



Analysis of the Current and Future Value of Indigenous Guardian Work in Canada's Northwest Territories

Dehcho First Nations
Lutsel K'e Dene First Nation
Indigenous Leadership Initiative
Tides Canada

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About Social Ventures Australia

Social Ventures Australia (SVA) works with innovative partners to invest in social change. We help to create better outcomes for disadvantaged Australians by bringing the best of business to the for-purpose sector, and by working with partners to strategically invest capital and expertise. SVA Impact Investing introduces new capital and innovative financial models to help solve entrenched problems. SVA Consulting partners with non-profits, philanthropists, corporations, and governments to strengthen their capabilities and capacity to address pressing social problems.

Acknowledgements

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List of abbreviations

AAROM	Aboriginal Aquatic Resource Ocean Management
DFN	Dehcho First Nations
GNWT	Government of Northwest Territories
ILI	Indigenous Leadership Initiative
IPA	Indigenous Protected Area
LKDFN	Lutsel K'e Dene First Nations
NGO	Non-Government Organisation
NWT CIMP	Northwest Territories Cumulative Impact Monitoring Program
SROI	Social Return on Investment
SVA	Social Ventures Australia
WoC	Working on Country
TK	Traditional Knowledge

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Executive summary

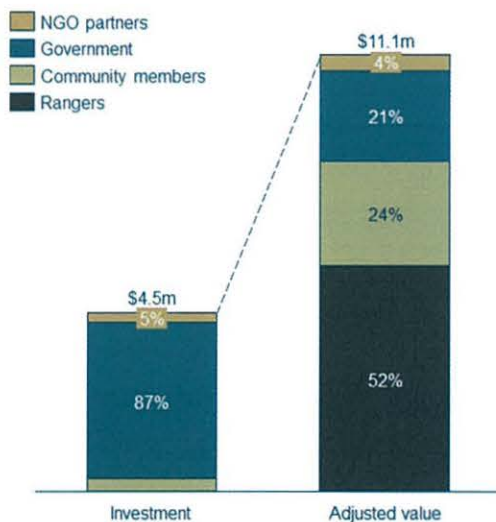
In Lutsel K'e and the Dehcho region of the Northwest Territories, First Nations are establishing Indigenous guardian programs to help manage ancestral territory. These programs employ Indigenous community members to act as stewards on the land, patrolling protected areas, monitoring fish and wildlife harvests, collecting data on the impacts of climate change, tracking industrial development activities, and educating visitors about proper land use.

In the process, guardians help secure the Dene way of life for generations to come. They also help conserve vast stretches of the Boreal Forest, a globally significant ecosystem that has more intact forest than the Amazon and nearly twice as much carbon in storage as tropical forests.

The programs in Lutsel K'e and Dehcho launched just eight years ago, but they already deliver significant social, economic, and environmental benefits. With more time and sustained funding, the Lutsel K'e and Dehcho guardians could deliver even more benefits, similar in scale to those achieved by more mature guardian programs in Australia.

Key findings

Guardian programs deliver value. The Lutsel K'e and Dehcho guardian programs launched with an investment of \$4.5 million. Already that initial investment has generated \$11.1 million in social, economic, cultural, and environmental value. This analysis supports the prevailing view – promoted in a range of previous evaluations and reports in the public domain¹ – that Indigenous guardian work has a profound positive effect on Indigenous people and their communities, Government, and other stakeholders.



Social Return on Investment

Indigenous guardian work in Lutsel K'e and the Dehcho region has delivered a social return on investment (SROI) ratio of 2.5:1 based on the investment in operations between FY09-16.

That is, for every \$1 invested, approximately \$2.5 of social, economic, cultural, and environmental value has been created for stakeholders.

Return on investment is likely to increase over time. The analysis shows that more investment in the Lutsel K'e and Dehcho guardian programs will likely yield even greater returns. Additional funding for year-round, full-time work complemented by training to enhance the quality of monitoring activities can increase the amount of social, economic, cultural, and environmental value that is generated from \$2.5 to \$3.7 for every \$1 of investment.

Guardian programs can help strengthen the conservation economy. A diversified 'conservation economy' built around protected areas and ecotourism can generate more jobs and capital infrastructure investment. Guardians provide the critical human resources and institutional capacity to 'open up' opportunities for eco-tourism ventures. They enable communities to manage tourism

¹ See e.g. Gilligan, 2006; Smyth, 2011; The Allen Consulting Group, 2011; Urbis, 2012; Social Ventures Australia, 2014; Social Ventures Australia, 2016.

impacts and provide an interface for strategic planning and management. They help communities derive benefit on their own terms, rather than having tourism 'done to them' by outsiders.

National support can help secure long-term benefits. Sustained, long-term support from a national guardian program would help Lutsel K'e and Dehcho build on their early success. A national network could help provide consistency – avoiding the project-to-project funding cycle that hampers some guardian programs – and additional, specialized training.

Conclusions

The guardian programs in Lutsel K'e and Dehcho have generated significant benefits in a short amount of time. They provide opportunities for Dene people to deepen their connection with their culture, land, and water while engaging in meaningful employment that values traditional knowledge. They also contribute to broader efforts to conserve biodiversity and fight against the dangerous impacts of climate change.

The communities view guardians' work as part of a broader vision in which practicing and strengthening Indigenous culture creates sustainable livelihoods and opportunities for communities to share their culture, land, and water with other Canadians. Greater investment in these programs – and in other guardian programs across the nation – is expected to deliver more benefits for more communities and for Canada's natural heritage.

1 Introduction

1.1 Project context objectives

There is growing evidence worldwide that Indigenous land management and stewardship can have a profound effect on Indigenous people and their communities, Government, and other stakeholders. For instance, a recent analysis of five Indigenous Protected Areas (IPAs) and associated guardian programs commissioned by the Australian Government Department of Prime Minister and Cabinet highlighted the wide range of social, economic, cultural, and environmental outcomes that can be generated through Indigenous land and water management. The outcomes included stronger Indigenous relationships with land and culture, and economic savings to Government as a result of increased employment of Indigenous guardians and decreased interactions with the justice system. The value generated for stakeholders in the five IPAs studied exceeded the investment.²

Indigenous communities have launched approximately 30 guardian programs across Canada, including the Haida Watchmen, the Coastal Guardian Watchmen Network, and the Innu Environmental Guardians. These long-standing programs have built and strengthened leadership capacity within these First Nations and provided models for other communities launching their own guardian efforts. Yet there is no national program in Canada, nor overall sponsorship.

There is a growing understanding within Indigenous communities, within Government, and among other stakeholders that these programs have generated positive results.

Following its recent analysis in Australia, SVA Consulting has been commissioned by the Indigenous Leadership Initiative (ILI) to understand, estimate, and value the outcomes that have been and may be achieved through emerging Indigenous guardian work in the Northwest Territories, in comparison to the outcomes that have been achieved in Australia.

Two Dene communities in the Northwest Territories collaborated in this project, and provided the basis for case studies:

- Lutsel K'e Dene First Nation (LKDFN) on the east arm of the Great Slave Lake; and
- Dehcho First Nations (DFN) of the Dehcho region, an area located in the southwest portion of the Northwest Territories.

The objectives in conducting this analysis were to:

- Test and validate the social, economic, cultural, and environmental outcomes that have been achieved by Indigenous guardian work in these communities;
- Compare the outcomes that have been achieved in these communities with the outcomes that have been achieved through the IPA program in Australia; and
- Assess the current and potential future value of this type of work if scaled nationally.

1.2 Indigenous guardian work

Prior to the arrival of Europeans, hundreds of distinct Indigenous nations inhabited the area that is now known as Canada.³ These nations have a long and rich relationship with land and water, drawing from land and water for their material and spiritual needs and, in turn, caring for land and water to ensure its future health. Today, a growing number of Indigenous nations are reclaiming their right and responsibility to care for and practice their relationship with the land and water by establishing their

² SVA Consulting, Consolidated report on Indigenous Protected Areas following Social Return on Investment analyses, 2016.

³ Canada Museum of History, First Peoples of Canada: Presenting the history and continuing presence of Aboriginal people in Canada.

own Indigenous guardian programs. Support has been provided primarily through philanthropic sources and Federal and Territorial governments.

The Dene (“people”) people are a group of First Nations who inhabit the northern boreal and Arctic regions of Canada, and includes at least five primary language groups, including Chipewyan (Denesoline), Tlicho (Dogrib), Yellowknives (T’atsaot’ine), South Slavey (Dehcho), and Sahtu (Sahutuot’ine). Their lands span the transition zone from boreal forest to tundra, and their lakes and rivers contain some of the purest and deepest freshwater in North America. There is high conservation value with a healthy ecosystem featuring moose, muskoxen, wolves, bears, wolverine, many species of birds and fish, and some of the last free-ranging heard of migratory barren ground caribou, the last of which is of particular cultural significance.

The Dene people have maintained their cultural traditions, including their responsibility to respect and care for their lands and water. Many Dene recall growing up living a traditional nomadic lifestyle and have only settled over the last few generations. While many remain on their traditional lands, the impact of settlement, in conjunction with the trauma of residential schools and the impact of mining and other development in the region, has been significant and continues to disrupt their traditional way of life.

The Lutsel K’e Dene First Nation (LKDFN) and Dehcho First Nations (DFN) have established Indigenous guardian programs to not only secure the land and water but also the Dene way of life for generations to come. Through Indigenous guardian programs, participants practice a traditional subsistence lifestyle, care for culturally important sites, conduct environmental monitoring, and interact with visitors. Their work also includes identifying and mitigating the impacts of climate change, such as large fire outbreaks, insect infestations, and exotic species intrusion. In addition, they track industrial development projects in forestry, commercial fishing, and mining.

Their vision is that their land and water will always be healthy and a place where they can hunt the game and catch the fish that provide their sustenance, and where practising and strengthening their culture can create sustainable livelihoods and opportunities to share with other Canadians.

“The land is like a pillow. You sleep on it. The land is also like a store. Anything you want is on it. It’s given to us by God for us to care for future generations, to keep the water clean, and to watch the fish, water, and berries.”

Florence Catholique, Former Lutsel K’e Dene First Nation Chief

Established in 2008, the Ni Hat’ni Dene (“watchers of the land”) and caribou monitoring programs in Lutsel K’e employ Indigenous Guardians on the ground to watch over and protect their traditional land and water. The programs are modelled off the Haida Gwaii Watchmen Program on the British Columbia coast and build upon a decade of prior community monitoring activities.

The mandate of these programs is to:

- Maintain the integrity of cultural sites and the natural beauty within Thaidene Nene
- Host and provide interpretive tours for visitors in the area
- Monitor and document visitor activity, cultural features, and environmental/wildlife values
- Transmit cultural and scientific knowledge to younger generations.

In 2014, the DFN established a similar program called Dehcho K’ehodi (“Taking Care of the Dehcho”). This program is similar to the Ni Hat’ni Dene program but with a heavier emphasis on language and cultural revitalisation. This work builds upon similar activities currently conducted through the Aboriginal Aquatic Resource Ocean Management (AAROM) and the Dene Zhatie Indigenous Language Revitalisation Program.

1.3 Methodology

This analysis presented in this report draws on the Social Return on Investment (SROI) methodology, which was used in the Australian reports. Using Social Value principles, we sought to understand, measure, and value the current and potential future impact of Indigenous guardian work in Canada. The full list of Social Value principles can be found in Appendix A1.

This analysis was informed by consultation with stakeholders⁴ of the guardian programs as well as desktop research canvassing relevant qualitative and quantitative data. Thirty-four stakeholders involved with Indigenous guardian work in these communities were directly engaged. Given the brief time that Dehcho K'ehodi has been running, consultations were also conducted with stakeholders of the Aboriginal Aquatic Resource Ocean Management (AAROM) and the Dene Zhatie Indigenous Language Revitalisation Program.

The views expressed in this report have been informed by the 34 interviews, our desktop analysis, and data from the ILI and relevant First Nations groups.

More detail on the methodology used in this report, interview guides, and a list of interviewees can be found in Appendices A2, A3, and A4, respectively.

Social Return on Investment

SROI is an internationally recognised methodology used to understand, measure, and value the impact of a programme or organisation. It is a form of cost-benefit analysis that examines the social, economic, cultural and environmental outcomes created and the costs of creating them using relevant financial proxies to estimate relative values.

⁴ The term 'stakeholders' is used exclusively in this report to refer to the stakeholders of the Indigenous guardian programs. This is not to be confused with stakeholders or rightsholders of the land. We acknowledge that Guardians and community members are rightsholders of their lands and waters with constitutionally protected rights.

2 Outcomes achieved through Indigenous guardian work in Lutsel K'e and the Dehcho region

2.1 Overview

This section seeks to explain the outcomes that were achieved through Indigenous guardian work in Lutsel K'e and the Dehcho region, as well as the process required to arrive at those findings.

2.2 The nature of the change

Across the two communities, Indigenous guardian work has generated significant social, economic, cultural, and environmental outcomes for Guardians, Community members, Government, and NGO partners. These stakeholder groups were considered the primary beneficiaries of the program. While there may be benefits accruing to other stakeholders, they were not included in the scope of this analysis. For more detail on stakeholder groups, please see Appendix A5.

We used a theory of change to understand the nature of the outcomes that have been created through Indigenous guardian work in Canada. The initial draft drew from the consolidated theory of change developed in the Australian analysis.⁵ This was then extensively tested and subsequently refined to incorporate evidence collected through stakeholder consultations and specific feedback from stakeholders.

On the pages that follow, the refined theory of change for Indigenous guardian work is presented articulating:

1. **Issues** that the Indigenous guardian programs seek to address, the **stakeholders** involved, the **activities** that take place and **inputs** (investments) into the programs
2. **Outputs** (i.e. the immediate consequences of activities), **outcomes** and **impact** for Community members and Guardians
3. **Outputs, outcomes** and **impact** for Government and NGO partners.

Outcomes should be read from left to right and are expressed as either short-, medium-, or long-term outcomes (i.e. the relative period of time before they are likely to occur). There are three types of outcomes represented:

- Material (i.e. relevant and significant) outcomes, which have been measured and valued as part of the SROI analyses;
- Intermediate outcomes, which have been achieved during the investment period but are not measured as part of the SROI analysis because their value is subsumed by later, related outcomes that carry a higher value; and
- Other outcomes, which have not yet been achieved and are therefore aspirational.

The theory of change includes clusters of closely related outcomes which together represent identifiable 'threads' of change over time. Related outcomes have been intentionally grouped together where possible.

The theory of change emphasises the interrelationship between social, economic, cultural and environmental outcomes. This is aligned with how stakeholders perceived the changes they experienced through the programs.

⁵ SVA Consulting, Consolidated report on Indigenous Protected Areas following Social Return on Investment analyses, 2016.

Indigenous guardian work – Theory of change: issues, stakeholders, activities, and inputs

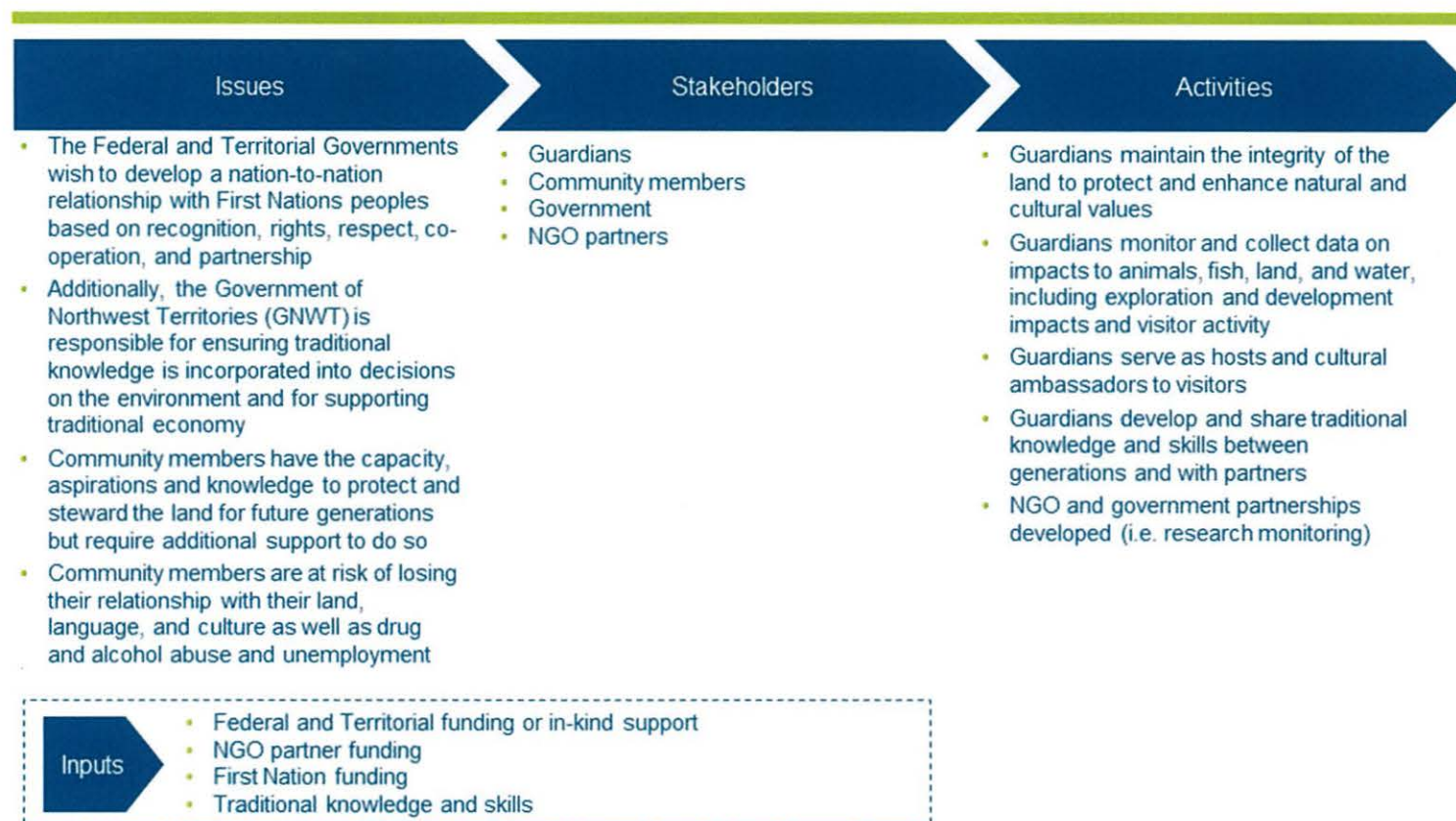


Figure 2.2a – Theory of change for Indigenous guardian work in Lutsel K'e and the Dehcho region – Issues, Stakeholders, Activities and Inputs (Investment)

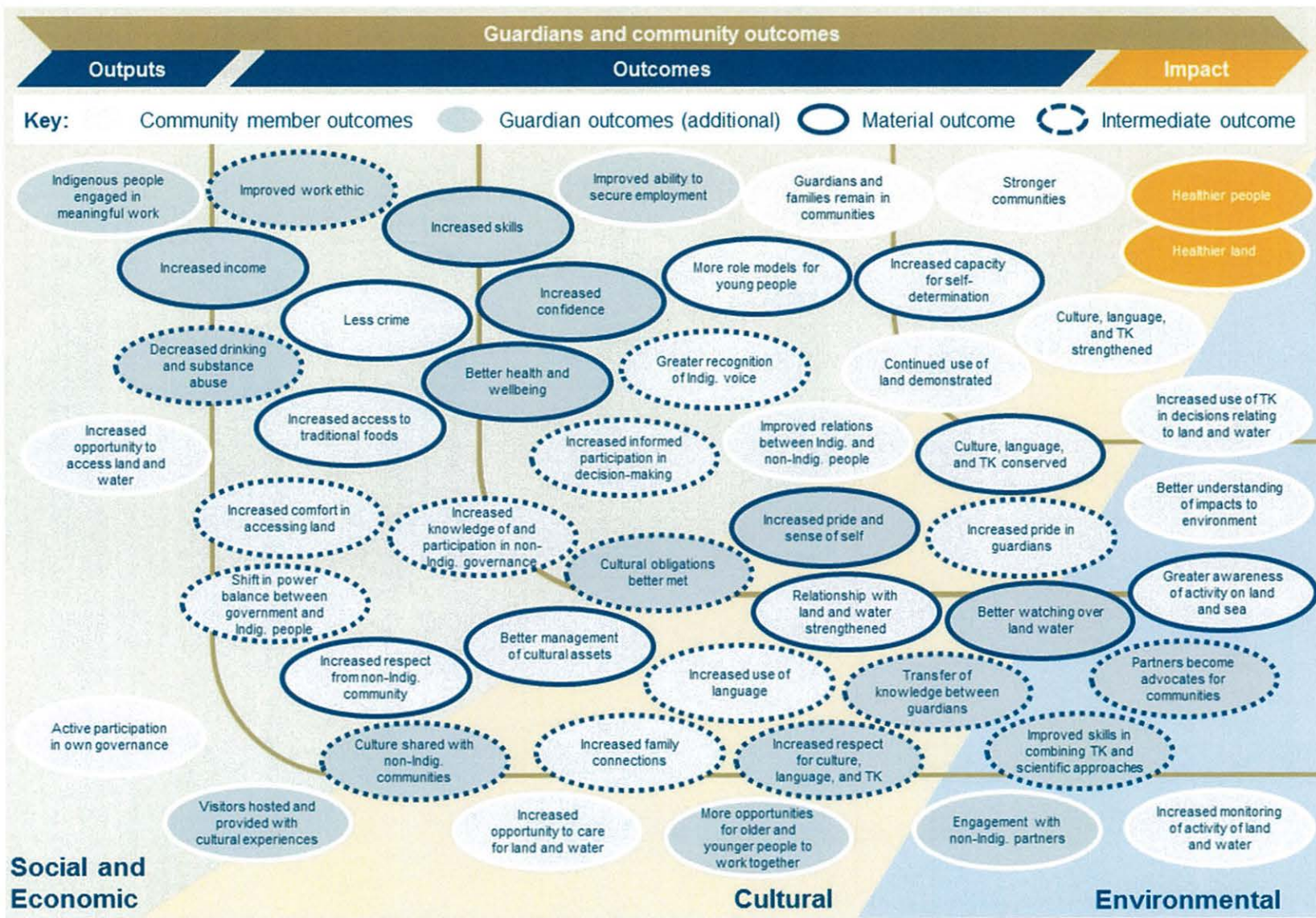


Figure 2.2b – Theory of change for Indigenous guardian work in Lutsel K'e and the Dehcho region – Guardian and Community member outcomes



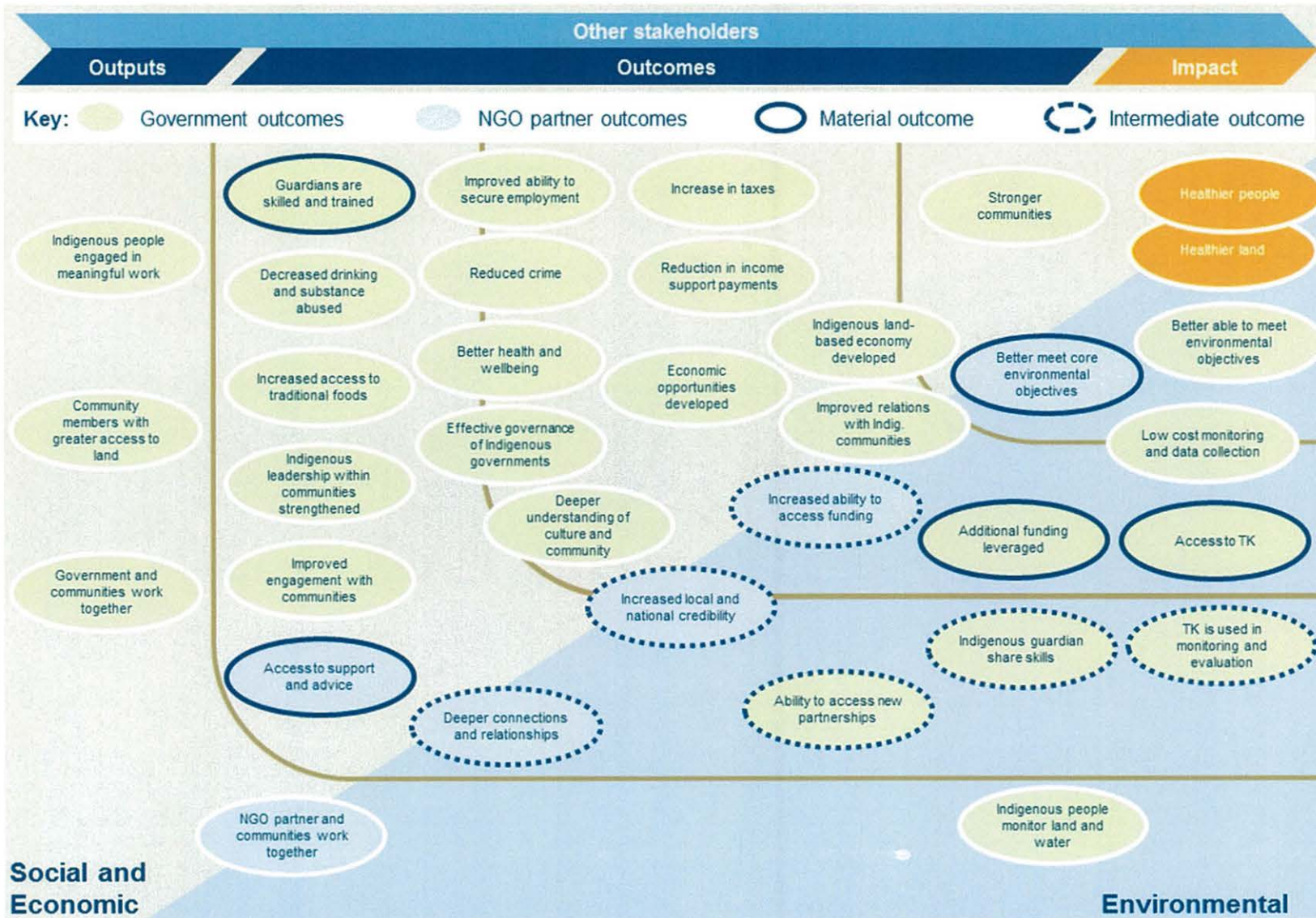


Figure 2.2c – Theory of change for Indigenous guardian work in Lutsel K'e and the Dehcho region – Government and NGO partner outcomes

2.3 Description of change

The stakeholder outcomes are represented in the theory of change outlined in section 2.2. This section describes the material outcomes experienced by each of the following stakeholders:

1. **Guardians**
2. **Community members**
3. **Government**, including the Canadian Federal Government and the Government of Northwest Territories (GNWT)
4. **Non-Government Organisation (NGO) partners.**

The outcomes described below are included in this analysis and represent incremental changes for stakeholders that occur as a result of Indigenous guardian work.

1. Guardians

Guardians include people who have been hired to watch over and care for land and water⁶. During the eight-year investment period covered by this analysis, an estimated 32 Indigenous people were engaged in guardian work, each completing an estimated average of 221 full (i.e. eight-hour) days. The average tenure of Guardians within the eight-year investment period is estimated at 3.6 years.

A Guardian fits within two stakeholder groups: Guardians and Community members, which reflects both their job and their role within community. Outcomes achieved by Guardians, captured in the table below, are therefore additional to those that are achieved by Community members.

A summary of the inputs (investment in the program), outputs (summary of activity) and outcomes (changes) that are experienced by Guardians is included in Table 2.1 below.

Inputs	Outputs	Material outcomes
Nil	<ul style="list-style-type: none"> • Indigenous people engaged in meaningful work • More opportunities for older and younger people to work together • Visitors hosted and provided with cultural experiences • Engagement with non-Indigenous partners 	<ul style="list-style-type: none"> 1.1 Increased skills 1.2 Increased confidence 1.3 Increased income 1.4 Better health and wellbeing 1.5 Increased pride and sense of self 1.6 Better watching over land and water

Table 2.1 – Inputs, Outputs and Outcomes for Guardians

Social and economic outcomes

The material social and economic outcomes that have been generated for Guardians are:

- Increased skills
- Increased confidence
- Increased income
- Better health and wellbeing

One of the immediate changes for Guardians is the increase in their skills, encompassing technical skills required for environmental monitoring as well as social skills to assist in interactions with visitors. Technical skills include both Traditional Knowledge (TK), which is gained through learning and

⁶ See section 4.3 for discussion of the investment.

working with older Guardians and TK experts in the community, as well as Western scientific skills, such as GIS mapping skills, procedures for collecting water and fish samples, and census taking for wildlife populations, which are developed through training and working with scientific experts and partners. Both are valuable and complementary, enabling Guardians to ‘see with two eyes.’ Social skills include interpersonal and public speaking skills. Guardians receive specific training in these areas and practice these skills during small group excursions out on land and water and through interactions with visitors.

Guardians reported developing greater confidence as a result of developing ‘increased skills.’ As Guardians practice the skills they learn and become exposed to a wide range of situations, they become more confident in their ability to watch over the land and water and to act as cultural ambassadors for their communities. Many Guardians spoke about the difficulty they would have had in speaking to visitors about their land and culture prior to their work as Guardians.

Another important outcome is increased income. There are few opportunities for employment in each community, with many Guardians reporting that there are only two opportunities for work in town: (1) The First Nation band provides limited opportunities for employment; or (2) Mining companies offer more employment opportunities. However, these mining positions are not viewed favourably. Depending on practices, these positions may allow little time left over for traditional cultural obligations and may even directly contradict the core cultural values of protecting the land and water. Guardians had many positive things to say about Indigenous guardian work, with multiple people independently reporting that they valued the ability to engage in meaningful employment that values Dene knowledge and expertise and to work in a manner that was consistent with their core values.

Better health and wellbeing was a consistent theme throughout interviews with Guardians. Guardians reported being more active and eating a healthier traditional subsistence diet during the program. Going out onto the land and water also provides mental benefits, allowing people to escape the stresses of life in town and to feel ‘free.’ Most importantly, however, was the importance of reconnecting with the land and water with many Guardians commenting that they felt ‘at home.’

Cultural outcomes

The material cultural outcomes that have been generated for Guardians are:

- Increased pride and sense of self
- Better watching over land and water

Increased pride and sense of self is a short- to medium-term outcome that results from greater connection within and between families, and connection (or reconnection) to culture. Guardians described this outcome as linked to the development of their cultural identity, which helped them better understand themselves, their culture, and their place in the world. For those who transfer knowledge onto the younger generations, pride comes from helping others connect with their culture and keep the land and water healthy.

“When I started with the program, I was a young man. I didn’t quite know what I wanted in life. I was kinda doddling around and I think I always knew what I wanted but I didn’t quite see it or have the insight. I feel like this [program] strengthened my bond with the community, with the culture, and with the people. It let me see the whole picture as one... It helps me understand why I need to represent the community and the land but also help fight for it, help others respect it and care for it, share the experiences.”

Jake Basil, Ni Hat’ni Dene guardian



By regularly going out on land and water and engaging in environmental monitoring, Guardians felt that they were able to better watch over land and water. Indigenous guardian work builds upon existing skills and offers more structured and comprehensive monitoring activities.

In the Dehcho region, for instance, forestry projects, mining companies, and commercial fishing activities are making their presence known on the territory. Guardians monitor this industrial development and help the community respond proactively to emerging threats. They also track the impacts of climate change and advise the community on how to reduce and adapt to shifts conditions.

Better watching over land and water is an important cultural outcome because the Dene have a cultural obligation to care for land and water. Additionally, Dene culture, including their way of life, language, and stories, are all rooted in land and water so watching over and protecting land and water are critical to the preservation of their culture.

2. Community members

Community members represent Indigenous people, mostly Dene, who live in the Lutsel K'e and Dehcho areas, but do not necessarily participate directly in the Indigenous guardian programs. In that sense, Guardians are a subset of the Community member stakeholder group. Community members usually live in the same towns and communities as Indigenous guardians and may also be connected through family relationships.

A summary of the inputs (investment in the program), outputs (summary of activity) and outcomes (changes) that are experienced by Guardians is included in Table 2.2 below.

Inputs	Outputs	Material outcomes
\$0.3 million	<ul style="list-style-type: none"> Active participation in own governance Increased opportunity to access land and water Increased opportunity to care for land and water Increased monitoring of activity on land and water 	2.1 More role models for young people 2.2 Less crime 2.3 Increased access to traditional foods 2.4 Increased capacity for self-determination 2.5 Increased respect from non-Indigenous community 2.6 Better cultural asset management 2.7 Relationship with land and water strengthened 2.8 Culture and language conserved 2.9 Greater awareness of activity on land

Table 2.2 – Inputs, Outputs and Outcomes for Community members

Social and economic outcomes

The material social and economic outcomes that have been generated for Community members are:

- 2.1 More role models for young people
- 2.2 Less crime
- 2.3 Increased access to traditional foods
- 2.4 Increased capacity for self-determination
- 2.5 Increased respect from non-Indigenous community



As a direct result of Guardians working out on land and water and engaging in meaningful employment that values Dene knowledge, Community members benefit from having role models in the community who are able to both fulfill traditional cultural obligations of watching over and protecting land and water as well as navigate the mainstream world of employment. Previously, many people either remained in the community relying heavily on welfare or left community and transitioned to a mainstream existence. In both cases, people experienced problems with boredom and, in some cases, drinking, substance abuse, and crime. The establishment of Indigenous guardian work has offered people meaningful employment and a purpose in life. It has created opportunities for people to navigate both Indigenous and mainstream worlds in harmony and has created positive, engaged role models in both a cultural and socio-economic sense.

Another benefit that community members experience through Guardian work out on land and water is the increased access to traditional foods. While out on land and water, Guardians are able to practice their traditional relationships with land and water, hunting game and catching fish. In accordance with Dene law, Guardians ‘share what they have’ and bring back these traditional foods to share with the whole community. This is significant not only for the cultural and spiritual aspects of these traditional foods but also from a practical sustenance standpoint. Due to the remoteness of the communities, the cost of food in town is high.

Community members regarded the increased capacity for self-determination to be the most significant social and economic benefit of the program. Guardians provide the tools and knowledge Indigenous communities need to govern their traditional land and water. For example, water and wildlife monitoring has created new data that can be used to guide the development of land use plans, and empowers community members to make more informed decisions about how their natural resources are used, what should be conserved, and what can be developed. For community, the establishment of Indigenous guardian programs represents a shift from simply asserting their rights to actively taking charge of the responsibilities that come with those rights.

“We can’t have rights without responsibility. If we assert rights to caring for land and monitoring the water and the fish, we have to do it too.”

Stephanie Poole, Lutsel K’e Dene First Nation Councillor

The sustained effort and quality of work being accomplished by Indigenous guardians reflects the capacity that has been built over time to not just articulate their vision for the future but also to make significant strides toward executing it.

The last material outcome in the social and economic thread is increased respect from the non-Indigenous community. The value of this outcome is low, in part due to current seasonal nature of Indigenous guardian work and the lack of awareness and understanding of the work that is done. However, tourists who have encountered these Indigenous guardians respect the role that Indigenous guardians are playing on their land and turn to these guardians for advice, support, and friendship.

Cultural outcomes

The material cultural outcomes that have been generated for Community members are:

- 2.6 Better cultural asset management
- 2.7 Relationship with land and water strengthened
- 2.8 Culture and language conserved

These three outcomes are closely linked to each other and to the Guardian outcomes related to better watching over land and water (discussed above). Without the resources flowing from Indigenous guardian work, there would be fewer opportunities for Guardians and Community members to access land and water. Many culturally important sites are located far from town and are inaccessible without

appropriate equipment. Being able to access these sites allows Guardians and Community members to better care for them, shielding them from emerging threats such as industrial development or climate change.

Many Guardians and Community members also take the opportunity to practice their cultural traditions while out on land and water, following a traditional subsistence diet, teaching younger generations how to respect and care for the land and water, sharing stories related to the land and water, and speaking the Dene language. This intergenerational exchange builds capacity and prepares young people to become stewards and future leaders. As a result, Indigenous guardian work creates cultural benefits that are of value for all Community members.

“If we keep continuing all these teachings it will soon become a story of how we saved our culture and our purpose [as a] First Nation so that we can have more generations that are proud to say they are First Nations.”

William Alger, Dehcho First Nation youth camp participant

Environmental outcomes

The material environmental outcome that has been generated for Community members is:

- 2.9 Greater awareness of activity on land

As a result of Indigenous guardian work monitoring the land and water year after year, the community has a better understanding of the development and tourist activities occurring on their traditional land and water as well as the health of the water and wildlife. With time, they hope to be able to map the impact of development and tourist activities to the health of the water and wildlife. They plan to use this information to inform future land use and management decisions. This information is seen as vital as the community draws significantly from land and water for their material and spiritual needs, and is committed to ensuring the health of land and water for future generations to come.

3. Government

In this analysis, the Government stakeholder group includes:

- The Canadian Federal Government; and
- The Government of Northwest Territories.

A summary of the inputs (investment in the program), outputs (summary of activity) and outcomes (changes) that are experienced by Government is included in Table 2.3 below.

Inputs	Outputs	Material outcomes
\$3.9 million	<ul style="list-style-type: none"> • Indigenous people engaged in meaningful work • Community members with greater access to land • Government and communities work together • Indigenous people monitor land and water 	<p>3.1 Guardians are skilled and trained</p> <p>3.2 Additional funding leveraged</p> <p>3.3 Data monitoring using TK</p>

Table 2.3 – Inputs, Outputs and Outcomes for Government

Social and economic outcomes

The material social and economic outcome that has been generated for Government is:



- 3.1 Guardians are skilled and trained

An immediate, direct consequence of Indigenous people engaged in meaningful employment as Guardians is that they are skilled and trained. Guardians may remain as Indigenous guardians if the roles are available, or they may move into other roles, filling positions with Parks Canada for example.

The technical and social skills, positive workplace habits, technical skill certifications, and strong sense of individual pride and accomplishment developed through Guardian work make them more employable in the job market and are valuable assets for future advancement. This supports Government's efforts to improve Indigenous employment rates.

Environmental outcomes

The material environmental outcomes that have been generated for Government are:

- 3.2 Additional funding leveraged
- 3.3 Data monitoring using TK

The Government of Northwest Territories (GNWT) has benefited directly through the additional funding it has been able to leverage for its Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP). NWT CIMP "coordinates, conducts, and funds the collection, analysis and reporting of information related to environmental conditions in the NWT. Its main purpose is to support better resource management decision-making and the wise use of GNWT's resources by furthering our understanding of cumulative impacts and environmental trends."⁷ Through NWT CIMP and other partnerships with Indigenous guardian programs, the Government has been able to leverage its funding of \$1.8M to secure additional partner funding at a ratio of 3:1. Government stakeholders indicated that it would not have been possible to secure this funding otherwise as partners do not fund 'mainstream governments.'

For the GNWT, the use of TK in data monitoring also supports them to fulfil their mandate under the Traditional Knowledge Policy whereby:

The Government recognizes that aboriginal traditional knowledge is a valid and essential source of information about the natural environment and its resources, the use of natural resources, and the relationship of people to the land and to each other, and will incorporate traditional knowledge into government decisions and actions where appropriate.

For Government as with Guardians, combining TK and Western scientific knowledge supports them to 'see with two eyes' and allows for a stronger and more comprehensive knowledge base with which to make decisions. This more comprehensive knowledge base is more likely to be applied, retained, and improved as a result of being grounded in a genuine collaborative framework.

"Mi'kmaq Elder Albert Marshall describes a process called two-eyed seeing that I think can help frame how we think about bringing together traditional knowledge and science in the NWT. As I understand it, with one eye, you look out at the world with the strengths of traditional knowledge. With the other eye, the strengths of science. You see best, more holistically, more clearly, when you see with the strengths of both eyes working together."

Erin Kelly, Assistant Deputy Minister, Environment and Natural Resources, Government of Northwest Territories

4. Non-Government Organisation partners

⁷ Government of Northwest Territories Environment and Natural Resources, Cumulative Impact Monitoring (NWT CIMP).

The primary NGO partners of the Indigenous guardian programs in Lutsel K'e and the Dehcho region are the Nature Conservancy, Tides Canada, and the Indigenous Leadership Initiative of the International Boreal Conservation Campaign. This work is supported directly and by conservation donors.

A summary of the inputs (investment in the program), outputs (summary of activity) and outcomes (changes) that are experienced by Government is included in Table 2.4 below.

Inputs	Outputs	Material outcomes
\$0.2 million	NGO partners and communities work together	4.1 Access to support and advice 4.2 Better meet core environmental objectives

Table 2.4 – Inputs, Outputs and Outcomes for NGO partners

Social and economic outcomes

The material social and economic outcome that has been generated for NGO partners is:

- 4.1 Access to support and advice

Through partnership with Indigenous guardian programs, NGO partners have been able to develop deeper relationships with guardians and community and to work with them more closely. They are also now able to access the support and advice of Indigenous leaders who can command the credibility and respect of territorial and federal Governments. This support and advice was seen as being valuable.

Environmental outcomes

The material environmental outcome that has been generated for NGO partners is:

- 4.2 Better meet core environmental objectives

As a result of working with Indigenous guardian programs, NGO partners experience a significant, long-term outcome related to better meeting their core environmental objectives of protecting threatened natural habitats and endangered species. NGO partners in Canada recognised the unique position of communities in determining future land use designations, and the value of TK and traditional ways of watching over and protect the land. NGO partners believe that their partnerships with Indigenous guardian groups are necessary to achieve their objectives.

Given the vast expanse of land covered by the Lutsel K'e Dene First Nation and Dehcho First Nations and the high conservation value of these areas, these Indigenous guardian programs offer a unique opportunity to achieve their objectives at significant scale. This is being advanced through the pending designation of Thaidene Nene in the Lutsel K'e territory as a National Park Reserve covering 27,000 km², and through several candidate protected areas in the Dehcho Region, including Edézhíe covering 14,250 km², Sambaa K'e covering 10,600 km², and Ka'a'gee Tu covering 9,600 km².

3 Comparison of outcomes achieved through Indigenous guardian work in Canada and Australia

3.1 Overview

This section compares the outcomes achieved through Indigenous guardian work in Canada and the equivalent 'Ranger' work in Australia through the Indigenous Protected Areas (IPAs) SROI analysis for the Department of Prime Minister and Cabinet.

3.2 Overview of Indigenous ranger work in Australia

Since 1997 and 2007 respectively, the Australian Government has formally engaged Indigenous Australians in the conservation of Indigenous land and sea through the Indigenous Protected Areas (IPA) and Working on Country (WoC) programs.

The IPA program supports Indigenous landowners to use land and sea management as a framework for achieving employment and conservation outcomes. An IPA is formed when traditional owners voluntarily develop a plan of management and enter into an agreement with the Australian Government to manage their land or sea country for conservation with government support. By participating in this program, Indigenous ranger groups are able to leverage significant partnerships and access a network of Indigenous rangers across the country for advice and support.⁸

The WoC program complements the IPA program, funding groups of rangers to care for land and sea in accordance with agreed plans of management. Through the WoC program, nationally accredited training and career pathways for Indigenous people in land and sea management are provided in partnership with others.⁹

It is worth noting that much of the land and sea in the communities studied in Australia were in various states of ill health at the commencement of these programs due to widespread degrading pressures (including having been ravaged by wildfires, weeds, and/or ferals). Active and continuing land and fire management techniques are required to restore its health. As a result, common activities conducted by Rangers included prescribed burning, managing feral animals, controlling invasive weeds, managing tourists, collaborating with researchers, and protecting threatened species.

3.3 Comparison of outcomes

As discussed previously, due to time and resource constraints, stakeholder consultations in Canada were limited to the primary beneficiaries of the program, including:

1. Guardians
2. Community members
3. Government, and
4. Non-Government Organisation (NGO) partners.

As such, this section will focus on the comparison of the outcomes achieved in Canada and Australia for only these groups.

⁸ PM&C Working on Country and Indigenous Protected Areas programmes 2013-14 annual report, p4.

⁹ *ibid*, p5.

1. Guardians

A summary of the outcomes (changes) experienced by Indigenous Guardians in Canada and Indigenous Rangers in Australia is included in Table 3.1.

Material outcomes in Canada	Material outcomes in Australia
1.1 Increased skills	1.1 Increased skills
1.2 Increased confidence	1.2 Increased confidence
1.3 Increased income (new)	1.3 Better health and wellbeing
1.4 Better health and wellbeing	1.4 Increased pride and sense of self
1.5 Increased pride and sense of self	1.5 Better caring for country
1.6 Better watching over land and water	

Table 3.1 – Material outcomes realised for Guardians in Canada and Australia. Outcomes in bold and labelled '(new)' are outcomes that are unique to Canada. Outcomes in italics and labelled '(not seen in Canada)' are outcomes that were seen in Australia but not in Canada.

Differences in social and economic outcomes

The material social and economic outcome that has been generated for community members in Canada but not Australia is:

- Increased income

In Australia, Rangers had more, albeit still limited, opportunities for alternative employment as even the most remote communities often lived in towns with road access to larger centers. In Canada, some of the communities studied are isolated, fly-in villages, and as a consequence, more likely to remain in place where employment opportunities are few and far in between. The ability to find meaningful employment in the community that recognizes and rewards traditional knowledge and skills was seen to be a significant source of value.

2. Community members

A summary of the outcomes (changes) experienced by community members in Canada and Australia is included in Table 3.2.



Material outcomes in Canada	Material outcomes in Australia
2.1 More role models for young people	2.1 More role models for young people
2.2 Less crime	2.2 <i>Rangers and their families live on country (not seen in Canada)</i>
2.3 Increased access to traditional foods (new)	2.3 Less violence
2.4 Increased capacity for self-determination (new)	2.4 <i>IPA leveraged for additional funding and economic opportunities (not seen in Canada)</i>
2.5 Increased respect from non-Indigenous community	2.5 <i>Increased respect for women (not seen in Canada)</i>
2.6 Better cultural asset management	2.6 Increased respect from non-Indigenous community
2.7 Relationship with land and water strengthened	2.7 Better cultural asset management
2.8 Culture and language conserved	2.8 Connection to country strengthened
2.9 Greater awareness of activity on land (new)	2.9 Culture and language conserved
	2.10 <i>More burning using cultural practices (not seen in Canada)</i>
	2.11 <i>Less noxious weeds (not seen in Canada)</i>
	2.12 <i>Less ferals (not seen in Canada)</i>

Table 3.2 – Material outcomes realised for Community members in Canada and Australia. Outcomes in bold and labelled '(new)' are outcomes that are unique to Canada. Outcomes in italics and labelled '(not seen in Canada)' are outcomes that were seen in Australia but not in Canada.

Differences in social and economic outcomes

The material social and economic outcomes that have been generated for community members in Australia but not in Canada are:

- Rangers and their families live on country
- IPA leveraged for additional funding and economic opportunities
- Increased respect for women

In the Indigenous communities studied in Canada, Guardians and their families have not left and continue to live on their traditional lands. As a result, this outcome was not seen as a change in the Canadian context.

In Australia, the Federal Government provides consistent funding and support that has been leveraged to secure additional funding and economic opportunities on a multi-year (3-5 year term) contractual basis. In Canada, Indigenous communities also hope to be able to leverage and secure additional funding and economic opportunities. However, given that funds have so far been cobbled together on an annual basis, they have not yet been able to realise this outcome.

The outcome 'increased respect for women' was not seen to be material in the Canadian context. This is not because the Dene people respect their women any less, but it is rather a reflection of the patriarchal culture of the Indigenous communities studied in Australia. In contrast, the standing of men and women in the Indigenous communities studied in Canada were seen to be more equal, with communities counting female chiefs in their lineage. Therefore this outcome was not considered a change that resulted from the investment in the Canada.

The material social and economic outcomes that have been generated for Community members in Canada but not in Australia are:

- Increased access to traditional foods
- Increased capacity for self-determination

The differences in social and economic outcomes seen in Canada and Australia relate to the unique contexts in which these programs operate and these communities live. The Indigenous communities studied in Canada rely heavily on traditional foods to supplement their diets, and guardian work is used as an opportunity to practice traditional relationships with land and water and to bring what game or fish is caught back to the community to share.

The outcome of ‘increased capacity for self-determination’ is an outcome that has been achieved in Canada by virtue of their self-organisation of these programs. It is a long-term outcome that has not yet been achieved in Australia.

Differences in environmental outcomes

The material environmental outcomes that have been generated for Community members in Australia but not in Canada are:

- More burning using cultural practices
- Less noxious weeds
- Less ferals

The material environmental outcomes that have been generated for Community members in Canada but not in Australia are:

- Greater awareness of activity on land

The differences in outcomes relate to the unique context in which these communities live. In Canada, Guardians referred to their activities as ‘stewarding’ the land and water, recognising the fairly intact state of the land and water and the natural ability of the harsh and unforgiving environment in Canada to restore itself. In contrast, Rangers in Australia referred to their activities as ‘managing’ the land and water, recognising the need for more active land and fire management techniques to combat the wildfires, weeds, and ferals that would otherwise proliferate the landscape.

This difference in context may be a point-in-time, as evidence of the observed impacts of climate change is accumulating quickly in the Canadian North. Communities and their partners in Canada may find that management activities around climate-driven changes such as wildfire, etc. become an important part of Guardian work in the future. The current role of Guardians involved in monitoring and traditional knowledge work may provide important information about the need for more active management strategies in this area.

3. Government

A summary of the outcomes (changes) experienced by Government in Canada and Australia is included in Table 3.3.

Material outcomes in Canada	Material outcomes in Australia
3.1 Guardians are skilled and trained	3.1 Rangers are skilled and trained
3.2 Additional funding leveraged (new)	3.2 <i>Reduction in income support payments (not seen in Canada)</i>
3.3 Data monitoring using TK (new)	3.3 <i>Increase in income tax (not seen in Canada)</i>
	3.4 <i>Effective governance of Indigenous corporations (not seen in Canada)</i>
	3.5 <i>Less offending by Rangers (not seen in Canada)</i>
	3.6 <i>Improved engagement with communities (not seen in Canada)</i>
	3.7 <i>Partnership model promoted (not seen in Canada)</i>
	3.8 <i>Greater respect for TEK (not seen in Canada)</i>
	3.9 <i>Low cost land management (not seen in Canada)</i>

Table 3.3 – Material outcomes realised for Government in Canada and Australia. Outcomes in bold and labelled ‘(new)’ are outcomes that are unique to Canada. Outcomes in italics and labelled ‘(not seen in Canada)’ are outcomes that were seen in Australia but not in Canada.

Differences in social and economic outcomes

The material social and economic outcomes that have been generated for Government in Australia but not in Canada are:

- Reduction in income support payments
- Increase in income tax
- Effective governance of Indigenous corporations
- Less offending by Rangers
- Improved engagement with communities
- Partnership model promoted

The above outcomes were not observed in Canada. This is likely due to the limited scale and relative novelty of Indigenous guardian work in Canada compared to in Australia. It also likely reflects the modest involvement of Government in Canada in these programs compared to in Australia, where Indigenous land and water stewardship is a nationwide program backed by the Federal Government and also supported to varying degrees by state governments, NGOs, corporate partners, and self-generated income streams. With additional investment and national support, these outcomes may also be achieved in Canada

In Australia, there is evidence of a correlation between active participation in land and sea management and improved key health indicators.¹⁰ Similar results were not observed in the Canadian context, but may well exist. This may warrant additional study.

Differences in environmental outcomes

The material environmental outcomes that have been generated for Government in Australia but not in Canada are:

¹⁰ Christopher P Burgess et al., Health country, healthy people: the relationship between Indigenous health status and “caring for country.” *Med J Aust* 2009; 190(10):567-572.

- Greater respect for Traditional Ecological Knowledge
- Low cost land management

The material environmental outcomes that have been generated for Government in Canada but not in Australia are:

- Additional funding leveraged
- Data monitoring using TK

'Greater respect for Traditional Ecological Knowledge' was not seen to be an outcome that was material in Canada. This is not because the Canadian Governments do not respect TK but rather a reflection of the respect they had for TK even prior to the commencement of Indigenous guardian programs. The GNWT's Traditional Knowledge Policy, which, as previously discussed, recognises the value of and seeks to incorporate TK where possible, was passed in 1997, well before Indigenous guardian programs were established. As a result, it was deemed that the relevant outcomes to be measured in Canada are the value ascribed to data monitoring using TK which helps fulfil the mandate of the Traditional Knowledge Policy and the additional funding leveraged through the NWT CIMP program, which uses TK.

'Low cost land management' or the equivalent 'Low cost data monitoring' is achieved in Australia with the effective utilization of Rangers as a widely distributed, highly skilled workforce that can be mobilized to do management work at much lower cost than would be possible by a centralized agency. This has proven to be effective in managing fire regimes over large areas resulting in reduced wildfire, greater biodiversity protection, carbon pollution control, reduction of feral animal impacts on biodiversity, control and limitation of negative impacts of weeds on biodiversity and fire, and a much better information base through collaborative research projects. Most of these benefits are either just being developed or have not yet been realised in the Canadian context. This outcome is anticipated to be achieved with time and additional training.

4. NGO partners

A summary of the outcomes (changes) experienced by NGO partners in Canada and Australia is included in Table 3.4 below.

Material outcomes in Canada	Material outcomes in Australia
4.1 Access to support and advice	4.1 Deeper connections and relationships
4.2 Better meet core environmental objectives	4.2 Better meet core biodiversity objectives

Table 3.4 – Material outcomes realised for NGO partners in Canada and Australia. Outcomes in bold and labelled '(new)' are outcomes that are unique to Canada. Outcomes that have been crossed out are outcomes that were seen in Australia but not in Canada. Outcomes in italics and labelled '(not seen in Canada)' are outcomes that were seen in Australia but not in Canada.

Outcomes for NGO partners were similar in Canada and Australia.



4 Current and potential future value of Indigenous guardian work in Canada

4.1 Overview

This section assesses the current and potential future value of Indigenous guardian work in Canada.

4.2 Methodology

Calculating the investment

The investment included in this analysis is a valuation of all the inputs required to achieve the outcomes that have been described, measured, and valued. For the purpose of this analysis, the investment includes the value of financial (cash) investment over the eight-year period between FY09 and FY16 as well as the in-kind (non-cash) investments that were found to be material.

Measuring and valuing the change

In order to estimate the current and potential future value of Indigenous guardian work in Canada, efforts were made to first measure and then value the change that has occurred.

Measures of the change that has occurred was inferred through stakeholder consultation and other quantitative data. Where possible, we have estimated the extent to which outcomes have occurred through the use of quantitative data previously collected by program staff or by other sources. The measures have also been deeply informed by stakeholder consultation.

Once the extent of change was measured, financial proxies were used to value all material outcomes. This valuation was completed in accordance with the Social Value principle of valuing what matters. This means that there is a need to value outcomes even if they do not carry a commonly agreed or understood market value.

There are a number of techniques used to identify financial proxies and value outcomes. The techniques used are presented in Appendix A6. Importantly, in accordance with Social Value principles, the financial proxy reflects the value that the stakeholder experiencing the change places on the outcome. This could be obtained directly through stakeholder consultation, or indirectly through research. Where appropriate, we have also drawn on financial proxies used in the Australian analysis. The financial proxies approximate the value of the outcome from the stakeholder's point of view.

Two commonly used approaches, often used in tandem, are the revealed and stated preference techniques. Financial proxies are inferred through the revealed preference technique from the value of related market prices. For instance, when Jake Basil – a former Guardian of the Ni Hat'ni Dene program – described an increase in his confidence resulting from working on the land and interacting with visitors, he explained that he was now far more comfortable speaking to visitors about himself, his land, and his culture. An appropriate financial proxy in that case might therefore be the cost of a public speaking course.

"We did training in interpersonal skills, communication skills, and data collection... [The program] really built me up, gave me skills."

Jake Basil, Ni Hat'ni Dene guardian

Stakeholders were further asked to identify the relative importance of outcomes – their stated preference – to ensure that the financial proxies used were in line with the relative value placed on those outcomes by stakeholders.



One of the principles of SROI is to not over-claim. This is typically accomplished by adjusting for deadweight, displacement, and attribution. In this analysis, stakeholder consultations suggested that the outcomes identified and measured were as a direct result of the investment (no deadweight), did not replace other value being created (no displacement), and were not a result of other contributions (no attribution). Therefore no adjustments to the financial proxies were needed.

Estimating the value

The total value for each outcome was calculated by taking into account the following components:

- Quantity – how much of the outcome happened
- Financial proxy – the value of the outcome

4.3 Investment

The total financial (cash) and in-kind (non-cash) investment over the eight years investment was approximately \$4.5 million.

Investment Summary

Table 4.1 and Figure 4.1 include a summary of the investment for Indigenous guardian work in Lutsel K'e and the Dehcho region.

Stakeholder	Total	Notes
Community	\$344,280	Includes funding from Lutsel K'e Dene First Nation (100%)
Government	\$3,932,748	Includes funding from Parks Canada (5%), the Department of Fisheries and Oceans (8%), and GNWT (87%)
NGO partners	\$240,000	Includes funding from conservation donors (100%)
Total	\$4,517,028	

Table 4.1 – Investment by stakeholder group, FY09-FY16



Figure 4.1 – Investment by stakeholder group, FY09-16.

4.3 Current value of Indigenous guardian work in Lutsel K'e and the Dehcho region

The combined value of the outcomes by stakeholders is estimated at \$11.1 million over the eight-year investment period. The greatest value is created for Community members, particularly those employed as Guardians, and for Government.

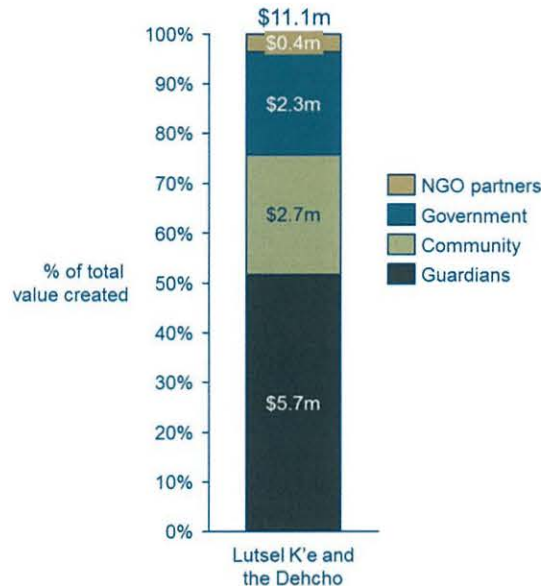


Figure 4.2 – Value of outcomes by stakeholder

Guardians and Community members

Guardians and Community members were the primary beneficiaries of the program and have achieved significant positive outcomes:

- The most significant outcomes for Guardians relate to their increased pride and sense of self and the opportunity to earn additional income. This speaks to the unique opportunity afforded by Indigenous guardian work for people to be ‘paid to be Dene, paid to be who they are’.
- Community member engagement with the land and water is a substantial contributor to value created through Indigenous guardian work, particularly where cultural activities precipitate the transfer of knowledge in relation to land, culture, and language.
- The increased capacity for self-determination is also seen to be a key source of value for Community members.
- The total combined value created for Guardians and Community members is \$8.4 million.

Government

While it is too early to realise some of the outcomes that are expected to be achieved, some positive outcomes are already being achieved:

- More Indigenous people are working as Guardians and being trained for other local jobs in their communities.
- Through partnership with Indigenous guardian groups, Government has been able to leverage significant partner funding at a ratio of 3:1 for every dollar invested in support of joint environmental monitoring work.
- Government has been able to work with partners to conduct monitoring activities using TK, which both allows it to fulfil its TK mandate as well as to ‘see with two eyes’ and develop a

stronger and more comprehensive understanding of impacts to the environment. This will guide more informed decision-making relating to land and water.

- The total value created for Government is \$2.7 million.

NGO partners

NGO partners also experienced material outcomes as a result of Indigenous guardian work. The total value created for NGO partners is \$0.4 million.

Comparison of value by stakeholders in Canada and in Australia

There are some notable differences when we compare the value generated by stakeholders in Lutsel K'e and the Dehcho region with the value generated by stakeholders in the five IPAs studied in Australia.

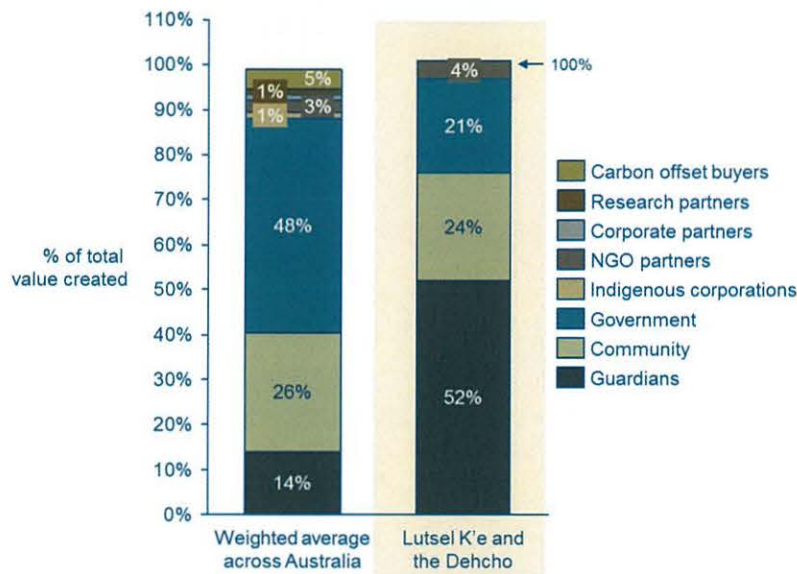


Figure 4.3 – Proportion of value generated by stakeholder in Australia and Canada

Of note, the proportion of value generated for Guardians and community members in Lutsel K'e and the Dehcho region are significantly higher than in Australia, reflecting in part the value of increased capacity for self-determination through self-organisation of the guardian programs, and in part the comparatively smaller value that is realised by Government. In contrast with Canada, the Australian Government is the principal investor in the Australian IPAs and is understandably a significant beneficiary there.

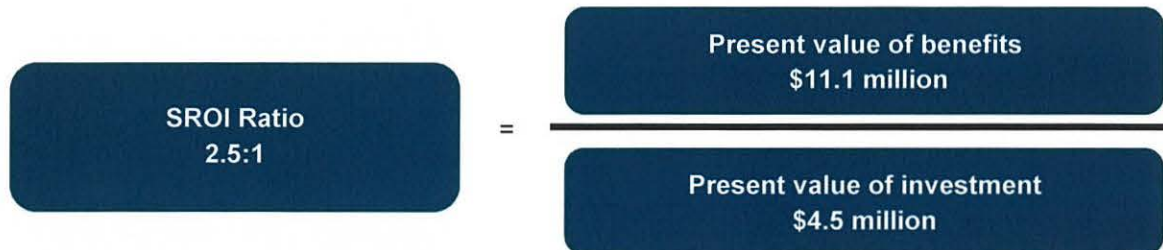
4.4 Calculating the Social Return on Investment (SROI) ratio of Indigenous guardian work in Lutsel K'e and the Dehcho region

An SROI ratio was generated by comparing the total value of the outcomes experienced by stakeholders to the investment required to create the value over the same eight-year period.



Indigenous guardian work in Lutsel K'e and the Dehcho has delivered an SROI ratio of 2.5:1 based on the investment across eight years between July 2008 and June 2016.

That is, for every \$1 invested, approximately \$2.5 of social, economic, cultural, and environmental value has been created for stakeholders.



When interpreting the SROI ratio, the following should be considered:

- The values for the outcomes created are estimates and provide an indication of the value that was generated through Indigenous guardian work in Lutsel K'e and in the Dehcho region
- The SROI ratio represents the additional value created, based on Social Value principles. This is the unique value that is created by Indigenous guardian work in Lutsel K'e and in the Dehcho region attributable to the investment for this specific period
- SROI ratios should not be compared without having a clear understanding of the mission, strategy, theory of change, geographic location and stage of development. A judgement about investment decisions can only be made when using comparable data.

Limitations of SROI

While the breadth and depth of the consultation process provides a compelling picture of the impact of the Indigenous guardian work in Canada, it is important to consider the limitations of this analysis.

The key limitations concern the lack of accurate data available to measure outcomes, particularly for Guardians and community members, and the involvement of other organisations in achieving the identified outcomes. To help overcome these limitations and inform assumptions, SVA Consulting drew on the rich information provided through the stakeholder engagement process as well as on the Australian analysis and other existing research, and made conservative assumptions where necessary.

The scope of stakeholders interviewed was also limited to those who were considered the primary beneficiaries of the program, namely Guardians, community members, Government, and NGO partners. There may be other stakeholder groups that have experienced material benefits. Therefore this analysis is likely to represent a conservative estimate of the value that was created.

4.5 Potential future value of Indigenous guardian work in Lutsel K'e and the Dehcho region

Throughout the consultation, many stakeholders emphasized that the programs are still in the early stages of development and that significant value can be generated with a few modifications to the programs. We have therefore tested some scenarios to assess the potential future value of Indigenous guardian work.

The specific scenarios tested were:

1. **Year-round, full-time guardian work is made available:** Sufficient resources are provided to enable each of the current guardians to engage in full-time work year-round. It also assumes that the guardian program currently being set up in the Dehcho region is running at full capacity over the eight years of investment.
2. **Scenario 1 and the quality of data from monitoring activities improves:** In addition to Scenario 1, additional training is provided to guardians to enhance the quality of data from their monitoring activities
3. **Scenario 2 and a diversified conservation economy is established:** In addition to Scenario 2, a diversified conservation economy is built through the establishment of protected areas such as the pending Thaidene Nene (“land of our ancestors”) National Park. Capital and ongoing investment is provided to set up infrastructure and to cover ongoing operational costs, such as wages, goods, and services. The local economy is enhanced with sustainable ecotourism opportunities.

The SROI ratios estimated for the base case, Scenario 1, and Scenario 2 are:

	Base case	Scenario 1: Year-round work	Scenario 2: Scenario 1 & training
Investment (\$)	4,517,028	8,644,961	8,676,961
Value created (\$)	11,079,895	25,536,866	32,075,398
SROI ratio	2.5:1	3.0:1	3.7:1

Table 4.2 – Investment, value created, and SROI of base case and scenarios

A breakdown of the value created by outcome and by scenario over the period of investment is presented in Appendix A7.

Increased investment in the capacity of these programs, such as year-round work and training, should result in an improved return on investment.

In addition, an investment in a diversified conservation economy has the potential to generate significant value. Such investment is likely to not only generate more of the outcomes already realised and some of the longer-term outcomes articulated in the theory of change, but it is also likely to result in a whole host of other outcomes not articulated in the theory of change. For instance, the investment required to set up a diversified conservation economy and the income generated through a diversified conservation economy is likely to have a multiplier effect on the economy. The size of this multiplier will depend on a number of factors, including where and with whom organisations spend their money, and where and how suppliers and employers re-spend their incomes.

The value that can be created through a diversified conservation economy is likely to depend on the amount of investment that is provided and the specific form it takes. It was not deemed appropriate to estimate the value and return on investment using the theory of change outlined in this report as it is likely inadequate to capture the vast changes that would occur

The potential value that can be generated as a result of a diversified conservation economy has been previously explored elsewhere in *Thaidene Nene – Land of our ancestors: Business case*.¹¹ In that report, potential economic benefits expected to be generated included new full-time and seasonal

¹¹ Cathy Wilkinson, *Thaidene Nene – Land of our ancestors: Business case*, 2013.

jobs in park operations and in tourism, new capital infrastructure investment with flow-on benefits for local builders and suppliers, and ongoing operational funding.

4.6 Potential future value of Indigenous guardian work if scaled nationally

There is extensive demand for Indigenous guardian work both within the communities studied and nationally. In the communities studied, only about 30-40% of applicants were accepted into guardian positions. Many of those who were guardians expressed an interest in doing guardian work year-round. Nationally, at least 30 Indigenous guardian programs have been established or are in the process of being established in locations ranging from the British Columbia coast to the Yellowknife region to Labrador.

National support for these programs is recommended to sustain the positive outcomes that are already being achieved and to meet the high demand for Indigenous guardian work.

Indigenous guardian work have provided opportunities for Indigenous guardians to deepen their connection with their culture, land, and water while engaging in meaningful employment that values traditional knowledge and pays them 'to be Dene, to be who they are.' Guardian work is seen as part of a broader vision where practicing and strengthening indigenous culture creates sustainable livelihoods and opportunities for communities to share their culture, land, and water with other Canadians.



5 Key lessons from Australia for growing the impact of Indigenous guardian work in Canada

5.1 Overview

This section discusses key lessons from Australia in relation to growing the impact of Indigenous guardian work in Canada.

5.2 Key lessons from Australia applied to Canada

National Government-backed Indigenous guardian programs have been in operation in Australia for almost 20 years now. By contrast, Indigenous guardian work in Canada is still emerging

The following presents key lessons from Australia that may be useful to bear in mind as Canada considers its involvement in growing the impact of Indigenous guardian work.

Key lessons from Australia applied to Canada

Program design:

1. A critical reason why the IPA and associated guardian programs have been so well-received in Australia is that they are consultative and voluntary in nature

Individual circumstances:

2. History, location, and landscape are all contributing factors when understanding the extent of change that is likely to occur in each IPA

Value creation:

3. The creation of value for a range of stakeholders is directly tied to investment in meaningful employment opportunities for Guardians on land and water
4. Indigenous guardian work can be a catalyst for deep and long-term partnerships with Government and other partners

Return on investment:

5. Long-term investment promotes significant, sustained change
6. Investment in training to build management capacity and technical land and sea management skills drives sustainable value creation

Evidence base:

7. A shared (but flexible) measurement and evaluation framework based on the theory of change articulated in this report may be useful for guiding the establishment of an evidence base of outcomes in Canada. Significant investment may be required to support measurement and evaluation capacity and capability on the ground

Program design

1. ***A critical reason why the IPA and associated guardian programs have been so well-received in Australia is that they are consultative and voluntary in nature***

In Australia, the process of establishing and committing an IPA is highly consultative and entirely voluntary. Indigenous groups are provided funding during an open-ended consultation period in which they can decide whether to proceed to IPA declarations or not. If they choose to proceed, any commitments made by Indigenous communities to manage their land and water are set out in a negotiated contractual arrangement between both parties, rather than by unilateral statutory action on

the part of the Government. This has built significant trust with Indigenous groups and allowed for more collaborative relationships.

Individual circumstances

2. *History, location, and landscape are all contributing factors when understanding the extent of change that is likely to occur in each IPA*

Not all of the outcomes identified in the theory of change will be relevant to each program or location. For instance, the nature of the landscape and the particular community context is likely to dictate which activities are needed to care for the land and water and the value that may be generated.

Value creation

3. *The creation of value for a range of stakeholders is directly tied to investment in meaningful employment opportunities for Guardians on land and water*

Guardians working on land and water are the foundation upon which almost all outcomes are based. The value created by Indigenous guardian programs is, therefore, largely proportional to the size of investment in guardian employment opportunities:

When Guardians work on country, they experience personal benefits including increased skills and confidence, and better health and wellbeing.

Community members benefit from Guardians' activities through reassurance that land and water are being looked after and protected, through an increased access to traditional foods, and through the transfer and conservation of culture and language that occurs while Guardians are working on the land and water. As a result, all of the outcomes experienced by community members are related to Guardians' activities.

Similarly, all Government outcomes are linked to Guardian work on country because of its flow-on effects, including skilled Guardians, additional leveraged funding, and access to TK.

4. *Indigenous guardian work can be a catalyst for deep and long-term partnerships with Government and other partners*

Through partnership with Indigenous guardian programs, Government is already realising significant value from additional leveraged funding at a ratio of 3:1 for every dollar invested. NGO partners are also realising significant value from being able to better meet core environmental outcomes.

In Australia, through their engagement with the IPAs, Government and partner organisations are able to build deeper relationships in community to better meet their core objectives, while Guardian and community members benefit from additional funding and economic opportunities. As a result, the quantity and quality of partnerships with Government and other partners can be key sources of value for both Indigenous communities and partners.

Successful partnerships are based on recognition of shared values and mutual benefits. The IPAs in Australia that were able to generate the greatest value from partnerships invested significant time and resources into building and maintaining those partnerships. Without sufficient resources to invest in partnership coordination and management, it will be difficult for groups to leverage Guardian work to their full potential.

Return on investment

5. *Long-term investment promotes significant, sustained change*

The IPAs studied in Australia showed varying stages of progress along the theory of change, and some of have achieved more advanced outcomes than other IPAs. This is most likely to be on account of either additional time since project inception, resources, or changing community circumstances (or all of them).

In discussions with Guardian groups and managers of several IPA projects in Australia, a consensus emerged that there is likely to be a ‘threshold’, beyond which investment in Indigenous guardian work will increase in efficiency. That threshold will differ on account of individual circumstances – e.g. location, landscape, and personnel.

6. *Investment in training to build management capacity and technical land and water monitoring skills drives sustainable value creation*

In order to ensure that Government funding effectively seeds further investment from other sources, sufficient up-front and ongoing core support investments in management capacity is critical. If Indigenous guardian programs are to leverage outside funding, the brokerage of new partnerships and the management of grants and reporting can require a significant investment of time and resources. Additional and effective management capacity was seen to be a key distinguishing factor between IPAs in Australia that were able to leverage a range of valuable partnerships and those that struggled to do so.

Furthermore, unless Guardians receive appropriate training to build their technical land and water monitoring skills, the return associated with positive Guardian outcomes is likely to plateau. Many Guardians bring with them TK skills. However, training in Western scientific techniques and practical technical skills are also needed to ensure they are able to ‘see with two eyes.’

Evidence base

7. *A shared (but flexible) measurement and evaluation framework based on the theory of change articulated in this report may be useful for guiding the establishment of an evidence base of outcomes in Canada. Significant investment may be required to support measurement and evaluation capacity and capability on the ground*

The theory of change presented in this report provides insight into the outcomes that have been achieved and that matter most to stakeholder groups such as Guardians, community members, Governments, and NGO partners. It can provide a basis for planning future measurement improvements and developing an understanding of the cross-sector outcomes being generated through Indigenous guardian work.

As with the Australian analyses, a limitation of this project was the absence of data to support the measurement of outcomes that we understood – through consultation – were being achieved. Project staff were only able to provide limited payroll and financial data, which in some cases was patchy and necessitated modelling work to arrive at basic indicators. The use of threshold assumptions, based on stakeholder consultation, was often required to measure the achievement of outcomes.

For Government to truly understand the full extent of outcomes that are being achieved through Indigenous guardian work, it will be helpful to develop a shared (but flexible) measurement and evaluation framework for use by Indigenous guardian programs, Governments, and third party investors. Such a framework would provide a common set of indicators, guiding Indigenous organisations in their understanding of the information that they could be capturing to prove and improve the impact of their work. When consolidated, Government would receive far better information about the impact of Indigenous guardian work across various domains.

Significant investment may be required in improved measurement and evaluation capacity and capability on the ground. In particular:



- Significant investment may be required to provide Indigenous organisations with the tools required to measure outcomes in a way that is not overly burdensome (e.g. hardware and software to capture data, hands-on training, and on-going support).
- Significant work may be required within Government to coordinate relevant departments and agencies to capture and make available relevant health, justice, employment, education, housing and family and community services data. Having a single lead entity within Government is understood to be essential to ensure that effective delivery occurs and that there is accountability for tracking the outcomes of the investments in these programs.

Once a process for data collection has been developed and implemented, Government could consider the applicability of a 'data-labs' model, as has been successfully trialled in the United Kingdom, to make aggregated, anonymised data available to Indigenous guardian programs for the purposes of benchmarking.

6 Conclusion

This report has considered the nature and value of changes resulting from investment in Indigenous guardian work in Lutsel K'e and the Dehcho region, drawing on the SROI methodology. The analysis concluded that over the eight-year period of investment, an estimated \$11.1 million of social, economic, cultural, and environmental outcomes was generated from the original investment of \$4.5 million. This analysis supports the prevailing view – promoted in a range of previous evaluations and reports in the public domain¹² – that Indigenous guardian work has a profound positive effect on Indigenous people and their communities, Government, and other stakeholders.

Indigenous guardian programs support Indigenous people in their pursuit of self-determination, enabling them not only care for land and water but also to secure the Indigenous way of life for generations to come. These programs provide opportunities for Indigenous people to deepen their connection with their culture, land, and water while engaging in meaningful employment that values traditional knowledge and pays them 'to be who they are.' Concurrently, Federal, State, and Territorial Governments value the ability to access and use traditional knowledge in conjunction with Western scientific knowledge in environmental monitoring and conservation, enabling Government to 'see with two eyes' and make more informed decisions relating to land and water.

Additional investment in the capacity of these programs is expected to result in an improved social return on investment. In particular, additional funding for year-round, full-time work complemented by training to enhance the quality of monitoring activities can increase the amount of social, economic, cultural, and environmental value that is generated from \$2.5 for every \$1 of investment to \$3.7 for every \$1 of investment. An investment in building a diversified 'conservation economy' through protected area establishment and ecotourism has the potential to generate significant value through the creation of more jobs, capital infrastructure investment with flow-on effects to the local economy, and ongoing operational funding.

National support for these programs is recommended to sustain the positive outcomes that are already being achieved and to meet the high demand for Indigenous guardian work.

¹² See e.g. Gilligan, 2006; Smyth, 2011; The Allen Consulting Group, 2011; Urbis, 2012; Social Ventures Australia, 2014; Social Ventures Australia, 2016.

Appendices

A1. Social value principles

The SROI methodology was first developed in the 1990s in the USA by the Roberts Enterprise Development Fund, with a focus on measuring and evaluating organisations that provided employment opportunities to previously long-term unemployed. During the early to mid-2000s, the United Kingdom (UK) Office of the Third Sector provided funding to continue the development and application of the SROI methodology, resulting in the formation of the UK SROI Network (now Social Value UK).

The Social Value principles (previously known as the SROI principles) that guide SROI analyses were developed through Social Value UK. These principles, described in Table A1.1, form the basis of an SROI analysis.

Principle		Definition
1	Involve stakeholders	Stakeholders should inform what gets measured and how this is measured and valued.
2	Understand what changes	Articulate how change is created and evaluate this through evidence gathered, recognising positive and negative changes as well as those that are intended and unintended.
3	Value the things that matter	Use financial proxies in order that the value of the outcomes can be recognised.
4	Only include what is material	Determine what information and evidence must be included in the accounts to give a true and fair picture, such that stakeholders can draw reasonable conclusions about impact.
5	Do not over claim	Organisations should only claim the value that they are responsible for creating.
6	Be transparent	Demonstrate the basis on which the analysis may be considered accurate and honest and show that it will be reported to and discussed with stakeholders.
7	Verify the results	Ensure appropriate independent verification of the analysis.

Table A1.1 – Social Value Principles

For more information about the Social Value principles, please see: <http://socialvalueint.org/our-work/principles-of-social-value/>

A2. Project methodology

The analysis has been completed across six stages and is presented in Table A2.1 below. Although represented sequentially, the process is iterative by design.

Stage	Description
Stage 1 Scope project	<ul style="list-style-type: none"> Define the project scope including stakeholders, programs, and the period of investment Develop an initial theory of change drawing on theory of change developed for Indigenous guardian work in Australia
Stage 2 Understand the change	<ul style="list-style-type: none"> Consult with stakeholders to understand the outcomes were created through Indigenous guardian work and to test the relationship between objectives, inputs, and outcomes Refine the theory of change
Stage 3 Measure change	<ul style="list-style-type: none"> Identify and measure the outcomes that were created through Indigenous guardian work
Stage 4 Value change	<ul style="list-style-type: none"> Identify relevant indicators and financial proxies to value the outcomes, drawing on the financial proxies used in the Australia analysis Determine those aspects of change that would have happened anyway or are a result of other factors
Stage 5 Calculate the SROI	<ul style="list-style-type: none"> Calculate the value of the outcomes and compare to the investment
Stage 6 Reporting	<ul style="list-style-type: none"> Synthesise and present key findings

Table A2.1 – Project methodology

Stages 2, 3 and 4 (i.e. understand, measure and value stakeholder outcomes) are the key stages of analysis. As part of each stage, a number of questions need to be considered. These are outlined in Box A2.1 and are included to highlight the types of issues being addressed.

Understanding, measuring, and valuing change

Understand the change

- What is the theory of change?
- What are the changes that matter most to stakeholders?
- What are the changes that matter most to stakeholders and have occurred within the investment period being analysed?
- Have any negative or unintended changes occurred as a result of the investment?
- What are the links between the activities and different changes that are expected to be experienced by stakeholders?
- Are the changes consistent between stakeholder groups?

Measure the change

- How do we know if changes have happened?
- How do we measure changes for stakeholders when there is limited data and evidence available?

Value the change

- What is the relative importance of each change?
- What is the value of the changes that are experienced by different stakeholders?
- Using financial proxies, how valuable is a particular change?
- How long would the change last for (duration) and does it change over time (drop off)?
- Would this value have been created anyway (deadweight)?
- Who else is forecast to be contributing to the value being created (attribution)?
- Would this value creation displace other value being created (displacement)?

Box A2.1 – Understanding, measuring, and valuing change

A3. Interview guides

Basic interview guide

The following is a basic interview guide provided to Indigenous guardian program staff prior to consultation to help them understand what we were hoping to get out of our interviews with stakeholders. This was intended as a guide only; the intent was to have open-ended conversations wherever possible.

When meeting with people we will want them to answer five main questions:

1. What has changed for you because of guardian work?

Changes might be positive and/or negative and they might occur immediately or over a long period of time. Broadly speaking, those changes could be categorised as:

- Social (e.g. less drinking)
- Economic (e.g. increased reliable income)
- Cultural (e.g. preservation of cultural knowledge)
- Environmental (e.g. less ferals on country)

2. How much change has happened?

These changes might be big or small (e.g. five less fights per year; 10 weeks less drinking per year; three less hospital visits per year).

3. Who else has changed because of guardian work?

- Has your family changed?
- What about other people in the community? (e.g. old people who see the work that young people are doing)

4. How important are the changes?

- Which of these changes are most and least important?
- How valuable are they? (e.g. when compared to other changes or possessions to which a value might be easily ascribed)

5. How much is as result of guardian programmes?

- Would these changes have occurred if it weren't for guardian programmes?
- Have other organisations, programmes or services contributed to these changes?
- How long would the changes last if guardian work stopped tomorrow?

Detailed interview guide

Introduction

- Thank interviewee and introduce the SROI project
- State that they can stop the interview at any point
- Request permission to identify interviewees in report

Involvement with Indigenous guardian work

We need to understand the person's story/background, and identify what the change has been for each stakeholder group (or what they want to change) through their involvement with Indigenous guardian work.

History

Tell me about your:

- Background / story
- Involvement with Indigenous guardian work

Objectives

- Why did you become involved with Indigenous guardian work?
- What do you hope to achieve?

Inputs

- What have you given to the programs (e.g. time, cash) in order to achieve the desired outcomes?
- If volunteer/pro bono, how can this be valued (\$/hr)?

Activities

- What programs have you been involved with (including what specific activities)?
- What are the immediate consequences of your involvement in those programmes?

Outcomes

- What has changed for you as a result of being involved with Indigenous guardian work?
- Are you using other government or community services more or less since your involvement with Indigenous guardian work?
- What impact has this had on your life, your family's lives, your community, your land?
- Have there been any negative changes as a result of your involvement with Indigenous guardian work?
- If so, what are they?

Check on objectives and outcomes

The initial conversation might give us some insight into the outcomes that result from these changes but if they don't, drill down further into what the changes actually look like for this group in practice.

- What do you (or your family, or your community) do differently now, since becoming involved with Indigenous guardian work?
- How do the negative changes affect you (or your family, or your community)?
- What do you do differently?



A4. List of interviewees

Over the course of this project, 34 stakeholders were interviewed, including 27 stakeholders that were included in the analysis and seven stakeholders that were excluded from the analysis.

All stakeholders were interviewed either in person during two weeks of consultation in Yellowknife, Lutsel K'e, and the Dehcho region or by phone. Two Indigenous co-researchers were engaged to assist with stakeholder consultations for the Dehcho region.

A concerted effort was made to interview people of different ages and genders where possible. A breakdown of the 34 interviewees by stakeholder group appears in Table A4.1 below.

Stakeholder groups	Location	No. consulted
Guardians (young adult)	Lutsel K'e	3
	Dehcho	2
Guardians (adult)	Lutsel K'e	5
	Dehcho	1
Community members	Lutsel K'e	9
	Dehcho	5
Government	Yellowknife	1
NGO partner	Yellowknife	1
Program staff	Lutsel K'e	3
	Dehcho	4
Total		34

Table A4.1– Interviewees by stakeholder group and location



A5. Stakeholder groups

The stakeholder groups were defined in three stages:

1. A preliminary list of stakeholders was developed through group discussion with program staff and was used as a basis for stakeholder consultation.
2. Throughout stakeholder consultations the materiality of, and distinction between, changes experienced by different stakeholder groups was considered. The project team tested their emerging hypothesis with program staff throughout the consultation period.
3. Following stakeholder consultation, the stakeholder groups were revisited and refined.

The table below identifies the stakeholders and the rationale for including or excluding them from the SROI analysis.

Stakeholder Group	Included / Excluded	Rationale for Inclusion / Exclusion
Stakeholder 1: Guardians	Included	<ul style="list-style-type: none"> • Guardians are the primary beneficiaries of the Indigenous guardian work • Although a distinction between rangers based on age and gender was considered, stakeholder consultations revealed there was no material difference between the outcomes experienced by Guardians on this basis • Differences in the experiences of Guardians was attributable to time spent working with the programs • It is likely that a Guardian working on country fits within two stakeholder groups: Guardians and community members, which reflects both their job and their role within community • Outcomes achieved by Guardians are additional to those that are achieved by community members
Stakeholder 2: Community members	Included	<ul style="list-style-type: none"> • Community members are also primary beneficiaries of Indigenous guardian work • There was no material difference in the outcomes achieved by different community members based on age or gender hence no need to separate this group into sub-groups • Differences detected within community members reflects time spent engaging with land and water (including accessing the land and water, and participating in land-based cultural experiences) and interaction with Guardians • Indigenous guardian work impacts community members indirectly by exposing young people to role models and conserving culture and language
Stakeholder 3: Government, including the Canadian Federal Government and the Government of Northwest Territories	Included	<ul style="list-style-type: none"> • Indigenous guardian groups have received funds and in-kind support from Canadian Federal Government departments and agencies and the Government of Northwest Territories • The Government of Northwest Territories works closely with Indigenous guardian groups through joint monitoring activities, trainings, and workshops • The Government of Northwest Territories has been able

Stakeholder Group	Included / Excluded	Rationale for Inclusion / Exclusion
		to access additional leveraged funding through partnership with Indigenous guardian programs
Stakeholder 4: NGO partners	Included	<ul style="list-style-type: none"> Partnerships with NGO partners are long-standing and have contributed to multiple co-benefits including better watching over land and water

Table A5.1 –Stakeholder groups included or excluded from the SROI analysis

A6. Valuation techniques

The following valuation techniques were applied in this analysis to value outcomes:

Technique	Description and examples
Cash transaction	An actual cash saving or cash spent by the stakeholder group. For example: <ul style="list-style-type: none"> A reduction in welfare payments is a direct cash benefit to the Government
Value of resource reallocation	A programme or service results in outcomes that allow resources to be used in different ways. For example: <ul style="list-style-type: none"> A reduction in crime may not result in less cost to the justice system because there is not a change in the overall costs of managing the justice system (so it is not a “cash transaction”). However, a value can be placed on the amount of resources that can be reallocated for other purposes
Revealed preferences	This is when a financial proxy is inferred from the value of related market prices. This can be achieved in the following ways: <ul style="list-style-type: none"> Is there something in a stakeholder’s group behaviour that will reveal the value of an outcome? For example, we may observe that stakeholders with less depression are now socialising more and going out for dinner with friends. The financial proxy is therefore the value of the dinners Through stakeholder consultation, is there a similar service or programme that would achieve the same amount of change? This is often referred to as a “replacement valuation”
Stated preferences	This is when stakeholders are explicitly asked how much they value an outcome. This can be done in a number of ways: <ul style="list-style-type: none"> Stakeholders are asked their “willingness-to-pay” or willingness-to-avoid” to achieve the outcome These are hypothetical cash transactions. Stakeholders are asked to make a choice based on a series of options presented to them through “participatory impact” exercises. This can also be referred to as “choice modelling”.

Table A6.1 – Valuation techniques descripti



A7. Value by outcome and by scenario over the period of investment

Base case

Outcome	Value for outcome	Value per stakeholder
Guardians		
1.1 Increased skills	\$260,190	\$5,717,048 (52%)
1.2 Increased confidence	\$125,400	
1.3 Increased income	\$1,084,200	
1.4 Better health and wellbeing	\$137,520	
1.5 Increased pride and sense of self	\$2,620,058	
1.6 Better watching over country	\$1,489,680	
Community members		
2.1 More role models for young people	\$90,000	\$2,680,399 (24%)
2.2 Less violence	\$153,051	
2.3 Increased access to traditional foods	\$389,248	
2.4 Increased capacity for self-determination	\$435,600	
2.5 Increased respect from non-Ind.	\$21,600	
2.6 Better cultural asset management.	\$49,500	
2.7 Relationship with land strengthened	\$551,200	
2.8 Culture and language conserved	\$500,000	
2.9 Greater awareness of activity on land	\$490,200	
Government		
3.1 Rangers skilled and trained	\$396,783	\$2,271,531 (21%)
3.2 Additional funding leveraged	\$1,620,000	
3.3 Data monitoring using TK	\$254,748	
NGO partners		
4.1 Access to support and advice	\$200,000	\$410,917 (4%)
4.2 Better meet biodiversity objectives	\$210,917	

Table A6.1 – Value by outcome over the period of investment – Base case

Scenario 1: Year-round, full-time work is made available

Sufficient resources are provided to enable each of the current guardians to engage in full-time work year-round. It also assumes that the guardian program currently being set up in the Dehcho is running at full capacity over the eight years of investment.

Outcome	Value for outcome	Value per stakeholder
Guardians		
1.1 Increased skills	\$0 ¹³	\$13,265,251 (52%)
1.2 Increased confidence	\$388,740	
1.3 Increased income	\$5,212,133	
1.4 Better health and wellbeing	\$426,312	
1.5 Increased pride and sense of self	\$2,620,058	
1.6 Better watching over country	\$4,618,008	
Community members		
2.1 More role models for young people	\$279,000	\$7,974,101 (31%)
2.2 Less violence	\$593,073	
2.3 Increased access to traditional foods	\$389,248	
2.4 Increased capacity for self-determination	\$435,600	
2.5 Increased respect from non-Ind.	\$66,960	
2.6 Better cultural asset management.	\$49,500	
2.7 Relationship with land strengthened	\$1,708,720	
2.8 Culture and language conserved	\$500,000	
2.9 Greater awareness of activity on land	\$490,200	
Government		
3.1 Rangers skilled and trained	\$1,230,028	\$3,886,596 (15%)
3.2 Additional funding leveraged	\$1,620,000	
3.3 Data monitoring using TK	\$254,748	
3.4 Increased in income tax	\$781,820	
NGO partners		
4.1 Access to support and advice	\$200,000	\$410,917 (2%)
4.2 Better meet biodiversity objectives	\$210,917	

Table A6.2 – Value by outcome over the period of investment – Scenario 1

¹³ This value of this outcome is subsumed by the later related outcome 'Increased confidence.'

Scenario 2: Scenario 1 and the quality of data from monitoring activities improves

In addition to Scenario 1, additional training is provided to guardians to enhance the quality of data from their monitoring activities.

Outcome	Value for outcome	Value per stakeholder
Guardians		
1.1 Increased skills	\$0 ¹⁴	
1.2 Increased confidence	\$388,740	
1.3 Increased income	\$5,212,133	\$13,365,251
1.4 Better health and wellbeing	\$426,312	(41%)
1.5 Increased pride and sense of self	\$2,620,058	
1.6 Better watching over country	\$4,618,008	
Community members		
2.1 More role models for young people	\$279,000	
2.2 Less violence	\$593,073	
2.3 Increased access to traditional foods	\$389,248	
2.4 Increased capacity for self-determination	\$435,600	
2.5 Increased respect from non-Ind.	\$66,960	\$7,974,101
2.6 Better cultural asset management.	\$49,500	(25%)
2.7 Relationship with land strengthened	\$1,708,720	
2.8 Culture and language conserved	\$500,000	
2.9 Greater awareness of activity on land	\$3,952,000	
Government		
3.1 Rangers skilled and trained	\$1,230,028	
3.2 Additional funding leveraged	\$1,620,000	\$10,425,128
3.3 Data monitoring using TK	\$6,793,280	(33%)
3.4 Increased in income tax	\$781,820	
NGO partners		
4.1 Access to support and advice	\$200,000	\$410,917
4.2 Better meet biodiversity objectives	\$210,917	(1%)

Table A6.3 – Value by outcome over the period of investment – Scenario 2

¹⁴ This value of this outcome is subsumed by the later related outcome 'Increased confidence.'

The model used to analyse these scenarios is available upon request from the Indigenous Leadership Initiative. To obtain a copy, please contact:

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Professional disclosure statement

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