with annual operating budgets of \$100,000 – \$200,000 and 2 and 4 seasonal staff to medium sized programs with annual operating budgets between \$300,000 – \$600,000 employing a mix of full time and part-time/seasonal staff, ranging from approximately 5 – 8 positions. There were also large programs included in our study with annual operating budgets between \$600,000 and \$1M. These large programs have anywhere from 9 – 25 staff members at peak times.²⁰

Funding for Coastal Guardian Watchmen programs comes from a variety of sources, and varies from Nation to Nation. Many Nations allocate own source revenues, generated from economic development, carbon credits, or a share of resource revenues collected by the Province. Some Nations charge commercial tourism operators fees for running businesses in their territories, and then use these funds to support their programs. Several foundations and non-profit organizations also provide financial support to the programs.

These funds cover program costs, which include (but are not limited to):

- Guardian Watchmen salaries
- Vehicle capital and operating costs (trucks, boats, etc.)
- Equipment costs
 - Navigation equipment (lights, marine chart, compass, sound-signaling device, radar, etc.)
 - Safety gear (survival suits, life jackets, life raft, first aid equipment, etc.)
 - Communication equipment (radio, satellite phone, etc.)
 - Monitoring equipment (GPS device, Coast Tracker, binoculars, hand held recorder, species ID guide, nets/fishing rods, camera, etc.)
 - Uniforms
 - Office equipment (computers, computer hardware and software, phone, etc.)
- Supplies (gas, food, etc.)
- Travel costs
- Skills training costs (SVOP, MED A3, Swiftwater, archaeology and CMT inventory training, environmental compliance monitoring training, environmental monitoring training, marine motor servicing, etc.)
- Printing costs

¹⁹ Coastal Stewardship Network, 2016.

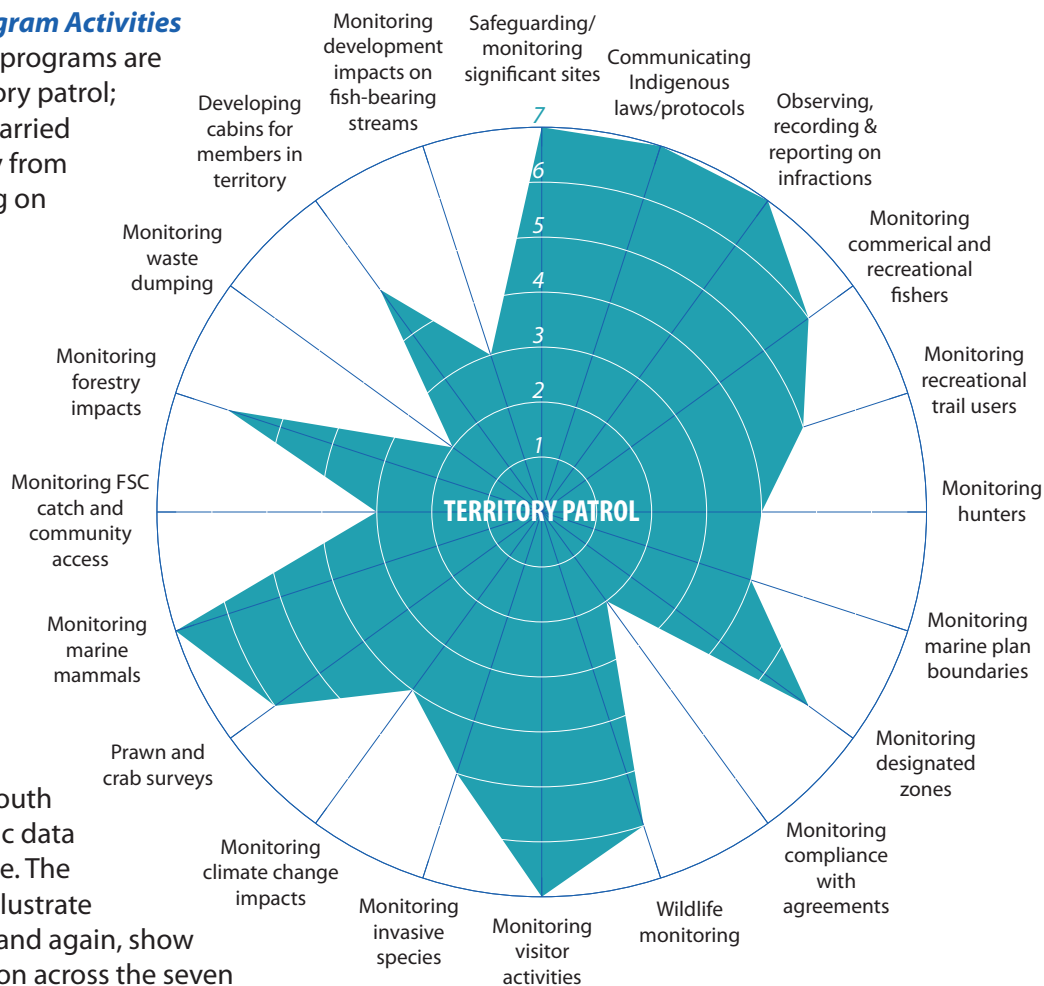
²⁰ Specific details about the costs and benefits related to individual programs are not shared in this report to protect the confidentiality of each program.

4.3 Guardian Watchmen Program Activities

All Coastal Guardian Watchmen programs are primarily oriented around territory patrol; however, the specific activities carried out by Guardian Watchmen vary from program to program, depending on the priorities of each Nation.

The figure at right summarizes Guardian Watchmen activities as they relate to territory patrol, and also illustrates which activities are most common across the seven programs considered in this analysis.

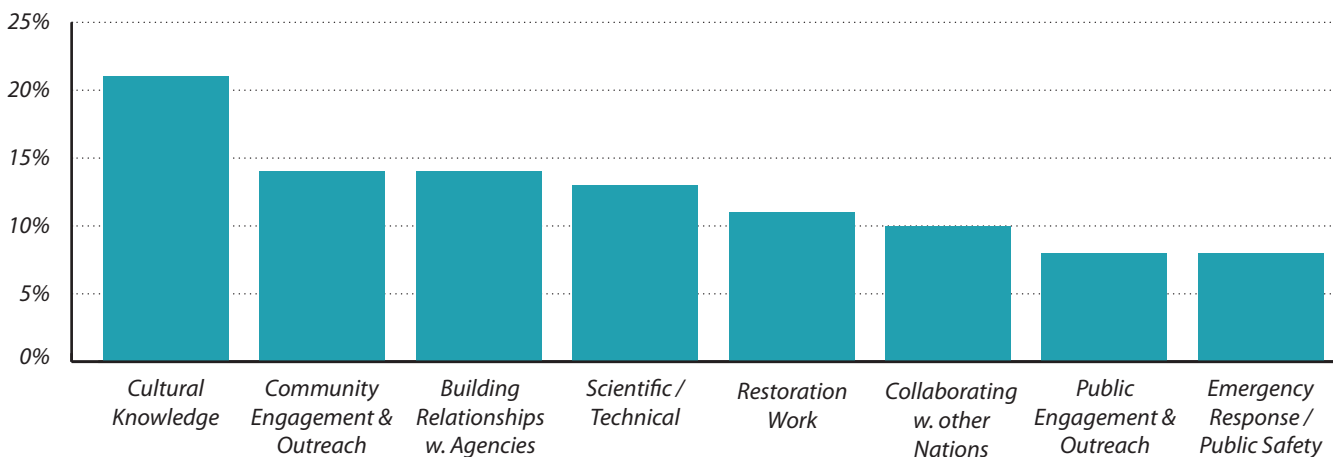
In addition to territory patrol, Guardian Watchmen carry out many other activities. The types of activities that Guardian Watchmen are responsible for range from community engagement and outreach, to youth mentorship, to complex scientific data collection and analysis, and more. The figures on the following pages illustrate these supplementary activities, and again, show which activities are most common across the seven Nations' programs included in this study.



↑ FIGURE 5: Number of participating Coastal Guardian Watchmen programs undertaking specific Territory Patrol activities

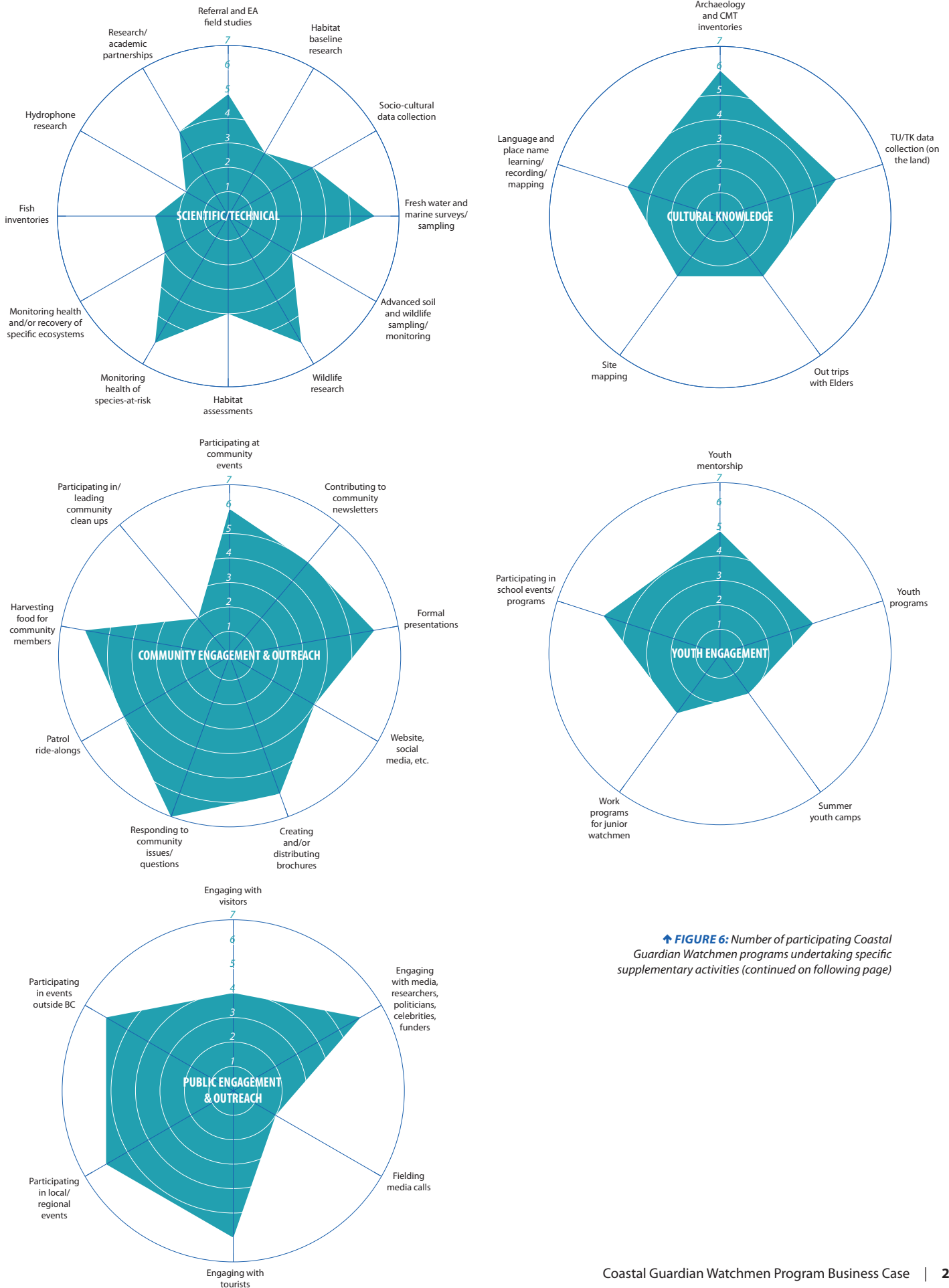
Taken together, the activities in Figures 5 and 6 drive Guardian Watchmen program value generation. Figure 7 illustrates the relative importance of these activity categories, as understood by program representatives.^{21,22}

↓ FIGURE 7: Guardian Watchmen program activities ranked in order of importance by participants

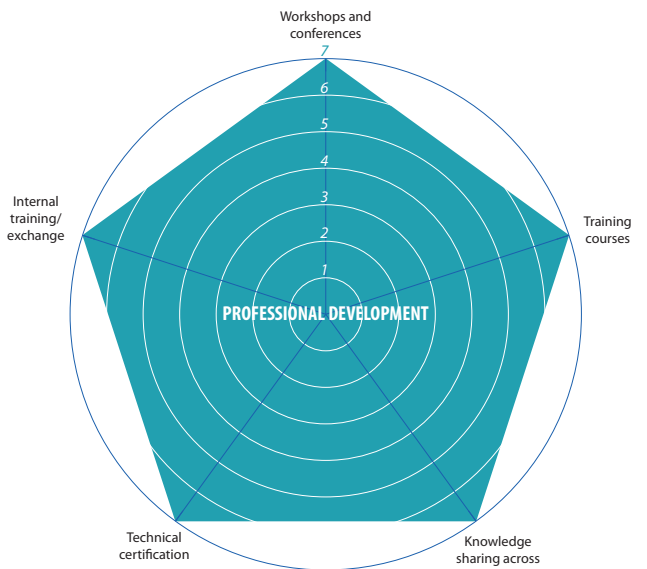
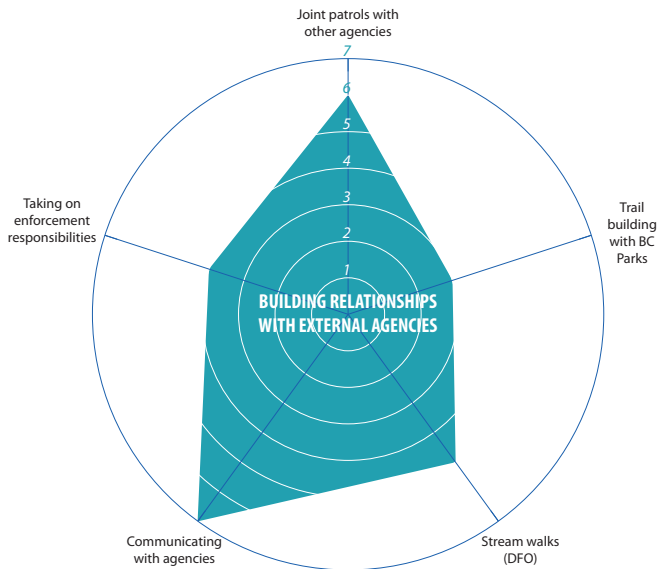
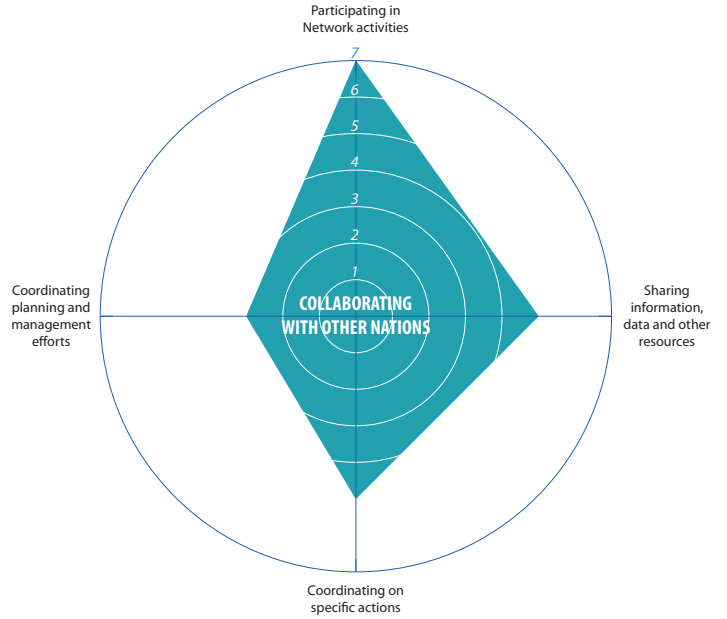
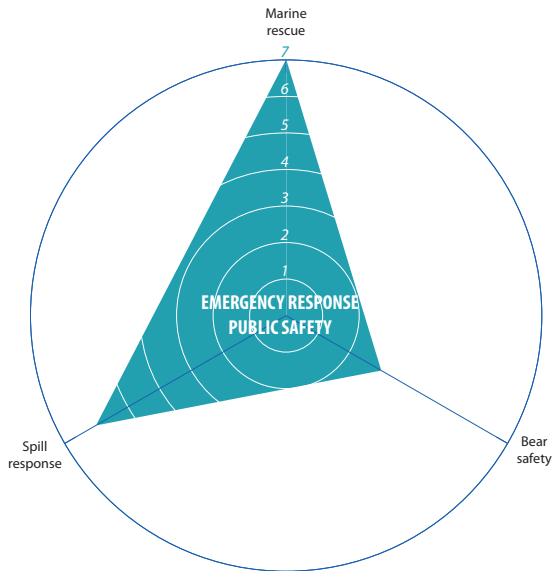
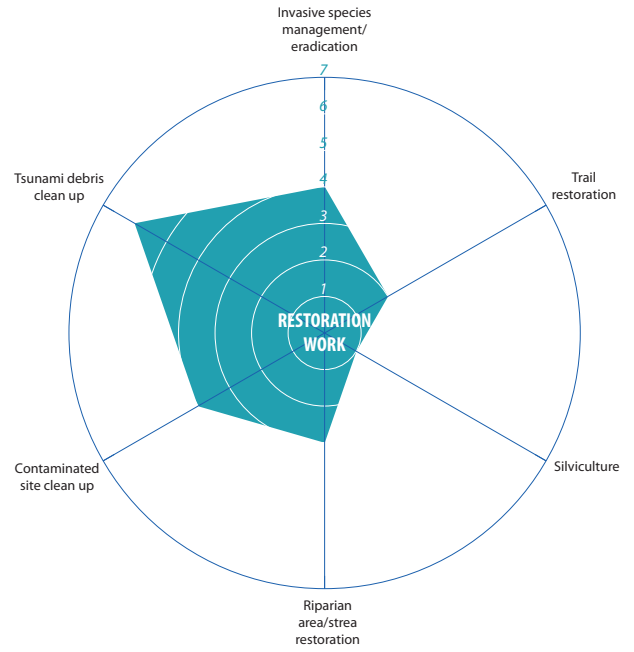
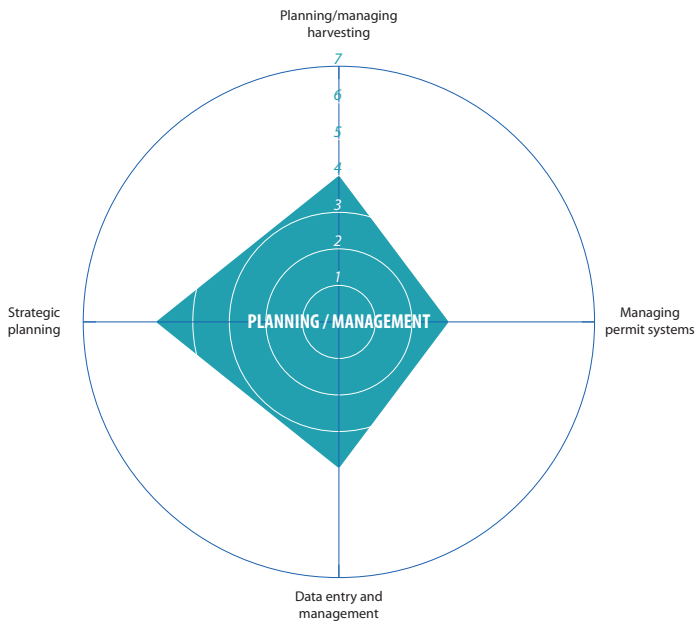


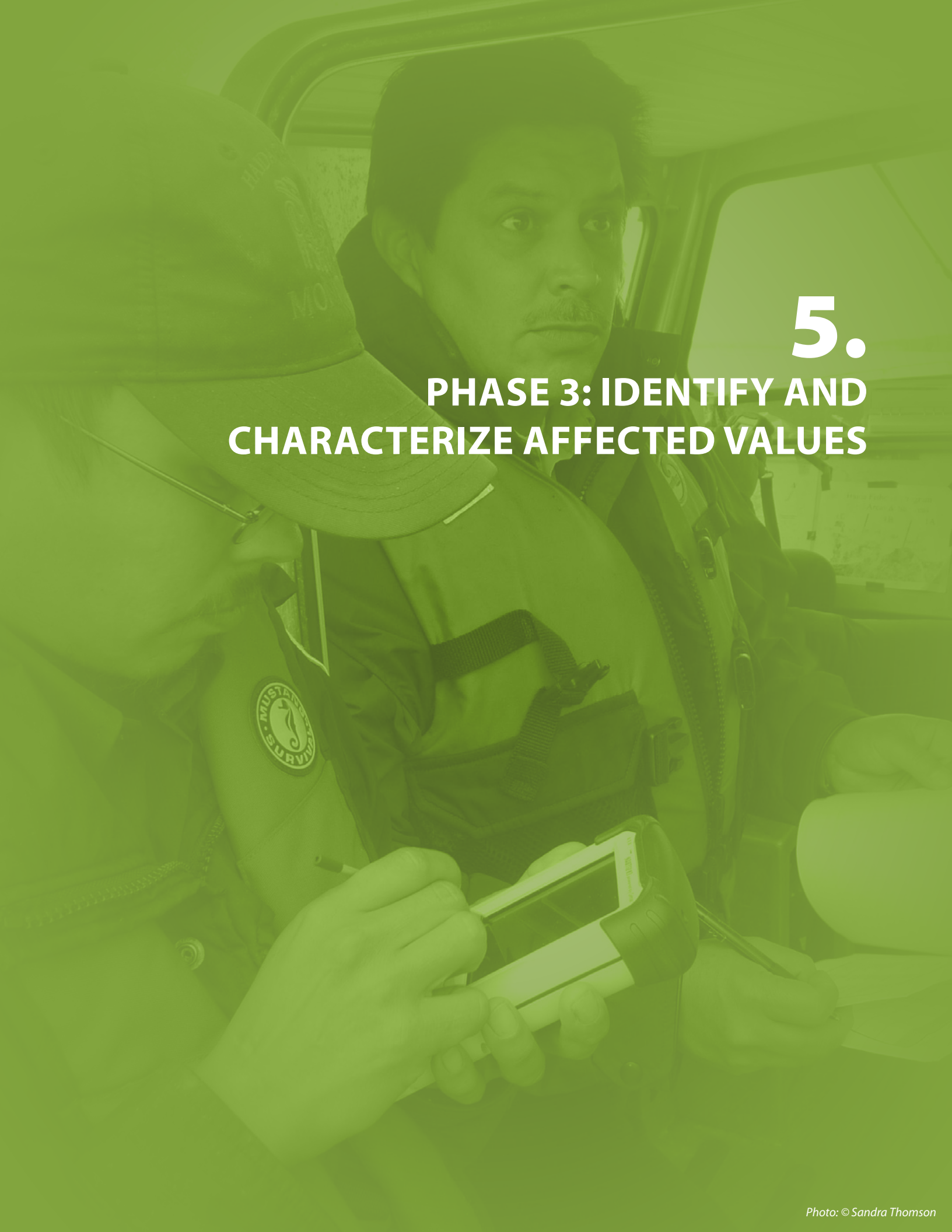
21 Territory patrol is not included in Figure 7 because it was confirmed early on that territory patrol is the most important activity category. Consequently, participants were asked to rank only the supplementary activity categories in order of relative importance.

22 These categories were revised through multiple iterations of engagement with project participants and have changed slightly over time (e.g., Youth Engagement is included in Figure 7 under Community Engagement & Outreach, while in Figure 6 it stands as a distinct category).



↑ FIGURE 6: Number of participating Coastal Guardian Watchmen programs undertaking specific supplementary activities (continued on following page)



A firefighter is shown from the chest up, seated in the driver's seat of a vehicle. He is wearing a dark jacket with a circular patch on the left chest that reads "MUSTANG STATE SURVIVAL" around a central emblem. He is also wearing a helmet with "MUSTANG STATE" and "120" visible. He is holding a clipboard in his left hand and a pen in his right hand, looking out the window with a serious expression. The entire image has a green tint.

5.

PHASE 3: IDENTIFY AND CHARACTERIZE AFFECTED VALUES

5. PHASE 3: IDENTIFY AND CHARACTERIZE AFFECTED VALUES

Guardian Watchmen programs have generated substantial benefits for the seven Coastal First Nations included in this study. This section describes:

- How benefits were identified;
- What they are and how they interrelate; and
- How they have created value across seven different participant-identified value dimensions (i.e., categories of value, or “Nation values”), which program representatives have indicated are of importance to the communities involved.

Participants did not identify any adverse changes due to the programs; consequently, only benefits are discussed.

5.1 Identification of Program Benefits and Elicitation of Affected Values

To ensure that community perspectives were appropriately captured at this critical phase of the assessment, EPI carried out a series of one-on-one interviews, small group sessions, and workshops (both in person and remote) with representatives from each of the Guardian Watchmen programs included in this study.²³ EPI’s first opportunity to engage directly with program representatives came during the Coastal Stewardship Network’s 2016 Annual Gathering²⁴, which was held at the Hakai Institute on Calvert Island from May 16-20. Prior to

23 For more information about this iterative process, see figure on page 15.

24 The Annual Gathering is a yearly event hosted by the Coastal Stewardship Network that brings representatives from the various Coastal Guardian Watchmen programs together, along with other partners and supporters.



this event, EPI had carried out some initial, high-level benefits scoping with Network staff members, which helped to focus the discussion and value elicitation that took place at this stage.

EPI facilitated two engagement sessions at the Annual Gathering: a small group workshop involving Guardian Watchmen program managers and other senior staff (n=12), and a wider workshop that included Guardian Watchmen and both senior and junior staff (n=30). In both sessions, EPI worked closely with participants to:

- Understand how they view the Guardian Watchmen programs as benefitting their communities; and
- Clarify how these benefits relate to specific, community-held values.

During these sessions, participants identified, confirmed and validated more than forty-five program benefits. They then grouped these benefits into seven distinct dimensions of value, also described as “Nation values” in this report:

These seven Nation values were carefully defined through facilitated discussion. Those present at the first two engagement sessions decided on the terms used to communicate them, and these terms were then iteratively validated and modified during later sessions (e.g., remote workshops and interviews with additional participants). Further discussion and verification regarding the benefits derived from the programs also took place during these later stages.

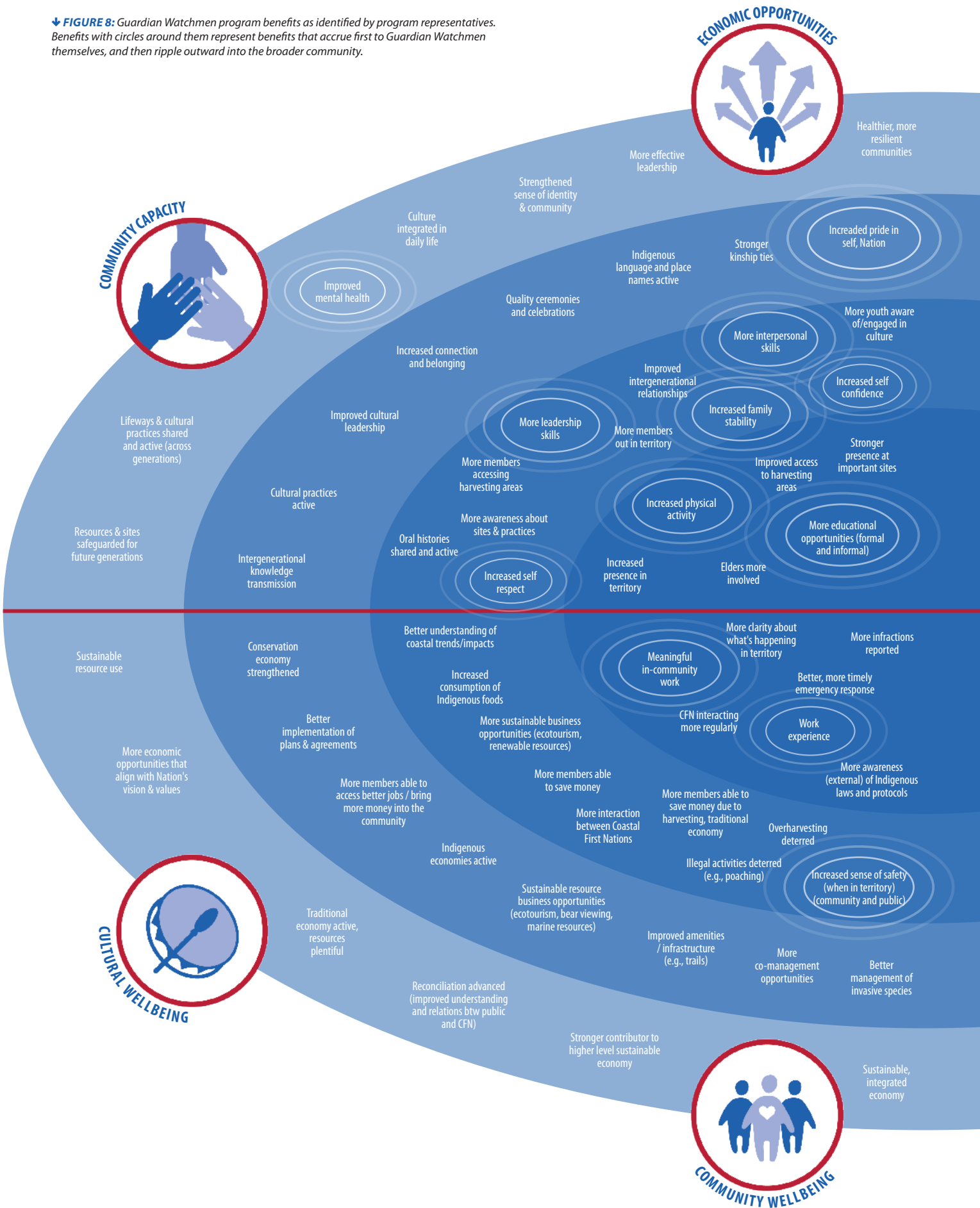
5.2 Program Benefits

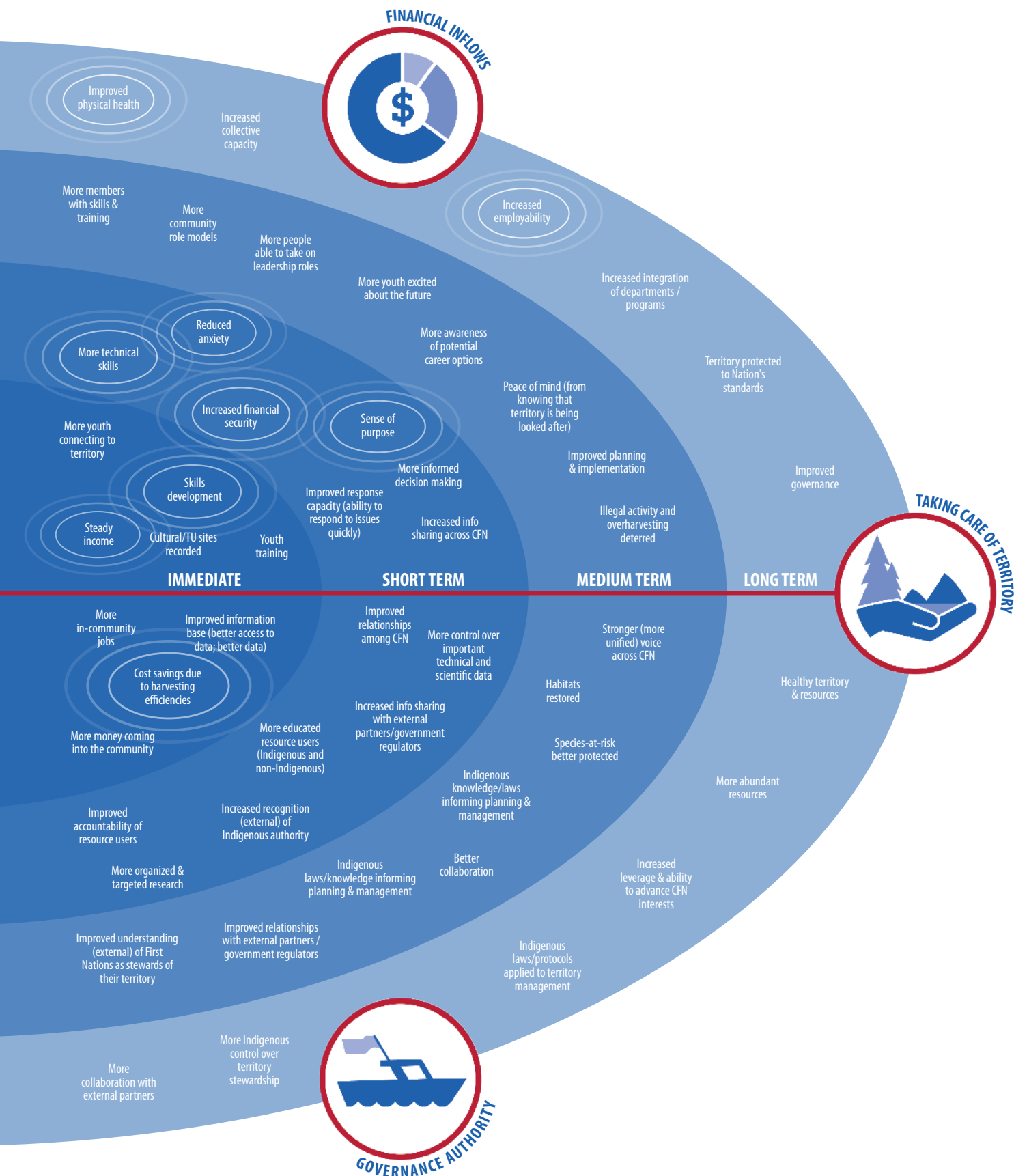
The figure on the following pages maps the full range of program benefits generated by Guardian Watchmen programs, as described and understood by program representatives.²⁵ These benefits have been organized based on the time period at which they accrue: immediate, short, medium, or long term. These categories are not fixed, but instead should be understood as fluid. How benefits accrue in each community will differ depending on its specific circumstances and context. Importantly, program benefits also accrue at different levels within coastal First Nation communities, meaning that while all of the benefits identified in the graphic are ultimately felt at a community level, some are first experienced by Guardian Watchmen themselves. These benefits then ripple outwards to others within their communities (e.g., immediate family members, coworkers, youth program participants, and so on).



25 Benefits listed are only those identified to date.

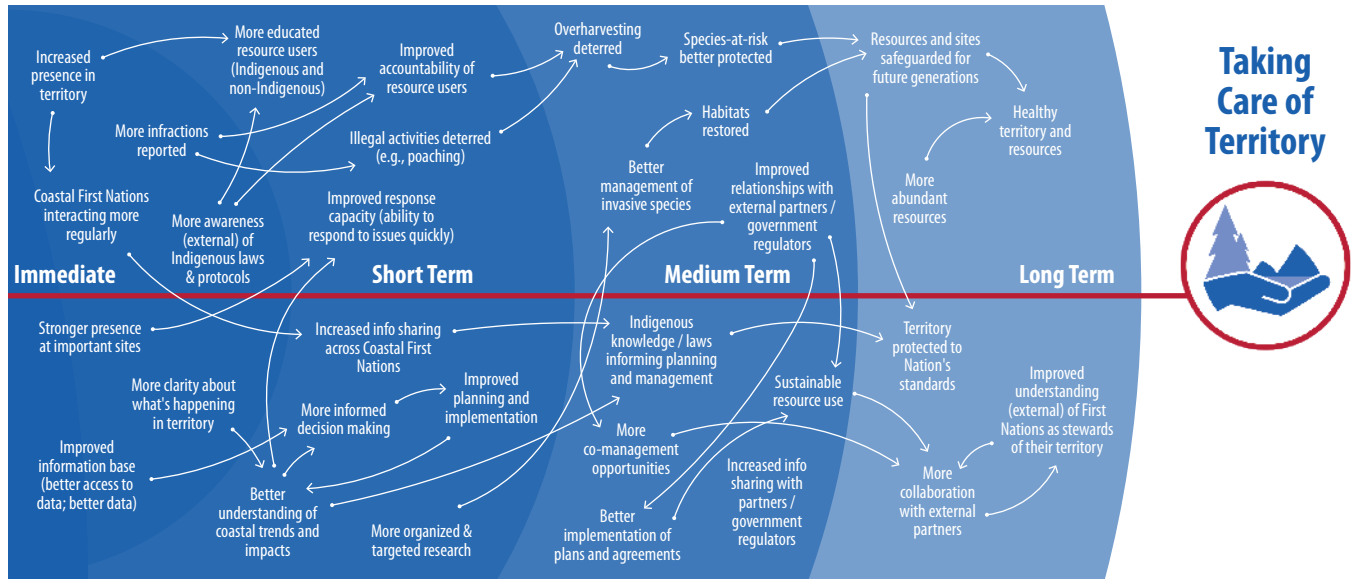
↓ **FIGURE 8:** Guardian Watchmen program benefits as identified by program representatives. Benefits with circles around them represent benefits that accrue first to Guardian Watchmen themselves, and then ripple outward into the broader community.





5.3 Program Benefits in Relation to End Values

5.3.1 Taking Care of Territory



↑ FIGURE 9: Taking care of territory benefits

Taking care of territory is viewed by coastal First Nations as both a fundamental responsibility and a core Nation value. It is the primary objective of all Coastal First Nation Guardian Watchmen programs, and it is also why Guardian Watchmen are known as the “eyes and ears” of their Nations’ territories. Many Guardian Watchmen understand their role as being to carry on the work of their ancestors, who since time immemorial have stewarded their traditional territories and ensured the health of their lands, waters, and resources for generations to come.

“We’ve been Guardians of these territories since time immemorial. And that’s not going to go away.”

– Guardian Watchmen program representative²⁶

There are many factors currently putting Coastal First Nations’ territories at risk. These include (but are by no means limited to) poaching, illegal and/or unsustainable fishing practices, trophy hunting, high impact tourism, climate change, overharvesting, industrial development, and shipping related impacts. Through the activities described in Section 3, Guardian Watchmen are working to monitor ecosystem health, enforce both Indigenous and provincial/federal government rules and regulations, and ultimately, safeguard the territories and resources their communities depend on.

“There are so many players coming through, and there have been a lot of instances where we’ve had to intervene. We’ve had suspected abalone poachers. We’ve had commercial salmon fishers fishing in closed areas, and at closed times. It’s really important that we’re out here to be the eyes and ears of our Nation, to see what’s going on, and to see the extent of the decline of the salmon stocks on the Central Coast.”

– Mike Reid, Heiltsuk Nation²⁷

From this perspective, the Guardian Watchmen programs provide numerous taking care of territory benefits that are of vital importance to coastal First Nation communities. Some of the key benefits in this area that participants have attributed to Guardian Watchmen programs include:

- Poaching and other illegal activities deterred

²⁶ From Eyes and Ears on the Land and Sea, produced by the Coastal Stewardship Network (CSN) 2010.

²⁷ Ibid.



Photo: © Philip Charles

- More infractions reported
- Improved accountability of resource users
- Better ecological/scientific data leading to a more fulsome picture of environmental trends and impacts, both within each Nation's respective territory and on the Central and North Coast more generally
- Habitat restoration and protection of species-at-risk
- Improved ability to respond to issues quickly
- Increased opportunities for Indigenous knowledge to inform marine and land use planning and management
- More data-driven decision making resulting in better management of territory

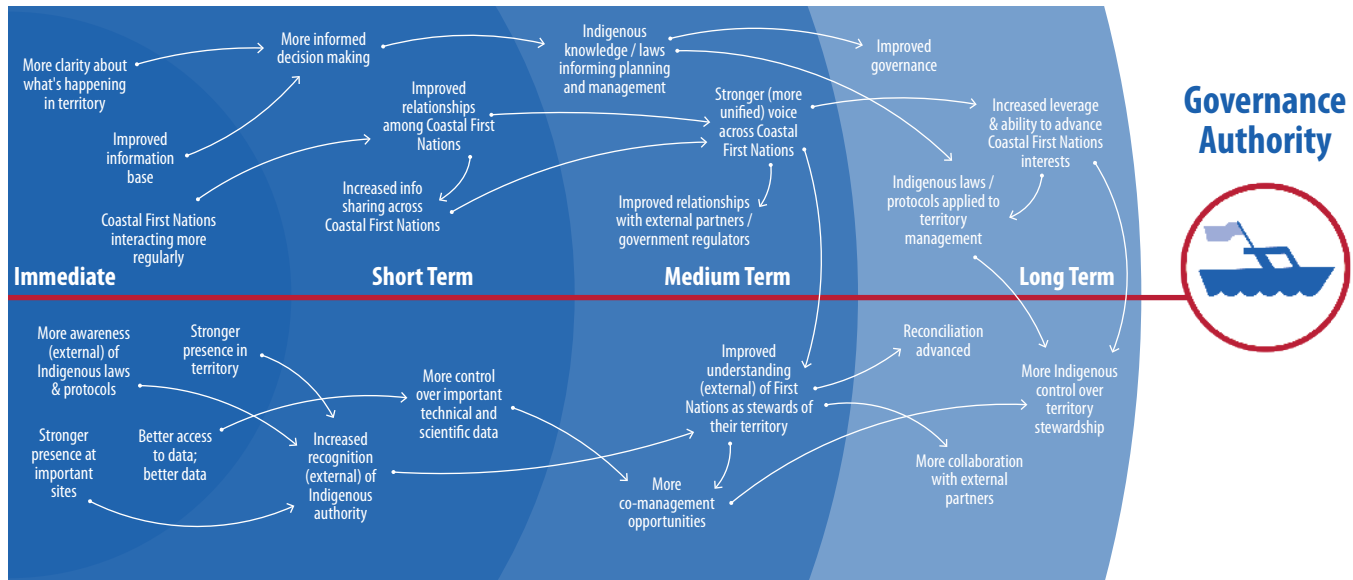
These benefits are depicted in *Figure 9* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.

"When I was in tourism development back in the day, like in the early 2000s, we saw a lot of illegal activities. Everything from trophy hunting, to diving for abalone, certainly illegal fisheries, and even illegal forestry – we caught one guy who was cutting down a whole chunk of forest. I would say since we started to develop and market this program, those sorts of activities have kind of fallen off the map. We just don't see those sorts of illegal activities anymore, which has been great. And so I think just having a presence out there is huge."

– Program representative, Kitsoo/Xai'xais Nation²⁸

28 2016 business case analysis participant.

5.3.2 Governance Authority



↑ FIGURE 10: Governance Authority benefits

Coastal First Nations derive their authority and jurisdiction over their ancestral territories from their Indigenous laws, and in Canadian law, from their Aboriginal title and rights. Under Indigenous and Canadian law, these Nations have the authority to make decisions regarding land and marine use, and the responsibility to safeguard the natural and cultural resources their communities rely on. However, First Nations' territorial jurisdiction has been limited by colonial control, and consequently, a second objective of the Guardian Watchmen programs is to support the mandate of affirming governance authority by providing a physical, on-the-ground Indigenous presence in these Nations' traditional territories.

"Our aboriginal rights and title have existed since time immemorial—the right to make decisions on how the land and its resources are used and the responsibility to steward the land and resources on behalf of this and future generations."

– Guardian Watchmen program summary statement²⁹

As a tangible and practical expression of their authority, Guardian Watchmen programs generate a range of benefits related to governance for Coastal First Nations. By having Guardian Watchmen in place to monitor and patrol their territories and resources, these communities are able to:

- Contribute and integrate into other programs and projects of the First Nations, breaking down 'silos' internally and improving First Nation governance

- Increase their presence in their territories
- Strengthen recognition of their authority among resource users (First Nations and non-First Nations)
- Gather and share important technical and scientific data (some of which non-First Nation governments may not have access to)
- Play a stronger role in decision making and planning concerning how the lands, waters, and resources are used
- Build and improve relationships with provincial and federal government agencies (e.g., BC Parks, DFO)
- Create more opportunities for co-management
- Develop and implement land and marine use plans and agreements to the Nations' standards

29 Coastal Stewardship Network website, 2016.

“The most significant change that I’ve seen really is just being able to collect information and have it... It’s kind of our information and if DFO wants that, they have to come and see us.”

– Ernest Tallio, Nuxalk Nation³⁰

“Our leadership needs solid information. From what I can see, other governments have skimpy information. It puts us in an advantageous position in government-to-government negotiations.”

– Frank Brown, Heiltsuk Nation³¹

“BC Parks is now coming to the table because they had to, since we’re out there 20x as much as BC Parks is. Now there is more of an emphasis on co-management.”

– Program representative, Metlakatla First Nation³²

“I think BC Parks staff are starting to rely a bit more on the Coastal Guardian Watchmen programs. I think they know that we’re out there on the ground and on the waters and that’s just another layer of monitoring. So I think that’s been really effective. And we’ve developed a relationship with BC Parks, and for the most part it’s been fairly good. From the governance side, I would definitely like the Province to recognize the authority of the Watchmen, but whether they do or don’t, we’re still going to do what we have to do.”

– Doug Neasloss, Kitasoo/Xai’xais Nation³³



Photo: © Sandra Thomson

30 Kotaska, 2013.

31 Ibid.

32 2016 business case analysis participant.

33 Ibid.

In addition, by working together through the Great Bear Initiative, Coastal First Nations have built a strong, unified regional voice, which the Nations have used to advance their interests in negotiations such as the Marine Plan Partnership (MaPP) and the 2016 Great Bear Rainforest Agreement. Guardian Watchmen play an important role in implementing these agreements, and through the Coastal Stewardship Network, Guardian Watchmen and other stewardship staff are also able to strengthen relationships and collaborate on priority issues and activities.

“In 2005, I had no idea who was in Kitasoo or Bella Coola... We all have overlap areas and for the most part we didn’t do any monitoring in those areas, we didn’t strategize together. We were operating in silos. Now when we have issues, we all work together... There will be issues that face all our nations and it is really important that we all stay connected... The issues we face are issues we all face.”

– Michael Reid, Heiltsuk Nation³⁴

These benefits are depicted in *Figure 10* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.

“We have a position, regardless of what the provincial and federal laws are up there. We have our own position in terms of hunting on the coast. So if we see hunters, we ask them to leave... I think we need to be a bit more vocal about the bear hunt and keep the pressure on so that hunting forums and the rest of the world knows our position and they know how to conduct themselves in our territories.”

Doug Neasloss, Kitasoo/Xai’xais Nation³⁵

“And we’d also like to continue to work with BC Parks... We’ve done a bunch of joint patrols, trail building projects in the last couple of years and would like to continue that. We’ve done one patrol with DFO so far. And would like to continue that and get to know other government agencies over the next five years and this coming season.”

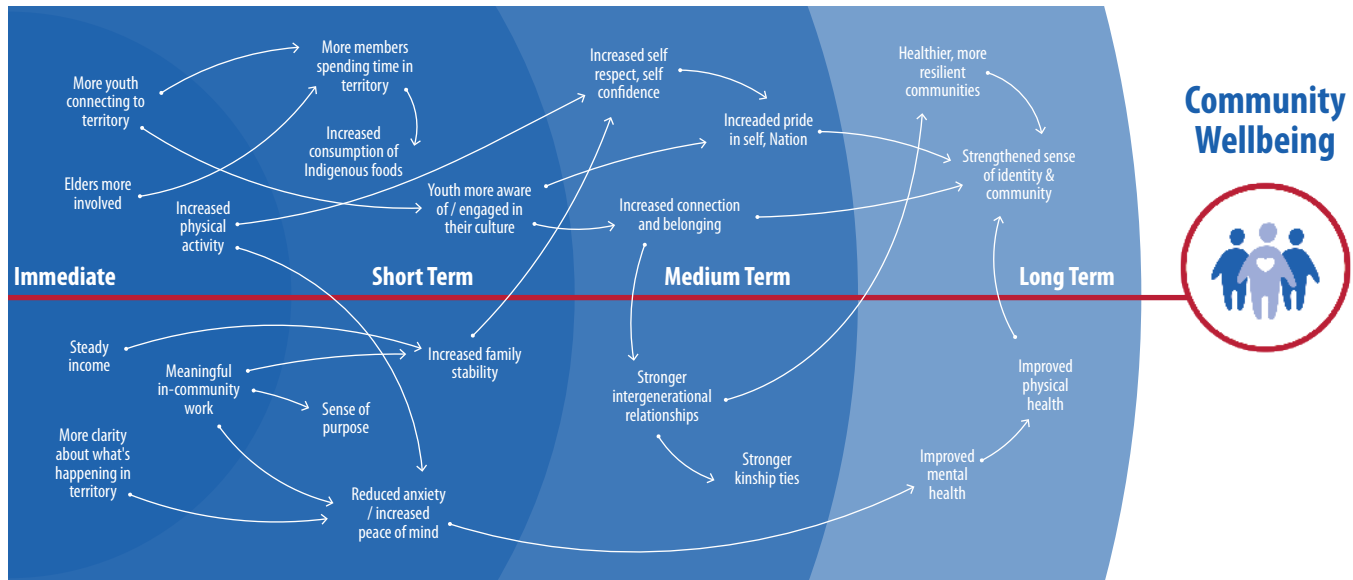
– Ernest Tallio, Nuxalk Nation³⁶

34 Kotaska, 2013.

35 Ibid.

36 Ibid.

5.3.3 Community Wellbeing



↑ FIGURE 11: Community Wellbeing benefits

The North and Central Coast has been populated by First Nations since time immemorial, and at one point, these Nations all had “complex cultures that included strong, healthy populations with deep and abiding connections to their respective territories”³⁷. However, well-documented impacts on Indigenous communities’ wellbeing due to colonialism (e.g., repression of cultural practices; annexation of territories and resources; displacement; social segregation; assimilation; marginalization) have been widespread, and First Nations continue to feel the effects today.

In response, Coastal First Nations have been working to improve community wellbeing by strengthening their connections to their cultures and territories, fostering strong identities, and asserting jurisdiction over their lands, resources, and communities. Guardian Watchmen contribute to this agenda by monitoring and protecting sites and resources that are of importance to community members, and by facilitating opportunities for community members to become more connected to their cultural practices, identities, and territories. Guardian Watchmen also keep community members informed about resource and territory-related issues and trends.

Some of the program benefits that participants highlighted with regard to community wellbeing include:

- Reduced anxiety / increased overall peace of mind due to the comfort that comes from knowing the territory is being looked after
- Strengthened sense of pride and identity (e.g., derived from connection to territory, culture, ancestors, history; also from having paid and meaningful in-community work)
- Improved sense of connection and belonging
- Improved mental health
- Improved physical health (e.g., due to increased consumption of traditional foods, increased physical activity from being out on the land)
- Increased community resilience
- Improved intergenerational relationships
- More opportunities for meaningful in-community work
- Improved financial security
- Increased self-respect

37 Health governance guide, FNHC, 2011.

“There’s less anxiety [in the community], people are less concerned about poaching, and they have confidence in our program.”

– Program representative, Kitasoo/Xai’xais Nation³⁸

“Our Elders are happy that Nuxalk territory is being looked after, and they’re also happy that young people are learning about their territory and culture.”

– Program representative, Nuxalk Nation³⁹

“I’m proud to be First Nations and to be looking after the territory that we got there. And each one of us are proud of that, to have a territory that we value. It is precious to each and every one of us. The ancestors that passed on, they were there before we were born. We have to continue to go back to that, the area that they picked for us to live. Look after everything, not just the land, but the sea...You know, I take it serious. I don’t take it like it’s just a job. It’s a serious thing, looking after your territory.”

– Clark Robinson, Kitasoo/Xia’xais Nation⁴⁰

These benefits are depicted in *Figure 11* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.

“Basically, we need a presence on the water. We need to have Nuxalk presence out in the rivers, out in the waters, to assess what’s there. Also with having our own monitors out there you’re going to have community members doing it, right? So they obviously live in the community, they know the area, and they want to be there for – well, for their whole life.”

– Megan Moody, Nuxalk Nation⁴¹

38 2016 business case analysis participant.

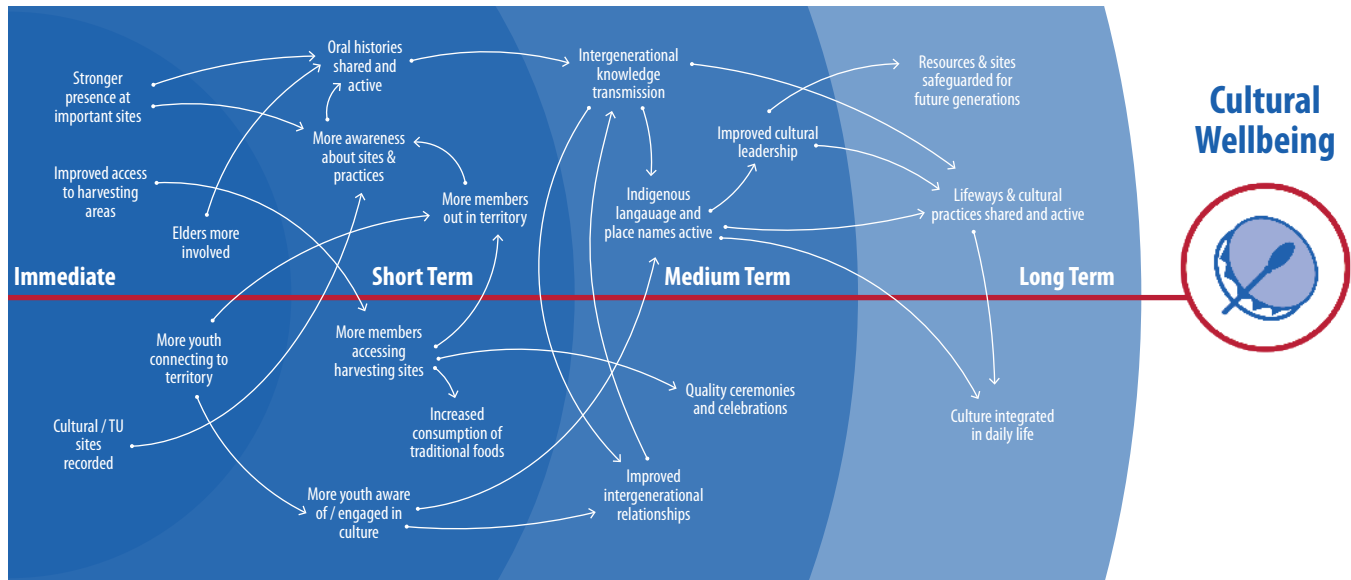
39 Ibid.

40 Kotaska, 2013.

41 CSN, Eyes and Ears on the Land and Sea, 2010.



5.3.4 Cultural Wellbeing



↑ FIGURE 12: Cultural Wellbeing benefits

Among Coastal First Nation communities, cultural wellbeing is intrinsically connected to territory stewardship. Accordingly, Guardian Watchmen play a significant role in improving cultural wellbeing in many of these communities. By safeguarding cultural resources (culturally significant sites, traditional food sources, medicinal plants, traditional use areas, etc.), Guardian Watchmen help to ensure that members have access to these resources, and can continue to engage in associated cultural practices. Through their work with youth (e.g., mentorship and junior Guardian programs), Guardian Watchmen transfer Indigenous knowledge to younger generations, while inspiring them to become more interested and engaged in their culture. Guardian Watchmen also often map cultural sites (e.g., petroglyphs, historical village sites, place names), which at times involves bringing Elders out on trips so they can identify these sites. In such cases, Elders are able to reconnect with important sites and resources that they may not have as much access to as they once did, while Guardian Watchmen have opportunities to learn from the Elders and carry their teachings and knowledge forward into the community.

We were able to take out some of our elders and community members to learn about some cultural sites and ecological sites that we hadn't known about before...This coming year we're looking forward to taking more elders out to learn more about our cultural sites and our territory.

– Ernest Tallio, Nuxalk Nation⁴²

According to program representatives, Guardian Watchmen also influence community members' harvesting practices. They keep members up-to-

date about where resources are plentiful or when they are ready for harvest (and vice versa), they harvest traditional foods and they share them with community members, and in some communities they build cabins for community use.

Benefits that participants attribute to the Guardian Watchmen programs in this area include:

- Important cultural sites and resources protected
- Increased awareness about important sites and resources

42 CSN, Eyes and Ears on the Land and Sea, 2010.



Photo: © Greg Johnson

- More members accessing harvesting areas and traditional foods
- Oral histories, place names, traditional languages, practices and lifeways more frequently shared and active across multiple generations
- More youth connecting to culture and territory
- Improved cultural leadership

These benefits are depicted in *Figure 12* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.

“So it’s not just a case of protection in the way we think of protection, but it’s actually promoting and continuing our intangible parts of our culture.”

– Barb Wilson, Haida Nation⁴³

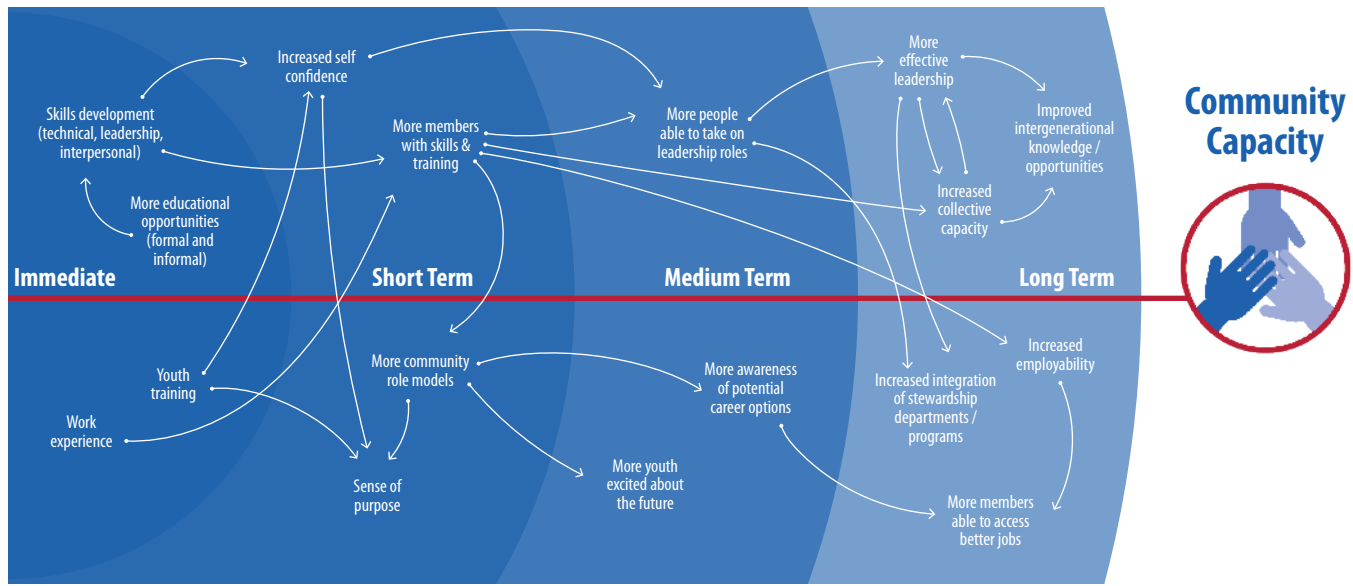
“We are the stewards of the land and the sea, and we’re also the protectors of our culture and our traditional values.”

– Guardian Watchmen program representative⁴⁴

⁴³ CSN, *Eyes and Ears on the Land and Sea*, 2010.

⁴⁴ *Ibid.*

5.3.5 Community Capacity



↑ FIGURE 13: Community Capacity benefits

Training and capacity building are both significant components of every Coastal First Nation Guardian Watchmen program. Typically, Guardian Watchmen are responsible for a broad range of activities (e.g., monitoring and research, data management, community outreach, and compliance enforcement), and so they must have highly diverse skillsets. To develop these skills, Guardian Watchmen take part in a variety of training initiatives. The Coastal Stewardship Network and other partners offer comprehensive technical training programs, and Guardian Watchmen also learn and develop new skills on the job.

Due to this focus on applied, in-community training and skills development, Guardian Watchmen programs have much to offer in terms of building community capacity. Through their interactions with various resource users, and through monitoring, research, and partnerships with universities and other organizations, Guardian Watchmen gain confidence, develop leadership and technical skills, and become trained in both traditional and scientific knowledge.

"I think our Watchmen have grown quite a bit over the years. [...] Just how they interact with people I think is really important, so relationships and building relationships is extremely important, and then we've run through a bunch of other things, like small vessel repair, or small engine repair, and how to deal with certain situations – like if there's any illegal activities – how to approach that. We also hired two other Watchmen that are fairly young, and I think just them learning the

territory, learning how to use boats, learning how to navigate while they're out there, learning to enforce all of our management plans and governance... I think it's instilled a sense of pride in these guys, that you know, they work for the Nation, they're enforcing stuff for the Nation, so yeah, it's been really good."

– Program representative, Kitasoo/Xai'xais Nation⁴⁵

As Guardian Watchmen acquire new skills, they pass this learning on to others in their communities. They do so both directly, by training and mentoring other Guardian Watchmen (including youth involved in junior Watchmen programs), and indirectly, by influencing family members and people they interact with. For example, young people in these communities see the kinds of opportunities that are available to Guardian Watchmen and are inspired

45 2016 business case analysis participant.

by career paths they may not have been exposed to otherwise. According to program representatives, this exposure has an influence on their decisions regarding education and work.

“People are more confident, lots of people are inspired to get out there and get jobs they wouldn’t have gone for before, and they’re applying for jobs in other areas too.”

– Program representative, Kitasoo/Xai’xais Nation⁴⁶

Some study participants have witnessed former Guardian Watchmen taking on new leadership responsibilities and/or moving into other positions in their communities. New Guardian Watchmen must be hired and trained to fill these individuals’ shoes, and as a result, community capacity increases overall.

In addition, several study participants mentioned that in their communities, Guardian Watchmen programs have been a catalyst for further growth and integration of stewardship work in their communities, and in some cases, they have also been the hubs around which broader stewardship offices have grown.

Program benefits associated with community capacity are summarized below:

- Increased confidence in skills and ability
- Increased educational/training opportunities
- More community members with skills (technical, interpersonal, communication) and leadership capacity
- Higher capacity members, increased collective capacity
- More community role models, more awareness among youth of potential career options, more young people excited about the future and interested in getting an education
- Increased employability
- Increased integration of stewardship departments/programs
- More effective leadership
- More information sharing across coastal First Nations, greater recognition of shared needs and interests, and stronger capacity together

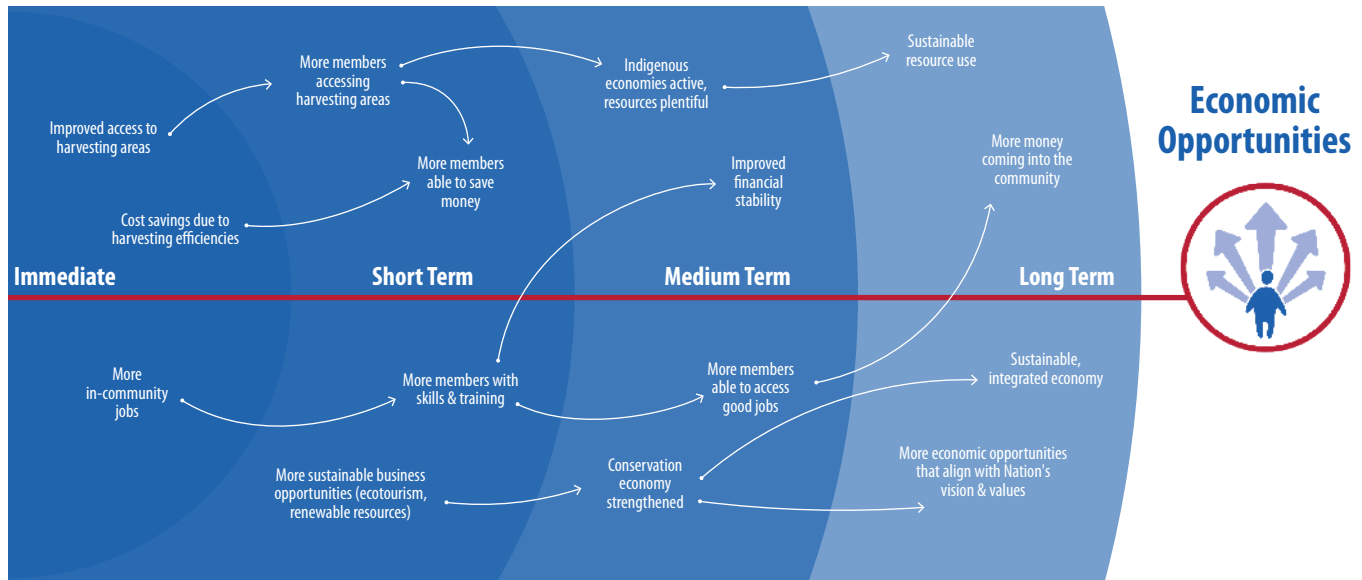
These benefits are depicted in *Figure 13* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.



Photo: © Greg Johnson

⁴⁶ Ibid.

5.3.6 Economic Opportunities



↑ FIGURE 14: Economic Opportunities benefits

There are several ways in which Guardian Watchmen programs contribute to Coastal First Nations' economic opportunities. For one, traditional harvesting depends on the availability of resources, and Coastal First Nations have already experienced significant impacts as a result of overharvesting (e.g., participants mentioned that salmon, abalone, geoduck, and herring stocks are all in decline). By protecting key resources that are critical to sustaining Coastal First Nations' traditional economies, Guardian Watchmen help to ensure that these economies can continue to remain active.

Due to the amount of time they spend in the territory, study participants described themselves as having increased opportunities to harvest traditional foods. Many also mentioned that they tend to keep other community members up to date about productive harvesting areas as well, which facilitates harvesting efficiencies for these individuals. Guardian Watchmen also often share their harvest with community members, or specifically harvest traditional resources for community members.

As discussed in sections 5.3.3 and 5.3.4, consumption of traditional foods has benefits associated with both community wellbeing and cultural wellbeing, but importantly, it also has economic benefits. When community members harvest and/or consume traditional foods, they save money that would otherwise be spent on groceries. In addition, through bartering and trade, community members are able

to access other goods and services in return for traditionally harvested resources.

Through their community outreach work, such as participation in community and school events, Guardian Watchmen also help to build community members' interest in getting out on the territory and taking part in cultural practices (particularly youth). Again, this benefits both community and cultural wellbeing (see sections 5.3.3 and 5.3.4), but it also has economic benefits in that it maintains traditional economies, and in many cases helps to grow them.

Finally, as described in section 5.3.2, through establishing an on-the-ground presence in their territories, Guardian Watchmen are also supporting Coastal First Nations in asserting their rights and title. As a result, their work helps to facilitate improved opportunities for economic development projects

that better align with the Nations' interests, values and visions for their territories. For example, on the Central and North Coasts, Guardian Watchmen enforce a Coastal First Nations-wide ban on trophy hunting for bears. Guardian Watchmen efforts in this area helps to maintain ecotourism businesses (e.g., bear watching) that have been developed in several communities.

Program benefits associated with economic opportunities, as identified by study participants, are summarized below:

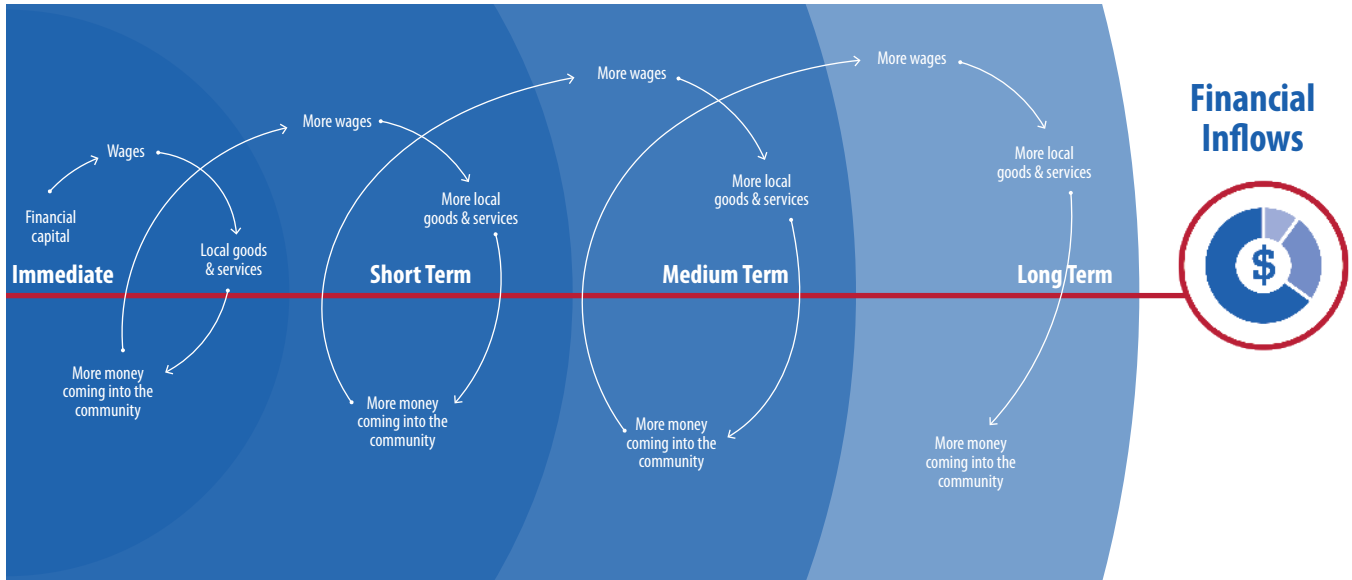
- Indigenous/traditional economies more active
- Due to training and skills development through the programs, members are able to access better jobs and bring more money into their communities

- More people out in their territories, harvesting foods and other resources that offer economic benefits
- Improved opportunities for economic development that align with Coastal First Nations' interests, values and visions for their territories (e.g., ecotourism and aquaculture)

These benefits are depicted in *Figure 14* on the previous page. Some of the relationships among them are depicted via arrows; however, it is important to note that the benefits in the figure are complex and highly interrelated, and the arrows are intended to highlight just some of the means-end and cause-effect relationships.



5.3.7 Financial Inflows



↑ FIGURE 15: Financial Inflows benefits

Guardian Watchmen programs bring financial capital into Coastal First Nation communities through program funding. Depending on the program, the majority of the program funding enters the local economy through local wages or local goods and services. Some of the funding quickly exits the local economy (e.g., fuel purchases) as is typical in small and remote communities, but much of it stays in the community via wages and other in-community spending. Over time, as the programs mature, there is potential for an increase in financial inflows (e.g., Guardian Watchmen receive more training, in areas such as scientific research, recreation/tourism support or expanded management, and are able to attract additional funds and in-community employment).

Program benefits associated with financial inflows, as identified by study participants, are summarized as Financial capital that otherwise would not be available coming into the community and only direct financial inflows to the community in the forms of local salaries and local procurement (estimated at 55% of program annual budget), as opposed to the total program expenditure. These were then modified to account for local economic multiplier effects (estimated at 1.3 for this analysis). Under these assumptions, a program that has a budget of \$308,000 will have a financial inflow to the community of \$220,220 (see adjacent calculation logic). These calculations are shown below. Annual financial inflow numbers were estimated based on research of GW program budgets that suggest between 40-60% of annual program cost inputs never enter the local Nation’s economy. However, financial

inflows also accounted for local economic multipliers that have over the years consistently achieved 1.25 – 1.70 in small northern BC communities (see Ryser and Halseth, 2008; Davis, 1986).

These benefits are depicted above in Figure 15.

FINANCIAL INFLOW CALCULATIONS:	
1) Total Annual Investment of an average GW program	\$308,000
2) Salaries as percent of budget	55%
3) Direct inflow to community (Total Investment x Percent to Salaries)	\$169,400
4) Economic multiplier	1.3
5) Total inflow (Direct inflows x multiplier)	\$220,220

A person wearing a wetsuit and sunglasses is kneeling on a rocky shore. They are holding a large coil of black cable in their left hand and a handheld electronic device in their right hand. Another person in a wetsuit is partially visible in the background. The entire image has a purple tint.

6.

PHASE 4: MEASURE THE CHANGES

6. PHASE 4: MEASURE THE CHANGES

As Section 5 outlines, there are seven participant-identified value dimensions, or Nation values, across which Coastal First Nations have experienced benefits due to their Guardian Watchmen programs. Importantly, because the programs are all unique and integrated into other programs and projects of the First Nations, each Nation was asked to define their own program based on the specific staffing, structure and activities their Guardian Watchmen carry out (using the program activity checklist tool) before each of the evaluation sessions. Then, great care was taken to iteratively ensure that only these program activities were included in participants' evaluations of the changes their communities have experienced. Furthermore, as a result of differences in program activities, context and the priorities of each Nation, benefits are experienced differently in each Nation. The purpose of this phase of the assessment was to understand the magnitude and extent of those changes, an evaluation process undertaken by each Nation's representatives independently.

From a business case perspective, these differences matter because they establish the change that can be attributed to each specific Guardian Watchmen program; in other words (1) not change in general, (2) not change from other activities, or (3) not change that would have happened even if the Guardian Watchmen program had not been implemented. Several rounds of discussion were undertaken to avoid over claiming, and ensure all participants had a common, accurate and agreed to understanding

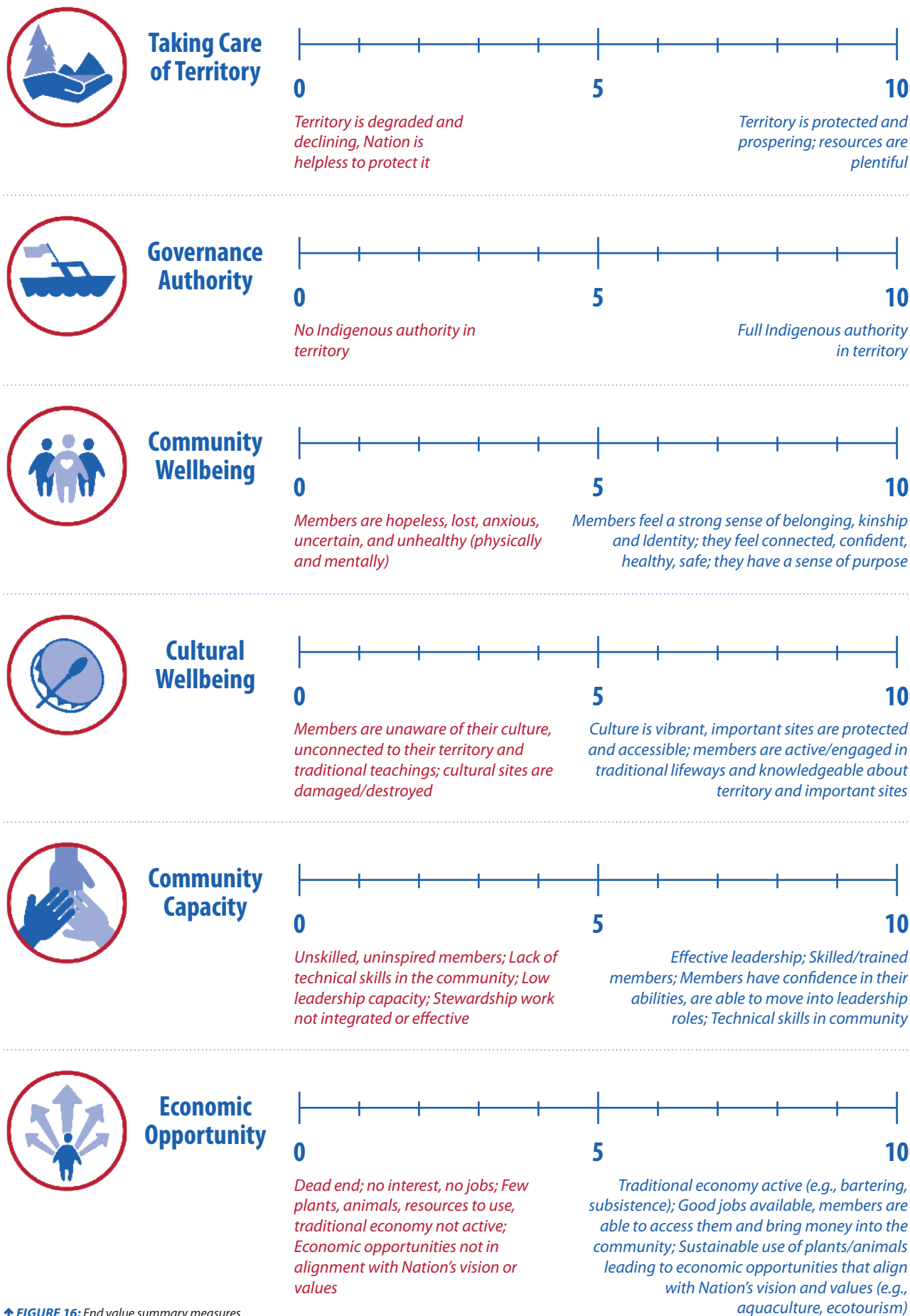
of what defined their Guardian Watchmen program. Summary measures were then developed and used to establish the extent and magnitude of change from the Guardian Watchmen programs to each Nation value.

6.1 Identifying Appropriate Measures

EPI worked closely with program representatives during the two engagement sessions at the Annual Gathering to develop and confirm well-defined, relevant measures for each Nation value. In some cases, measures were readily established, such as in the case of Financial Inflows, where dollars provided a natural measure; or in the case of Governance Authority, where a constructed scale with clear end points "no Indigenous authority – full Indigenous authority" of a 0-10 scale were quickly identified. For Nation values *without* natural or proxy measures, constructed scales (0-10) were developed and validated with study participants.

These measures allowed participants to identify and communicate the changes that have occurred in each Nation (i.e., the combined benefits they have experienced in relation to each Nation value) as a result of their Guardian Watchmen program in consistent, practical and understandable ways. *Figure 16* shows the final set of affected Nation values with associated measures. Further refinement of the measures is possible with more research and analysis with a broader group of community members.





↑ FIGURE 16: End value summary measures

6.2 Evaluating the Magnitude and Extent of Changes

Using this set of Nation values and associated measures, EPI worked with representatives from each Guardian Watchmen program to evaluate how the programs have affected their respective Nations. Participants were provided worksheets with scales and measures for each of the Nation values (see *Figure 16* above), and asked to measure – from a community perspective – the effect their program has had on their Nation, with respect to each category.

They did so by first recounting what it was like in their community in relation to each value dimension immediately *before* the Guardian Watchmen program was initiated to help establish a baseline of the community without a Guardian Watchmen program. Then explaining what had changed for their Nation since then, participants were asked to specifically identify changes that occurred *as a result* of the program.

Participants then measured the changes experienced in relation to each Nation value both qualitatively (through description), and quantitatively (using the 10-point scale).

This exercise (as well as the value weighting exercise described in Section 7) was completed once with all seven Nations, and twice with four of the Nations⁴⁷. The first session took place at the Annual Gathering. The four follow up sessions were conducted remotely via online workshops. In the remote sessions, EPI used video conferencing and screen sharing technology to ensure effective communication. Each time, the exercise was carried out in a systematic, facilitated workshop setting.

6.2.1 Evaluation Discussion

The results discussed below are described in general terms to protect the confidentiality of the Nations in question.

All the Nations included in this study reported seeing significant changes in terms of magnitude

⁴⁷ While all seven Nations were contacted for follow-up workshops, at the time of writing, three of the Nations had not yet completed this stage of project work.

and extent across Nation values. The largest changes were associated with **Taking Care of Territory** due to their Guardian Watchmen programs. This outcome was by far the most consistent result across the seven Nations. Representatives from several programs described moving from a one or a two to a seven or an eight on the 10-point scale, meaning that they attribute huge benefits in this area to the work of their Guardian Watchmen. One Nation's representatives characterized the situation in their territory as a "free for all" prior to their Guardian Watchmen program, and described the Nation as having "no presence on the landscape" and "limited knowledge of resource extraction activities" at that time. This same Nation identified several program contributions relevant to **Taking Care of Territory**, including an "increased presence on the landscape" and "increased knowledge all around – terrestrial, marine, and cultural". Another Nation mentioned that while they have always prioritized **Taking Care of Territory**, with the vessels and capacity they have now as a result of their program, their efficiency and effectiveness in this area has substantially increased.

As anticipated, Nations with larger and more mature programs appear to have experienced more significant changes in relation to **Taking Care of Territory** as compared to smaller and younger programs. This correlation suggests that for **Taking Care of Territory**, the extent and magnitude of change increases as annual investment in the programs increases. Importantly, almost every Nation stressed that while their programs have generated significant returns with respect to **Taking Care of Territory** to date, there is still a lot of work to be done in this area.

Governance Authority is another value dimension that almost every Nation reported experiencing considerable positive changes. While the size of the change was typically not as large here as it was for **Taking Care of Territory**, the consistency of the results across all seven Nations indicates that **Governance Authority** is another key area in which the programs are reliably generating benefits for their respective communities. Several Nations stressed that while they are not yet where they want to be vis-à-vis **Governance Authority**, they feel they are "moving in the right direction", and are pleased that the Guardian Watchmen program is increasingly recognized by



Photo: © Sandra Thomson

non-First Nation resource users and contributing to this important Nation value. A few Nations also described the territorial presence of the Guardian Watchmen as being instrumental in getting provincial and federal government representatives to the table to discuss co-management options.

While all seven Nations have experienced positive changes in their communities in relation to **Community Capacity**, this is another area in which there is a correlation between the maturity of a program and the extent of its effects. Nations with recently established programs (i.e., <10 years) reported seeing smaller changes associated with **Community Capacity** than Nations with older programs that commonly reported significant changes in this area. Given the time it takes for people to acquire new skills, cycle into different roles in their communities, and train others, such a relationship is to be anticipated. It also indicates that

with respect to **Community Capacity**, sustained investment in the programs over time leads to increased value.

For both **Community Wellbeing** and **Cultural Wellbeing**, the results were again consistent in that all Nations reported experiencing positive changes in these areas as a result of their Guardian Watchmen programs. However, the results varied considerably in the *magnitude and extent* of change reported. Regarding **Cultural Wellbeing**, there appears to be a correlation between program activities and benefits, as the results suggest that when programs place more emphasis on activities associated with cultural knowledge, they generate more returns in this area.⁴⁸ Among other changes, program representatives commonly cited increases in traditional harvesting / consumption of traditional foods, improved mental

48 Further research is required to verify this finding.

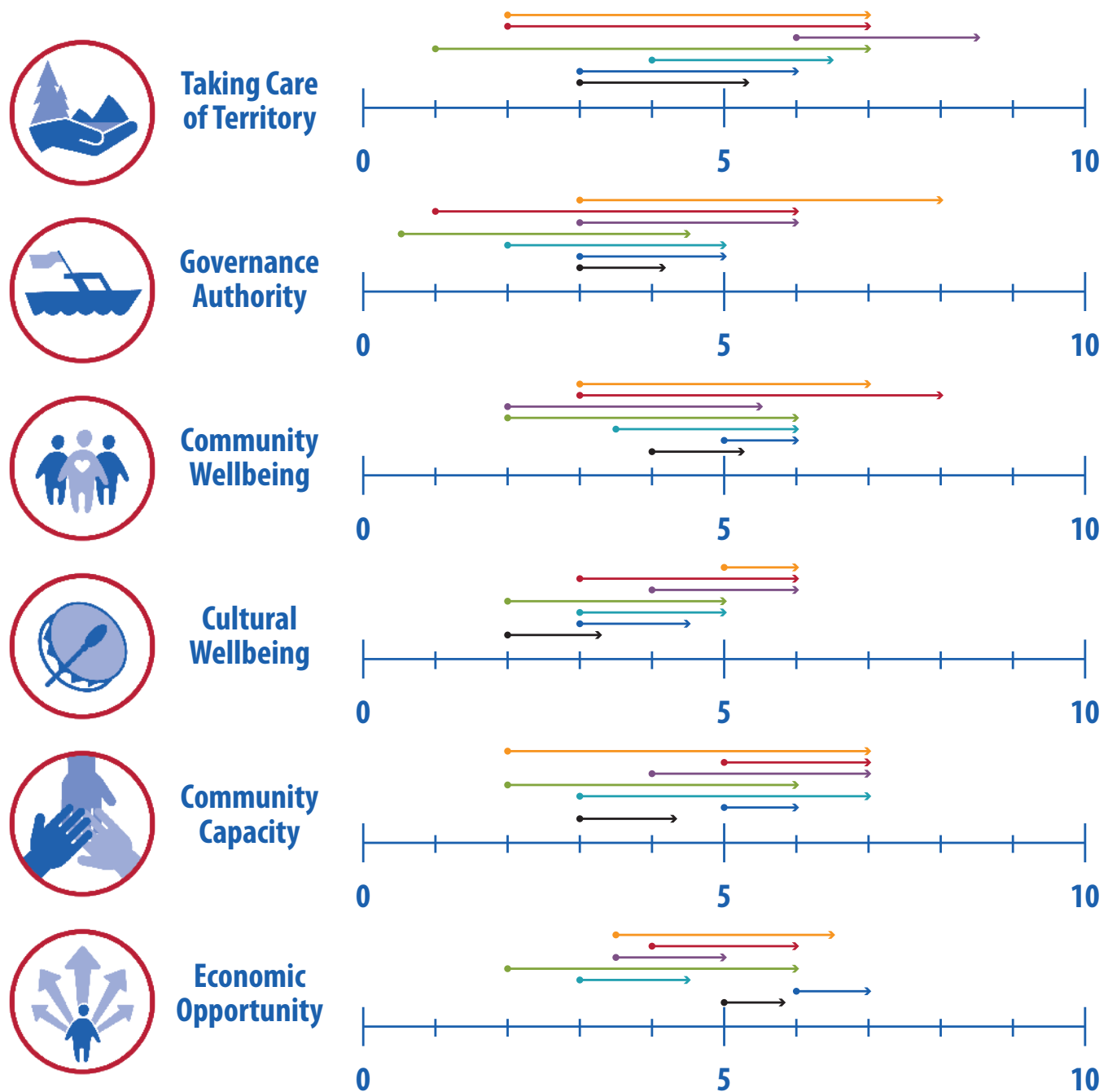
and physical health, and increased peace of mind as key **Community Wellbeing** benefits that their communities have experienced as a result of the Guardian Watchmen programs.

Almost across the board, the Nations involved in the study reported only a small change with respect to **Economic Opportunities**. That said, it is worth noting that the Nation with the largest and longest-running program was an exception to this rule;

they reported “enhanced natural abundance and increased economic opportunities” and a more active traditional economy (“bartering”) as benefits derived in this area as a result of their Guardian Watchmen program.

The figure below describes the extent of the changes attributable to Guardian Watchmen programs in each Nation, as identified by program representatives.

↓ **FIGURE 17:** Extent of changes for each Nation



A photograph of a person wearing a dark hoodie, looking down at a document held by another person. The image is overlaid with a semi-transparent red filter. The person in the hoodie is holding a pen, suggesting they are reviewing or signing the document. The background is slightly blurred, showing some dry grass or brush.

7.

PHASE 5: VALUE THE CHANGES

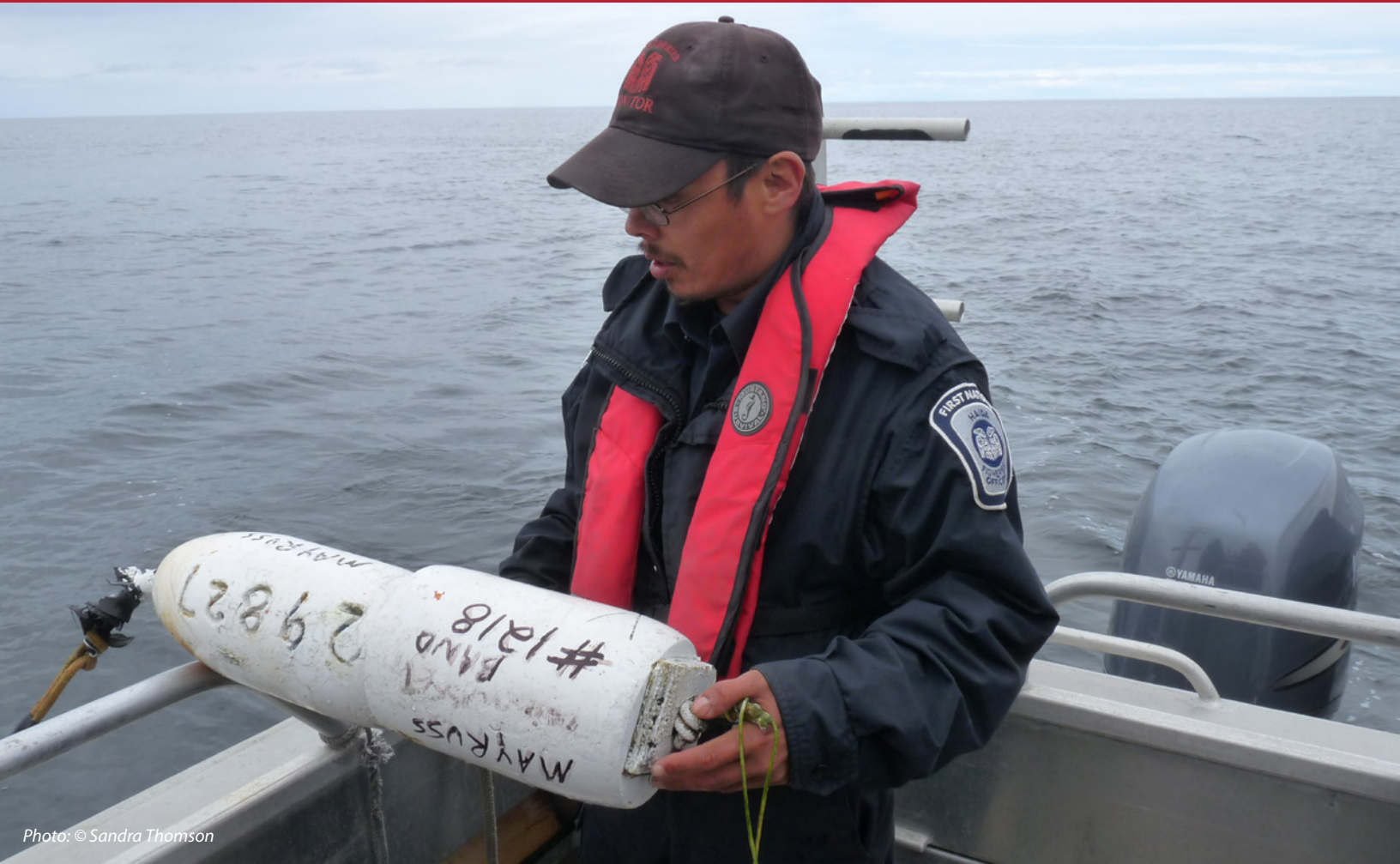


Photo: © Sandra Thomson

7. PHASE 5: VALUE THE CHANGES

Before establishing monetary equivalents that underpin the business case and communicate overall return on investment, the relative importance of the magnitude of the changes to Nation values from a community perspective needed to be established and quantified.

Section 6 describes the magnitude of change Coastal First Nations have experienced in their respective communities as a result of Guardian Watchmen programs in terms of each of the seven Nation values identified and described by participants. To elicit the relative importance of these changes, EPI facilitated a three stage value-weighting process using a multiple method approach.⁴⁹ This approach included methods that are well established in the impact evaluation literature—swing weighting⁵⁰ and point allocation—⁵¹ and involved reconciling any

differences between the methods and validating final results.

The swing weighting exercise took place at the Annual Gathering and involved worksheets. The point allocation and reconciliation methods were used in the follow-up remote workshop sessions, where screen sharing and survey software helped to facilitate further evaluation and discussion. During the follow-up workshop sessions, participants had access to the results of their first-round evaluation, which they had initially completed at the Annual Gathering. The goal was to establish an agreed on set of value weights that reflected the relative importance participants place on the changes that have occurred in their respective communities.

Participants were not asked to evaluate the relative importance of the Nation values themselves; rather, they were asked to determine the relative importance of the magnitude and extent of the *changes* to the

49 Hobbs & Horn, 1997.

50 McDaniels, 1992; Keeney, von Winterfeldt & Epple, 1990.

51 Van Grundy, 1988.

Nation values as a result of their Guardian Watchmen program, from the perspective of their community as a whole⁵². Changes to Nation values were determined in the context of “with” and “without” scenarios, arrived at by considering the Nation before the Guardian Watchmen program (“without”) and then after the Guardian Watchmen program had been implemented (“with”).

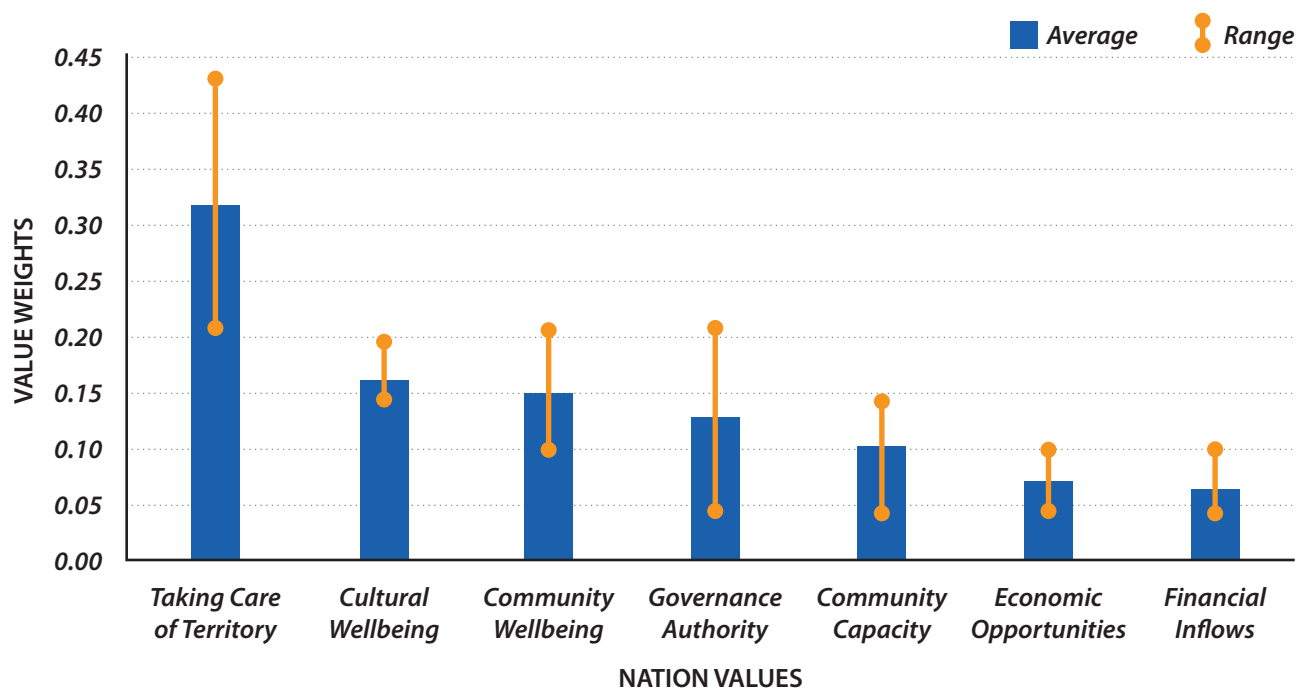
Participants discussed, debated and clarified their understanding of the importance of the Guardian Watchmen programs’ contributions to each of the seven Nation values until they were comfortable with the final set of weights. This section offers analysis of the results from this process.

7.1 Value Weights

The figure below shows both the *average* and the *range* of value weights for participating Nations. The bar indicates the average weight and the lines indicate the highest and lowest weights. The longer the line, the greater the difference in how much each Nation weights the relative importance of changes to a particular Nation value; the shorter the line, the greater the consensus.

52 In other words, they were evaluating the relative importance of the changes that have occurred in their communities as a result of their Guardian Watchmen programs, not simply identifying which values are most important.

↓ **FIGURE 18:** Average relative importance of Nation values across all seven Nations



The Guardian Watchmen programs’ most significant benefit across all seven Coastal First Nations was to the **Taking Care of Territory Nation** value. This result is to be expected, as it is the primary objective of the programs. What is interesting is that those Nations with younger programs valued the benefits to this Nation value higher than those with long-established programs. While interesting, this result is not surprising, as going from having no ‘eyes and ears’ on the territory to having some is a significant change. More established programs begin to recognize, pursue and value other Nation values more as the territory begins to be looked after more consistently and the marginal changes over time become less pronounced. The benefits from the Guardian Watchmen programs to **Cultural Wellbeing** and **Community Wellbeing** were ranked second and third after **Taking Care of the Territory**, acknowledging the strong contribution to these important aspects of the Nations’ development.

Though ranked fourth in *average* relative importance, program contributions to **Governance Authority** as a Nation value varied significantly in terms of relative importance across Nations. Coastal First Nations that are more actively pursuing stewardship governance recognized more value in the contribution of their Nation’s Guardian Watchmen program. Program contributions to **Community Capacity**, **Economic Opportunities** and **Financial Inflows** all varied in terms of value to each Nation, but generally speaking were valued lower than the other Nation values.

8.

PHASE 6: CALCULATE THE OVERALL RETURN ON INVESTMENT



8. PHASE 6: CALCULATE THE OVERALL RETURN ON INVESTMENT

The last step in developing the business case is to calculate the overall value generated from Guardian Watchmen programs, and to represent that change in value in monetary terms. Generally speaking, translating the net value changes into monetary terms requires two pieces of information:

1. An impact with a monetary value, in this case *Financial inflows*; and
2. A quantification of the relative importance of that monetary impact to the other values (i.e., the relative value weights discussed in Section 7).

This information provides a numerical basis for translating the changes affecting each Nation value into a dollar figure that represents the benefits and losses.⁵³ For example, if the benefits to **Taking Care of Territory** were considered twice as important as the **Financial Inflows** (as they were with one Nation), then the net value change of **Taking Care of Territory** would be double the **Financial Inflows** figure. With these dollar figures established for each Nation value change, basic arithmetic allows the final balance to be calculated in dollar terms. This approach to establishing monetary equivalents for intangible or non-market values is an industry standard and has been used in many contexts, such as nuclear waste repository sites,⁵⁴ electric utility reliability,⁵⁵ and wastewater planning.⁵⁶

Another crucial factor of the valuation is a clearly defined investment period, i.e., the window during which benefits from the investment are realized and calculated. In other contexts, such as financial investment (e.g., an investment in the stock market), it may be appropriate to see how benefits (financial returns) accrue over several years; in others (e.g., mobility from a monthly car lease) the benefits are tied to the annual investment period. For this analysis, the investment period has been established as one-year based upon the following assumptions:

- Investment decisions are generally made around funding cycles, and for the purpose of this analysis, it is assumed the funding cycle is annual;
- Unlike many financial investments where the principal is recovered at the end of the investment period, each year's investment in a Guardian Watchmen program can be seen as unrecoverable at the end of that investment period, with no expectation of traditional financial return; and
- The annual investment only generates value from the program while it is actively funded. If funding investments were to be abruptly stopped, value would quickly diminish.⁵⁷ In other words, the investment made in one year will not provide benefits to the Nation in subsequent years without ongoing investment.

In the context of a one-year investment period, the change to the Nation values (*Figure 17*) can be understood to represent the benefits a Nation experiences during a single year from operating the Guardian Watchmen program.⁵⁸ These benefits include the **Financial Inflows** figure, which is a current annual number.

Based on this analysis, each year's investment will achieve, at the low end, **a 10 to 1 return on investment from the Nation's perspective**. In other words, for each dollar invested on an annual basis, a Nation would be benefiting at least 10 times that amount. On the high end, some Nations are experiencing **a 20 to 1 return on investment each year**.

53 A process which uses basic multiplication called 'pricing out'. See Clemen, 1996.

54 Merkhofer and Keeney, 1987

55 Daniels, and Swoveland, 1995.

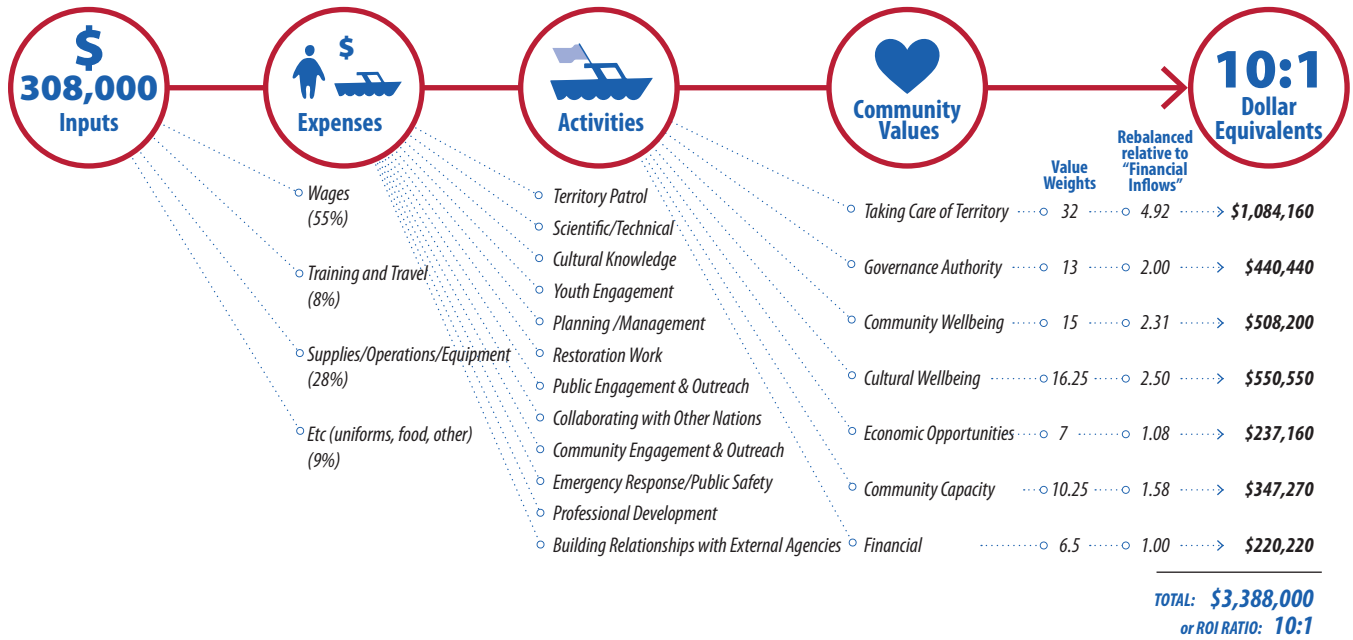
56 Keeney, McDaniels, and Ridge-Cooney, 1996.

57 Our assumption using the "with Guardian Watchmen program," and "without Guardian Watchmen program" does not account for any residual value beyond the annual investment, making the value generate calculation conservative. Furthermore, our analysis evaluates benefits. If we looked at a future year where a Nation has its program abruptly stopped, those benefits would be viewed as losses to existing programs. According to the value function of prospect theory, people think about gains and losses relative to reference points rather than in terms of absolute amounts. Losses are disliked about twice as much as the absolute equivalent gains are liked. This suggests that the ROI calculations in this report are conservative (See Kahneman and Tversky, 1979 and 2000 on prospect theory.)

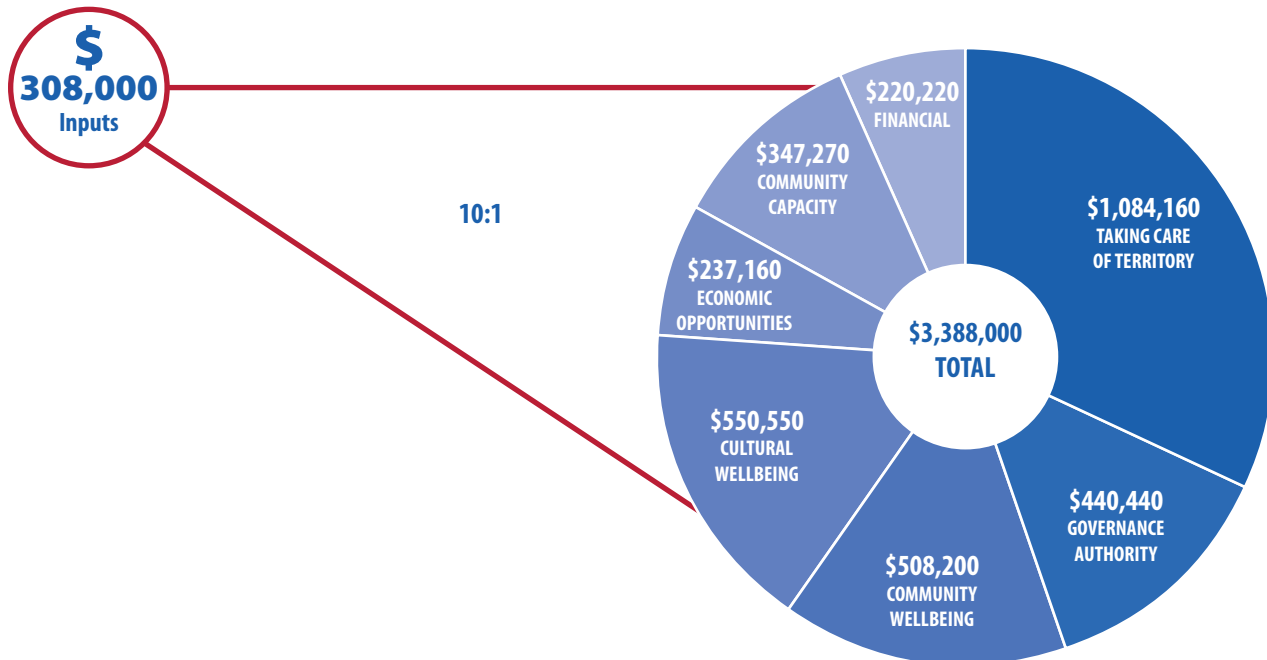
58 Benefits are understood as a 'current' value, which is the calculation of all cumulative and ongoing changes (i.e., including past changes that are still felt currently, and excluding those that have dissipated over time). There was no attempt to conduct a year-by-year valuation from program initiation in order to calculate accumulated value of the life of the program.

The figure below demonstrates this outcome with respect to an average Guardian Watchmen program in terms of annual budget inputs and value weights, with conservative estimates of financial inflows into the community (e.g., 55% salary and 1.3 multiplier). In this report, community-specific data is not shared so as to protect the confidentiality of the Nations that participated.

↓ FIGURE 19: Process flow calculation



↓ FIGURE 20: Coastal Guardian Watchmen average value generated from a \$308K annual investment - translated into dollars



9. DISCUSSION AND CONCLUSION

The purpose of this business case analysis is to help understand the overall value generation from the Coastal Guardian Watchmen programs, and specifically, to provide insight into the question ‘is it worth the investment?’. Such an analysis requires establishing an understanding of the relevant costs and benefits associated with the program, and then translating net benefits into a common monetary metric so that return on investment can be calculated. Using a more comprehensive set of value criteria, including difficult-to-measure considerations (often described as extra-financial, intangible or incommensurable dimensions of value), return on investment was calculated for seven Guardian Watchmen programs, from the Coastal First Nations’ perspective.

The result of this business case analysis is that from the perspective of the First Nations involved in this study, Coastal Guardian Watchmen programs achieve, at the low end, a **10 to 1 annual return on investment**. In other words, for each dollar invested on an annual basis, a First Nation would be benefiting at least 10 times that amount. On the high end, some First Nations are experiencing a **20 to 1 return on investment ratio each year**.

An additional practical outcome of this business case analysis is a framework for understanding and communicating the range of benefits that flow from Coastal Guardian Watchmen programs.⁵⁹ Investments in Guardian Watchmen programs that enable coastal First Nations to hire and train community members to safeguard their traditional territories generate extensive benefits to the individual Guardian Watchmen, their families and their communities. These widespread benefits include taking care of territory, nurturing cultural wellbeing, improving general health and community wellbeing, advancing governance authority, increasing community capacity, opening and promoting economic opportunities in the Indigenous and conservation economies, and providing much needed financial capital inflows.

While important benefits are directly linked to program objectives, this business case analysis suggests that leveraging the knowledge that benefits are widespread can lead to more explicit pursuit of these benefits. Utilizing this information regarding the significant benefits across different contexts

⁵⁹ The analysis also examined adverse impacts and unintended consequences. No significant negative effects were identified.





Photo: © Sandra Thomson

(e.g., over time, program size, program integration) for planning, design and management of Guardian Watchmen Programs may garner even higher value generation in British Columbia and across Canada in the future.⁶⁰

Importantly, significant return on investment was found in both new programs and more mature programs, indicating that the value generated from investment is rapidly achieved and sustainable over time with continued investment.

Activities and resulting benefits from Coastal Guardian Watchmen programs significantly contribute to the values being pursued by other interested parties, partners and stakeholders including other coastal communities, resource industries, tourists and other resource users, government agencies and the Canadian public in general (see Appendix A).

⁶⁰ Such widespread benefits may be due to many factors. Two that emerged from this research are: (1) external investments (i.e., funding) are not highly structured, so each Coastal Guardian Watchman program is able to design and manage their own program to meet their needs and priorities; and, (2) informal feedback loops between GW programs have been developed that allow each program to share successes and failures. Note: This flexible, relationship-based approach is the basis for innovation. It could be nurtured as a safe container for risk taking – where shared understanding of the problem(s) could lead to rapid prototyping: trying out new ideas, failing, adjusting, and learning as quickly as possible.

9.1 Areas for Future Research

Areas for future research in order to validate or more fully develop the business case include:

- Conduct wider community-based analysis with a range of community members (e.g., traditional and political leadership, youth, Elders) to validate or expand on the analysis presented here.
- Conduct a full participatory evaluation (similar to the one conducted for the Coastal First Nations presented here) with specific partners and stakeholder and affected parties (e.g., coastal communities, resource users, government agencies, general public) to quantify return on investment to these groups.
- Conduct additional business case analyses with more First Nations' Guardian Watchmen programs to compare and contrast programs and better understand return on investment of Guardian Watchmen programs in different contexts.

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APPENDIX A: Partners & Stakeholder Analysis

Guardian Watchmen programs generate various benefits that are likely of value to parties and groups outside of the Coastal First Nation communities. Key stakeholder groups include:

- Non-reserve coastal communities
- Non-First Nation resource users
- Industry
- Other First Nations
- The Canadian public
- The NGO/donor community
- Federal and provincial government agencies (e.g., BC Parks, Fisheries and Oceans Canada)

Benefits to outside groups are an important part of understanding the full value generated by Guardian Watchmen programs in the wider context of the North and Central Coast, British Columbia, and Canada. Our collective understanding of these programs' value would thus be enhanced by analysis of the value of Guardian Watchmen programs to non-Coastal First Nation stakeholder groups.

A more complete understanding of the many ways in which outside groups benefit from Guardian Watchmen programs could help highlight opportunities for future collaboration between Guardian Watchmen programs and external partners (particularly provincial and federal government agencies). It is our hope that increased collaboration among these parties would contribute to the important and ongoing process of reconciliation between the federal and provincial governments, and First Nations.

There are various methods that could be used to assess the value of Guardian Watchmen programs to external agencies and wider Canadian society. We suggest that *stated value analysis* and *economic value analysis* are well suited to uncover Guardian Watchmen program benefits to outside groups. This Appendix lays out a roadmap for these analyses. A key ingredient to both approaches is collaboration. Thorough and rigorous analysis using both methods will require real involvement from Guardian Watchmen program representatives, and representatives of the groups identified above (particularly relevant provincial and federal government agencies). Ultimately, the valuation process should provide these groups and the Coastal First Nations with a more complete understanding of their shared interests and values, and how they can better work together to accomplish them.

Stated Value Analysis

Stated value analysis starts with identifying key groups that may be affected by the activities carried out by Guardian Watchmen, and inviting them to participate in the valuation process. Participating groups would be asked to identify their relevant organization, program or agency-level values (i.e., their stated values), and then guided through a facilitated and structured process whereby they would estimate the contribution of Guardian Watchmen programs to their selected stated values. A high level of contribution would suggest a high degree of overlap between Guardian Watchmen program activities and objectives, and the stated values and related activities and objectives of the group or agency. A low level of contribution would suggest a low degree of overlap. This process would result in input from the participant groups as well as from Guardian Watchmen program participants. The process would transparently represent the valuations of each participant

group and has the potential to initiate or further conversations between participant groups and Coastal First Nations/Guardian Watchmen programs. Ideally, it would lead to the identification of common objectives and interests, and future opportunities for collaboration.

Replacement Value Analysis

Another way to assess the value of Guardian Watchmen programs is through an analysis of their economic value. This analysis would be based on the understanding, discussed above, that Guardian Watchmen program activities likely overlap with and contribute to fulfilling the objectives of non-Coastal First Nation stakeholder groups such as government agencies. This overlap may be particularly significant in the case of some provincial and federal government agencies, and offers a clear opportunity for collaboration and increased efficiencies. Government agencies with a high likelihood of overlap include, but are not limited to, Fisheries and Oceans Canada, Parks Canada, BC Parks, and the BC Ministry of Forests, Lands and Natural Resource Operations. Government objectives that may be at least partially fulfilled through Guardian Watchmen activities include, but are not limited to, monitoring resource use along the North and Central Coast and Haida Gwaii, promoting compliance with federal and provincial government regulations and land and marine use plans, monitoring the ecological health of local ecosystems, and tracking changes to ecosystems from resource use over time. These potential common objectives among the Guardian Watchmen programs and government agencies suggest that Guardian Watchmen programs may be helping to fulfill some government mandates. In addition, if we accept that government agency mandates are an expression of Canadian public values, Guardian Watchmen programs are likely generating value for the wider Canadian public.

Although such value may not be the focus of Guardian Watchmen programs, it is an important piece of the wider value of the programs. As such, it should be considered in a full accounting of the value of these programs within Canada. To establish the degree of overlap among relevant activities, the value of those activities to government, and the costs to the Coastal First Nations of conducting those activities via their Guardian Watchmen programs, both government representatives and Coastal First Nation/Guardian Watchmen program representatives would need to be involved.

Once overlap and costs have been established and mutually agreed upon, they can be used in Replacement Value Analysis, which can be expressed in its most basic form by the following equation:

$$\text{Replacement Value} = (\# \text{ of Guardians employed} \times \text{Rate of pay by government for equivalent positions} \times \% \text{ overlap between Guardian activities and government activities}) + \text{Equipment costs}$$

In Replacement Value Analysis, operational costs are calculated using government rates, as these are the costs government would incur to conduct the same activities. It then becomes possible to calculate the value to government of “replacing” the activities that relevant government agencies are responsible for with contributions to growing Guardian Watchmen programs.

Value Proposition

The value proposition of Guardian Watchmen programs is a key element of the current and potential future value of the programs to government and other stakeholders. The value proposition of Guardian Watchmen programs is the lower marginal cost of conducting government activities when they are completed by Guardian Watchmen. While there may be significant overlap between government agency activities and those of Guardian Watchmen, Guardian Watchmen regularly conduct a wide range of activities in the areas in which government agencies operate. Guardian Watchmen program activities that overlap with government activities can thus be completed by Guardian Watchmen at a lower marginal cost. Guardian Watchmen are already

incurring transportation and equipment costs to conduct activities that are important to the programs. They are thus able to reduce the cost of activities that overlap with government activities by reducing operational and administrative costs.

In addition to cost savings, it could be argued that the Guardian Watchmen programs bring personnel with extensive local expertise that can help fill gaps in government capacity resulting from funding shortfalls and broad mandates.⁶¹ Guardian Watchmen programs employ local people with extensive local, on-the-ground experience. With proper training provided by the programs and the Coastal Stewardship Network, these Guardian Watchmen can and do provide high-quality work that contributes to achieving government agency mandates at low marginal costs.

Reconciliation

Reconciliation with Canada's Indigenous peoples, and the renewal of a nation-to-nation relationship, is one of the current priorities of the governments of both British Columbia and Canada.^{62,63} Reconciliation with Canada's Indigenous peoples involves recognizing rights, a commitment to ongoing cooperation and partnership,⁶⁴ and reconciling the interests and worldviews of Indigenous and non-Indigenous Canadians. A central theme and a critical component of reconciliation is partnership. By working together to accomplish shared objectives, the provincial and federal governments and Canada's Indigenous peoples can build partnerships and engage in the ongoing process of reconciliation.

The contributions of Guardian Watchmen to the activities and objectives of government agencies may offer an opportunity to further the process of reconciliation through partnership between the Coastal First Nations and the provincial and federal governments. Given the overlap between the activities and objectives of Guardian Watchmen programs and government agencies, there is considerable scope for ongoing partnerships that facilitate working together to accomplish mutual goals. These partnerships have already developed around Guardian Watchmen programs to some extent (e.g., the Marine Plan Partnership for the North Pacific Coast). However, partnerships, and their associated reconciliation benefits, could be further extended to explicitly involve Guardian Watchmen programs in contributing to government stewardship responsibilities and accomplishing shared objectives. Such partnerships would be particularly valuable if they were used to address current gaps in government activities that are causing agencies to fall short of accomplishing their mandates. Future partnerships between government agencies and the Coastal First Nations' Guardian Watchmen programs could serve the dual purpose of strengthening reconciliation with Canada's Indigenous peoples while fulfilling government agency mandates, and ultimately meeting the interests of the Canadian public.

61 Olson, Milko, & Connors, 2015.

62 Indigenous and Northern Affairs Canada, 2016.

63 Ministry of Aboriginal Relations and Reconciliation, 2016.

64 Indigenous and Northern Affairs Canada, 2016.

APPENDIX B: Methods Review – Return on Investment and the EPI Approach to Evaluating the Coastal Guardian Watchman Program

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August 2, 2017

Introduction

Return on Investment (ROI) is a useful concept. Simply put: what is gained or lost from an investment in something. ROI is traditionally a financial analysis tool – the financial return on a financial investment. However, it is now evolving to help measure and communicate returns on non-financial or intangible values as well (e.g., social, environmental, etc.). The purpose of this section is to briefly discuss the concept of ROI and its evolution as a tool that can be applied to non-financial analysis. This section will also look at the approach used by EPI, the associated challenges, and how they were addressed.

The Evolution of ROI and applying Business Case Analysis to Non-Financial Contexts

ROI was originally developed as a tool to help understand the financial return, or profit from a financial investment, and many people understandably still associate ROI with strictly financial matters. It is usually represented as a percentage or a ratio. For example, if you invest \$10 to buy lemons and sugar for your lemonade stand and at the end of the day you have \$30, you have a net profit of \$20 and an ROI of 2.0 : 1.0 or 200%.⁶⁵ Real world examples can vary tremendously. In 2016, Forbes reported an ROI ratio for Apple, Inc. of 2.6 : 1.0 (down from a high of 3.4 : 1.0), meaning that for every \$1 of invested capital there was a financial return of \$2.6.⁶⁶ At the other end, ROI can also be negative: Forbes reported that Respirex Phara had a ROI of -28.3 : 1.0 (for every dollar invested, there was a loss of \$28.30).

Because ROI is both simple to understand and widely accepted as a performance measurement metric, it is attractive to those interested in communicating the financial implications of policies and programs. For these reasons, it is now commonly used for this purpose; for example, uses of ROI in program-specific applications like training, leadership or staff retention have resulted in ROI ratios of 10.5 : 1.0 for a sexual harassment prevention program; 8.2 : 1.0 for an absenteeism control/reduction program; and 2.3 : 1.0 for a retention improvement program.⁶⁷ In these examples, the benefits being measured are ultimately financial: bottom-line cost avoidance or cost saving resulting from lower complaints, turnover, absenteeism, and higher job satisfaction. In another example, the “Life Works” program in North Carolina undertook an even more expansive evaluation of benefits that included employment, health, housing, parental support, and income management. In doing so, they achieved a ROI ratio of 7.26 : 1.0.⁶⁸ This calculation still relied on financial calculations of gains and losses—in this case estimated tax revenue, the value of cost avoidance related to reduced government assistance, and annualized salary data.⁶⁹

65 Typical returns from the stock market can be around 7% annually. The ROI would depend on how long your money was in the stock market, as ROI does not have a standard time definition. It would take over 10 years to get at 1.0 : 1.0 ROI at 7% annual return.

66 David Trainer. Apple Tops The Market For Return On Invested Capital. Forbes. APR 27, 2016

67 Sample of published ROI studies from the ROI Institute, 2007.

68 Social Return on Investment. APHSA Innovation Center Issue Brief, May 2013

69 From a review of the literature (and common sense), higher ROIs are achieved by programs that address vital gaps and include a broader array of benefits (financial or non-financial) in the analysis.

The emerging challenge is that these financial-based ROIs are limited in that they do not capture investment return or value generated on many hard to measure intangible benefits related to social, cultural and environmental values. Yet, in many cases, these intangible benefits are the primary reason for investment. In a typical ROI report, they may or may not be articulated at all, and if they are incorporated, they often end up getting buried deep in qualitative descriptions while the quantitative numbers get attention in decision making. Therefore, it is not surprising that investors in social, cultural and environmental programs (funding agencies, donors, etc.) are looking to alternative ROI models and methods to help understand, measure, and communicate changes from an investment.

Standard Economic Approaches to Non-Financial ROI Analysis

To generate an ROI for non-financial returns requires a translation of social, cultural or environmental changes into a monetary measure – one that can be directly compared against the financial investment in a program. To address this, some ROI analyses borrow methods from cost-benefit analysis (CBA) to establish a monetary measure (i.e. dollars) for intangibles.⁷⁰ These CBA methods include, but are not limited to, benefit transfer, market proxies, replacement cost, and contingent valuation/willingness to pay surveys. The advantage of these methods is that they are more familiar to some audiences (e.g., government, business) and reflect the training and understanding of the economists typically asked to conduct financial analysis. Further, these methods may be helpful (but limited) when the ROI perspective is that of the market. For example, taking advantage of ecosystem services of a wetland that does not require a community to build an expensive waste treatment plant could be measured in cost savings: money the community did not have to spend. Perspective is very important, and unfortunately these CBA methods have many inadequacies that become conspicuous in contexts where Indigenous values are being examined. Four key shortcomings of CBA methods are listed below:

1. **They reflect value from the market perspective, not value from the community perspective.** Value is the worth or importance of something held by people or groups. As value changes from person to person, or group to group, it is relative, changing depending on the specific perspective taken. Market proxies tend to reflect general market pricing, which may be quite different than the value that those affected (e.g., an Indigenous community) might place on a good or service. Many of the CBA methods take what is inherently a community value question that should be answered by those experiencing the costs and benefits,⁷¹ and answer it from the perspective of the general market, typically using market proxies that are indirect or derived. There is little direct connection between how much a benefit or loss is valued by those experiencing the change and the price or cost of a market proxy. For example, an analyst might determine that a financial proxy to establish the dollar value of a community member that is becoming more comfortable speaking to visitors is equal to the cost of a \$300 public speaking course. However, the value of that skill may be worth much more in that community (valued at more than the \$300 a larger market might value it); or, that person may already be very good at speaking with visitors, so this gain in skills is not highly valued (or less than \$300).
2. **Results may be limited by an individual's ability to pay.** Derived market-based proxy measures or willingness to pay measures generated from a hypothetical market from a specific perspective, such as the target community, may be limited by the individual's ability to pay. Therefore, even if the community perspective is taken for a hypothetical market, the financial framing of willingness to pay may distort how important something is as it depends so much on a person's individual wealth. For example, if a community member were asked if they were willing (i.e., able) to pay \$300 to become more comfortable speaking to visitors, they might say "no" because they are poor, not because they do not value becoming more comfortable speaking to visitors.

70 Sometime referred to as Social Return on Investment (SROI)

71 For further discussion, see Gregory and Trousdale, 2009.

3. **They capture only individual costs and benefits and ignore broader community costs and benefits.** CBA approaches include only the aggregation of individuals' derived proxy measures based on some type of market exchange/proxy or individual willingness to pay, leaving out the often highly valued, collectively held, community or nation-level benefits. This is particularly true when it comes to evaluating costs and benefits associated with projects and programs impacting Indigenous communities, as many Indigenous peoples tend to think of cultural and social benefits in terms of collective value, and so find such methods to be inappropriate.⁷²
4. **They tend to undervalue benefits and costs.** First, CBA methods may not fully capture what they claim. When indirect or derived market proxies are used, they tend to capture only part of what is purported to be valued. For example, when the price of hamburger meat at the local grocery store is used to measure the benefits of hunting a moose, it reduces this traditional activity to means of attaining a certain quantity of meat. However, many benefits are not included or captured in this number, such as the value of teaching hunting to younger generations, the health benefits of being active on the land, and the cultural benefits of having moose meat at ceremonies.

In short, while conservative assumptions and defensible approaches are needed to establish confidence in ROI results, using only CBA methods to translate intangible benefits and costs for ROI calculations are likely to be limited, may be inappropriate and are at risk of undervaluing the return on investment in contexts in which the most important benefits are intangible and at least some of them are communal .

For these reasons, in choosing methods for the Coastal Guardian Watchman program business case, EPI designed an approach that was iterative and participatory, and involved the application of value elicitation techniques and stated preference methods from the field of decision analysis that help to structure values so that changes to these values (i.e., losses and gains) can be evaluated. The Coastal Guardian Watchmen programs were seen as highly-needed programs filling an important gap, resulting in a wide range of both anticipated and unanticipated benefits. These benefits are the basis for the Coastal Guardian Watchmen business case ROI calculations (no losses or adverse effects were identified).

Challenges with Applying a Participatory Decision Analysis Approach

EPI's participatory approach to evaluation includes decompositional and structuring tools, techniques, and methods of decision analysis.⁷³ In addition to the many evaluation case studies in the literature,⁷⁴ a prominent example is BC Hydro, where a similar decision analysis approach is used to develop a "business case" for all its major investments.⁷⁵

Because only the community can indicate what is important to them and how important associated changes are to them, they must be asked. This participatory approach means that many challenges must be addressed. For example, there are cognitive and judgemental biases (e.g., overconfidence, anchoring, recall challenges, mental fatigue) that can lead to poor evaluation results. Participation by those affected opens the potential for response bias, or the tendency of a person to answer questions on a survey untruthfully or misleadingly.

In this evaluation, EPI was aware of these issues and made every effort to minimize known biases and reduce the cognitive demands on participants. For example, cognitive demands were addressed by breaking the issues down into understandable parts, and focusing on the inherent multi-dimensional aspects related to program impacts. This design works with the constructive nature of human preferences to represent a full

72 Gregory and Trousdale, 2009.

73 For example, see: Gregory et al, 2012; Keeney, 1980; von Winterfeldt and Edwards, 1986; Clemen, 2000.

74 For example, see: Keeney, 1992.

75 B.C. Hydro. n.d. TRIPLE BOTTOM LINE AND STRUCTURED DECISION-MAKING A CASE STUDY OF BC HYDRO. Report # GDS09-198. Retrieved from <http://corostrandberg.com/wp-content/uploads/2009/12/industry-canada-sdm-case-study.pdf>

suite of values where what is important and the relative importance can be considered by those experiencing the change.⁷⁶ EPI also used multiple methods that allowed participants to think through the meaning of the values; develop understandable categories; and explore the relative importance of changes, both individually and through group deliberation.⁷⁷

Specifically, community representatives underwent several rounds of value elicitation to meet criteria requirements,⁷⁸ and multiple value weighting sessions to allow for reflection and verification of weighting results. The output of this process provides some insight on its success. For example, in early versions of the framework, values of emotional, psychological, physical wellbeing were separated out. In the final review workshop, the Nation representatives (mostly stewardship directors) modified this so that these were combined into a value called “Community Wellbeing”. This reduced the number of value categories (complete and concise) and helped with measure development (understanding and independence), which in turn minimized overlap and double-counting potential. In another example, the participants changed the Nation value label initially called “Cultural Vitality/Strength” to “Cultural Wellbeing” and detailed what they considered to be part of this value and why it was unique. A similar analysis took place regarding “Taking Care of Territory”. Participants indicated that as an end value, “Taking Care of Territory” should not be confused with “Territory Patrol”, which is an action that affects all end values. From their perspective, “Taking Care of Territory” is, in and of itself, an important value that could not be combined with any of the other Nation values, like “Cultural Wellbeing”. Concerns by EPI regarding double-counting and independence persisted throughout the evaluation process, and steps were taken to work with participants to clarify relationships between values and establish distinct measures for each.

This approach stands in contrast to traditional economic approaches that assume a specific monetary value exists or can be derived for any given change attributed to the program (a benefit or cost). As outlined above, only community members can indicate how important changes are to them, so they must be asked. This raises issues of sample size, participatory methods, response bias and strategic answering, all of which were prominent concerns in this evaluation as EPI only had access to Guardian Watchmen and Stewardship Directors as representatives of their respective communities. While greater insight into the program is gained from the expert knowledge of these participants, when contrasted with a broader community perspective, the size of the benefits and importance to specific Nation held values may be overemphasized or underemphasized. For example, participants may over-emphasize the importance of changes to the community because they personally experience them more often, or because their jobs depend on continued funding. They may also try to “game” their response to try and anticipate desired responses of their superiors (Guardian Watchmen trying to please Stewardship Directors; Directors trying to please funders). They may underemphasize as well due to their status, education levels, family, etc.

While the evaluation design and the use of multiple methods can minimize response bias, these results only represent benefits to the Nation from the perspective of the Guardian Watchmen and Stewardship Directors. A reasonable next step in the evaluation process would be to validate the results from a broader community perspective.⁷⁹

Hobbs, B. F., and G. T. F. Horn. 1997. Building public confidence in energy planning: A multimethod MCDM approach to demand-side planning at BC gas. *Energy Policy* 25(3): 357-375.

76 Gregory, R., S. Liechtenstein, P. Slovic, 1993.

77 Hobbs, B. F., and G. T. F. Horn. 1997.

78 Complete, concise, sensitive, understandable, and independent. See Gregory et al, 2012.

79 See section 3.3 Project Scoping: “Due to various project limitations, including timing, funding, and logistics, the decision was made to choose “breadth over depth” (i.e., to work with more Nations through their staff, rather than fewer Nations involving their entire communities). Community-wide engagement would be warranted as a next phase evaluation step to understand value generation from more perspectives, and to validate community-level value generation.”

