

An Evaluation System for Measuring Climate Action in the Bow Valley Region of Alberta

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INTRODUCTION

Non-profit organizations have emerged as pivotal players in the battle against climate change by raising awareness and implementing environmental protection projects in their region. The literature reviewed in this project highlights the necessity for nonprofits to demonstrate their success and efficiency to secure consistent funding (Privett & Erhun, 2011), while also maintaining transparency and accountability to their stakeholders (Carman, 2010; Ebrahim, 2010; Lecy et al, 2012). As a result, my study focused on identifying methods for the Biosphere Institute of the Bow Valley, a small climate-focused nonprofit in Alberta's Bow Valley Region, to effectively measure and showcase its impact on the community and the environment. This research was conducted by analyzing widely recognized sustainability reporting frameworks (GRI, ISSB, SASB, ESRS, CDP, SROI) alongside commonly used tools like the logic model.



RESEARCH QUESTION

What tools and methodologies are most effective for non-profit organizations to evaluate and enhance their climate action projects?

METHODS

Phase 1:

The following sustainability reporting standards were analyzed to identify best practices and commonalities that could inform the development of a new, comprehensive evaluation framework tailored to the needs of the Biosphere Institute of Bow Valley.

- Global Reporting Initiative (GRI)
- Sustainability Accounting Standards Board (SASB)
- International Financial Reporting Standards (IFRS)
- European Sustainability Reporting Standards (ESRS)
- Carbon Disclosure Project (CDP)
- Social Return on Investment (SROI)

Phase 2:

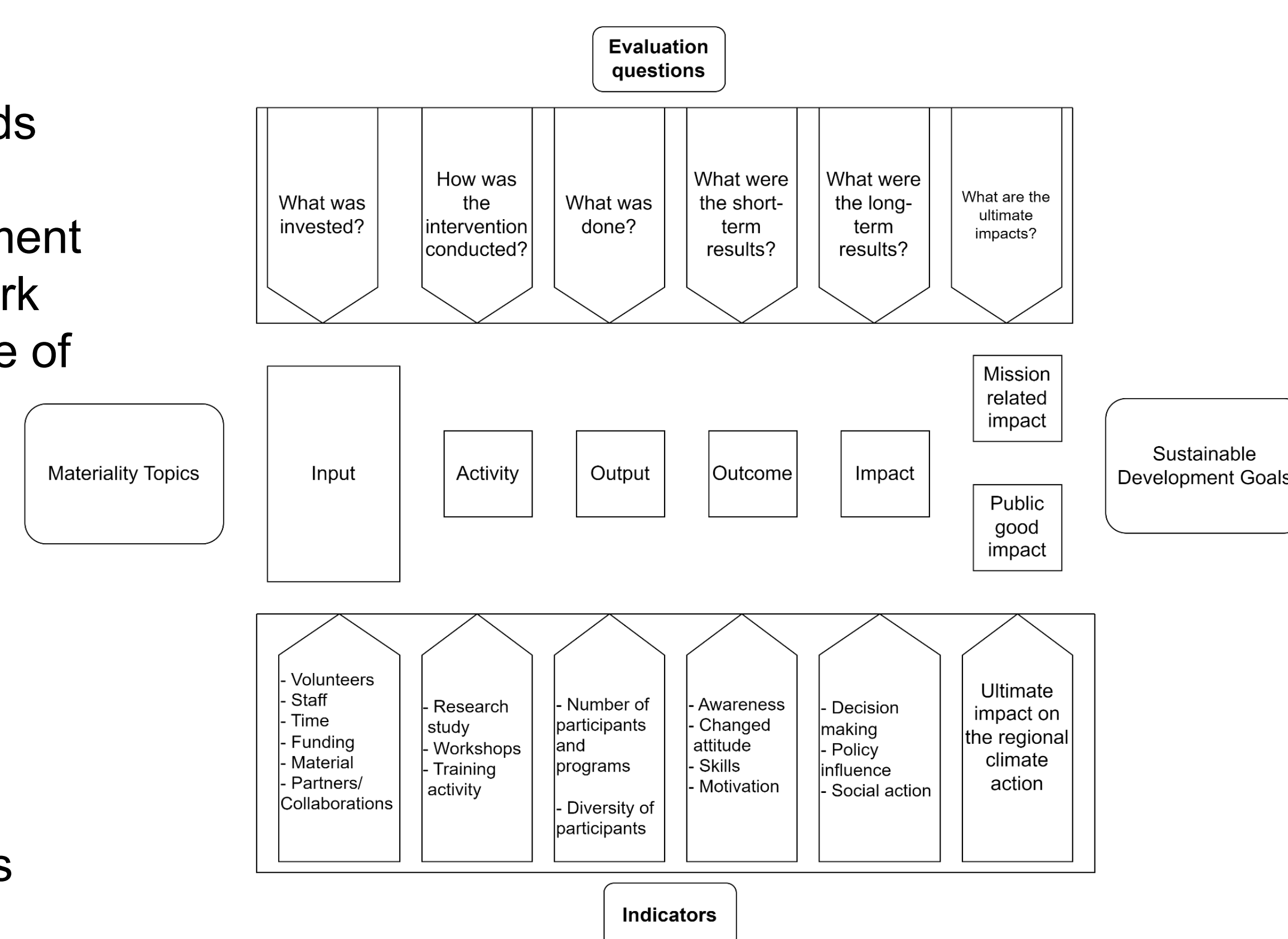
Phase 2 consisted of applying the findings from Phase 1 to the Biosphere Institute's climate initiatives. The methods used to collect data were surveys, interviews, research paper reviews, and internal data from the organization.

RESULTS

Table 1. Accelerating Climate Actions in the Bow Valley Evaluation System.

Evaluation System Components	Description
1. Organizational details	The organization details: the mission and vision, activities, and governance.
1. The goal of the evaluation	The goal of the evaluation framework and its importance.
1. The scope of the evaluation	The project's boundaries and key tasks – ensure all stakeholders have a clear understanding of what the project will and will not include.
1. Stakeholder engagement	Identify and map stakeholders involved in / affected by the initiative.
1. Materiality identification	Identify important material topics for the organization and its stakeholders.
1. Project description	A detailed overview of the project's key components.
1. Indicators	SMART indicators. (specific, measurable, achievable, relevant, and time-bound)
1. Logic model	The sequential relationship between the input, activities, outputs, outcomes, and impact of a program.
1. Data analysis	Examining data or information in detail to uncover deeper insights and support decision-making processes.
1. Conclusion/information sharing	Draw a useful conclusion and share insights with stakeholders.

Figure 1. The Accelerating Climate Action Logic Framework Template.



RESULTS

The evaluation system and logic framework were applied to five of the Biosphere Institute's climate-focused initiatives:

- **The Accelerating Climate Action in the Bow Valley (ACA) Community Events**
- **The Geo-exchange Feasibility Study**
- **The Construction Waste Diversion Program**
- **The Protocol for Soil Conservation and Management on Construction Sites**
- **The Earth Talks Events**

Geo-exchange Feasibility Study:

- Explored the viability of geo-exchange systems in the region.
- Analyzed hydrogeological characteristics, groundwater flow, soil/rock thermal properties, and building energy loads.
- Detailed economic aspects of installation and operation.
- Successfully showcased at the 2024 ASME Conference; TBD publication in the conference journal.

Construction Waste Diversion Program:

- Successfully implemented strategies to reduce landfill waste and promote circular economy practices.
- Set a precedent for future projects and potential policy influence.
- Generated interest in program expansion and inspired similar initiatives.

Protocol for Soil Conservation and Management:

- Recommended soil reuse during construction with a soil management database.
- Provided guidelines for recycling facilities, soil quality maintenance, and training.
- Potential to enhance the Construction Waste Diversion Program by integrating soil conservation.

Community Events (ACA & Earth Talks):

- Increased awareness and community engagement in local climate action.
- Suggestions to conduct a fall survey for better response rates and reliable data.

Overall Evaluation Insights:

- The projects evaluated were overall successful in terms of laying the groundwork for ongoing and expanded efforts in sustainable development, but assessing their effectiveness was limited by the lack of comprehensive data.
- A detailed financial analysis and stakeholder insights would be needed for a more rigorous evaluation. As well, a broader and longer application of the evaluation system is recommended for a more robust impact assessment and understanding of its effectiveness.

LIMITATIONS

- **Low survey response rate:** A major challenge due to time constraints and limited follow-up efforts, resulting in data that captures the views of only a small segment of participants and stakeholders.
- **Narrow scope of perspectives:** With responses from a limited group, the findings offer a less comprehensive understanding of the broader community's perspectives and the full impact of the initiatives.
- **Interpretation:** Given the low response rate, results should be interpreted with caution, as they may not accurately represent the wider community's views.

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