



# BEYOND ZERO HARM FRAMEWORK

A Participatory Process  
for Measuring Community  
Well-Being



Version 1.1

March 1, 2016



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# BACKGROUND & ACKNOWLEDGEMENTS

## Background – Where Did the Beyond Zero Harm Framework Come From?

The Beyond Zero Harm Framework was created by a group of participants from mining companies, civil society organizations and academics, who belong to the Devonshire Initiative – a collaborative forum for international development NGOs and mining companies. The Beyond Zero Harm (BZH) working group was established in 2013 and spent more than two years building a framework to address the gaps in the ways that companies approach measuring, understanding and discussing community well-being with host communities. The result is this framework, which the working group presents as a **'beta version' for piloting and testing (BZH version 1.1)**. The working group's intention is to revisit this version within three years and apply the results and input from pilot projects in various jurisdictions to revise and strengthen the framework.

The members of the working group represented their respective organizations, but the Beyond Zero Harm Framework is not a document of any specific company or organization. As almost all of the participants in the working group were members of the Devonshire Initiative (DI), The DI has kindly agreed to host the framework, while the members of the working group will continue to collectively promote the framework's use and collect feedback in order to improve future versions or help other companies/organizations implement it.

## Acknowledgments – Who Built the Beyond Zero Harm Framework?

The BZH Framework was developed through the truly collaborative efforts of the members of the working group, who are listed below. Members contributed their time, their ideas, and their expertise in an iterative, consensus-based process that reflects the collective experience of the group. This initiative was led by Aaron Steeghs (formerly of IAMGOLD) and Lauren Joseph (IAMGOLD), along with Michelle Hassen and Janet Fishlock of rePlan, an ERM Group company. These four wrote the bulk of the document, with specific contributions from Ed Opitz and Robyn Stewart. It should also be acknowledged that rePlan, which specializes in social assessment, advisory and management services (now part of ERM), made very generous contributions in the form of Michelle, Janet and others' time and expertise, as well as support for the formatting and publishing of the final document. Although some of rePlan's contribution was conducted as fee-based services, those fees were a fraction of the indispensable in-kind contributions.

The working group also used funds to cover the cost of consulting fees by both rePlan and by Dr. Trevor Hancock, a senior scholar/professor at the University of Victoria, who provided expertise on the development of the core indicators. Financial contributions to the development of the framework were made by IAMGOLD Corporation, Kinross Gold Corporation, Hudbay Minerals and the Mining Association of Canada.

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# INTRODUCTION

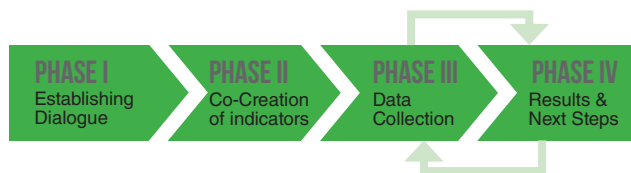
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# WHAT IS THE BEYOND ZERO HARM FRAMEWORK?

The Beyond Zero Harm Framework (BZH) is a participatory process for discussing, defining, measuring and analyzing community well-being. The framework was jointly developed by participants of the Devonshire Initiative, including mining companies, civil society organizations and academics, and is designed to address gaps in the collection of consistent and meaningful data on community well-being in locations where mining companies operate. The multi-stakeholder process on which the BZH Framework is based also aims to shift how companies participate in community development dialogue more broadly.

The Framework is laid out in four-phases and is designed to complement existing company initiatives for baseline data collection (such as Social Impact Assessments) as well as existing community planning and development processes.

Figure 1: The four phases of the BZH Framework.



The BZH Framework incorporates two different types of indicators for well-being measurement: indicators that are pre-defined, called **Core Indicators**, and indicators that are jointly-defined with communities, called **Co-created Indicators**. The combination of these two different types of indicators ensures that what is measured is relevant to global development standards as well as the local context.

The Core Indicators, which have been adapted from global development indices, are designed to be applicable in almost any developing country context and are intended to remain consistent in their application (acknowledging

that in any given scenario, local circumstances may prevent collection of some indicators). The Core Indicators cover an inclusive range of well-being categories, including: education, health, economy, living standards, security, etc. (see the full list of core indicators on page 7).

The Co-created Indicators can be conceptualized as a blank slate of indicators that are developed through a guided dialogue with community stakeholders in order to reflect local realities. The process of dialogue to develop locally applicable Co-created Indicators is integral to the BZH process and to the overall goal of creating inclusive, multi-stakeholder definitions of community well-being.

*Where does the Beyond Zero Harm name come from?*

“Zero Harm” is a term prevalent in the mining sector that refers to the commitment to avoid unnecessary environmental impacts and to protect the health and safety of the workforce and the surrounding communities. In that context, Beyond Zero Harm is about moving beyond the ‘do no harm’ ideology, to create a process that drives collaborative and strategic planning to improve community well-being.



# WHAT IS THE OBJECTIVE OF THE BZH FRAMEWORK?

The BZH Framework was developed first and foremost to address gaps in the consistency and meaningfulness of data used to assess community well-being – **better data**. The participatory process that the framework lays out for defining, measuring and analyzing the data with host communities also addresses significant gaps in how companies participate in local development processes – **better dialogue**. While the need for consistent and meaningful baseline data is what spurred the idea of the BZH Framework, early discussions about the Framework also highlighted another challenge, which was the role of the company in local development dialogue.

## **Better Data: Are communities better off?**

The idea of the BZH Framework was born from the realization that, despite the existence of a wide range of tools and frameworks for stakeholder engagement, program monitoring and evaluation, and the measurement of human development on a macro (national) scale, there are currently no industry-specific tools or frameworks for tracking overall well-being at the community level. Without this information, mining companies tend to focus on their contributions to local communities, using quantifiable data on things like wages, procurement, taxes, and community investment, which doesn't always resonate with community stakeholders. Few approaches have consistently captured local baseline data on a broad range of well-being indicators, covering areas like health, education, safety, security, infrastructure, economy, governance, living standards and civic engagement. As such, few studies could accurately and holistically answer the question: are communities better off since mining has arrived? With this in mind, BZH provides a framework to obtain a more inclusive view of community well-being across multiple dimensions.

## **Better Dialogue : Can companies support development dialogue instead of leading it?**

Better data is important, but how the data is defined, collected and analyzed, and who is involved in the process are equally, if not more important than the numbers. That is why the BZH Framework focuses as much on driving a multi-stakeholder process as it does on developing holistic indicators.

Communities typically have existing development processes in place when a mining company arrives to the area; however the role of a mining company as a major (if not the only) source of funding can create an imbalance, putting the company at the center of the development dialogue. The BZH Framework aims to shift that balance by designing a multi-stakeholder process for defining and measuring well-being with the mining company as a participant, not the driver. More often than not, a multi-stakeholder process not only results in better planning, but also strengthens the company's social license to operate.

# WHY A MULTI-STAKEHOLDER APPROACH?

## Improved development outcomes

Multi-stakeholder processes result in better development outcomes. This fact has been recognized in development research for some time. Inclusive community representation generally improves transparency and accountability, while ensuring that any process outputs are reflective of local needs and goals. It is important to acknowledge that the BZH Framework is not an actual planning framework; it is a framework for collaboratively defining, measuring and analyzing community well-being. As such, the processes and data that emerge from the BZH Framework could be either woven into an existing development planning process or serve as a precursor to a (new) development planning process.

## Improved social license to operate

From a company perspective, there is much to gain from a multi-stakeholder approach in terms of securing a social license to operate. Research shows that one of the

keys to building trust with local communities is ensuring that community members feel respected by any decision-making processes and ultimately that they can actively participate in them – this can be called ‘procedural fairness’. Although this concept applies largely to mine project-related decisions, it also applies to community development processes.

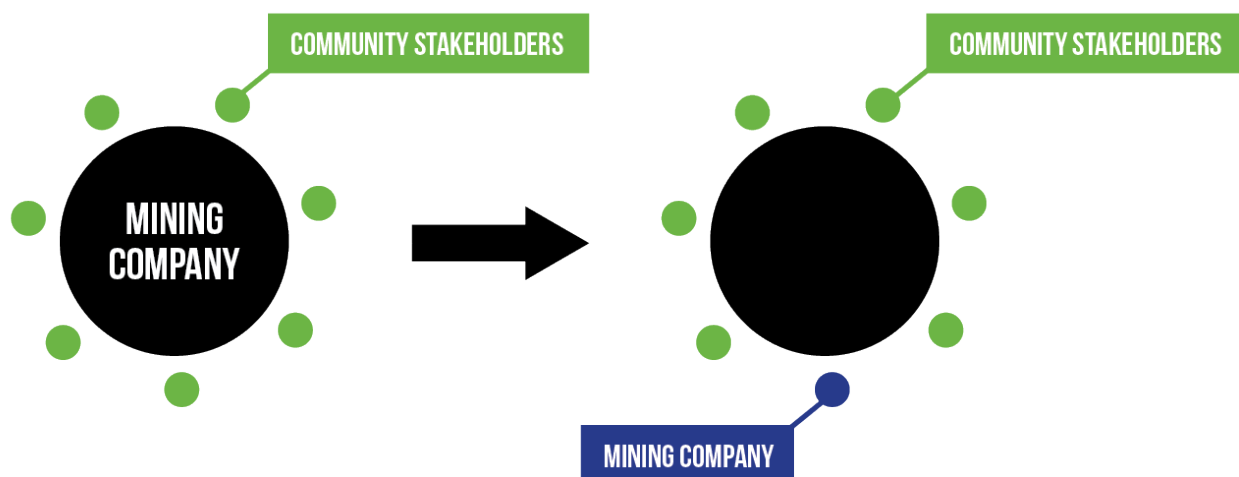
It is important to acknowledge here though, that multi-stakeholder processes are complex undertakings in and of themselves and require commitment by all parties.

Specifically, the multi-stakeholder process laid out in the BZH Framework aims to highlight three concepts:

### **1.The company is not the focal point of the development dialogue.**

The role of a mining company as a source of funding for local development can position the company at the center of the development dialogue. Inherently, this can create risks of a paternalistic and unsustainable relationship. The BZH Framework aims to shift that balance by ensuring that the mining company is at the table for local development dialogue, but not at the center of discussion, regardless of the extent of the company’s (financial) contribution. (See figure 2.)

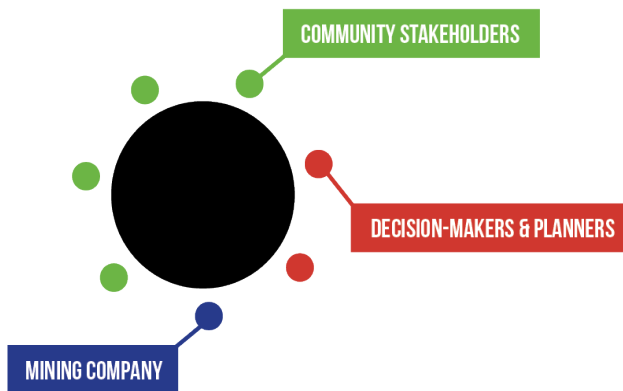
Figure 2: Shifting company away from central role of funding local development



## 2. Company-community dialogue is connected to broader development processes with key stakeholders at the table.

Communities or geographic regions typically have their own development plans and processes in place, irrespective of the presence or involvement of mining companies. When company-community dialogue and development planning is well connected to these processes, there is more potential for sustainable outcomes. The BZH Framework aims to strengthen the connection between key stakeholders involved in development planning and the company-community dialogue. (See figure 3.)

Figure 3: Stakeholder dialogue table



## 3. The dialogue is an inclusive process.

Communities are not homogeneous and inclusivity is a critical component of successful development processes. That principle equally applies to the process of defining and monitoring well-being in the BZH Framework. A multi-stakeholder process does not simply mean a lot of people at the table; it means representation of different groups, such as women, youth, elderly, vulnerable people, ethnic and religious minorities, and others. It also means providing regular feedback to the rest of the community. While all groups may not be at the table at the same time, the BZH process promotes dialogue through focus groups and other venues that enable inclusive dialogue. (See figure 4.)

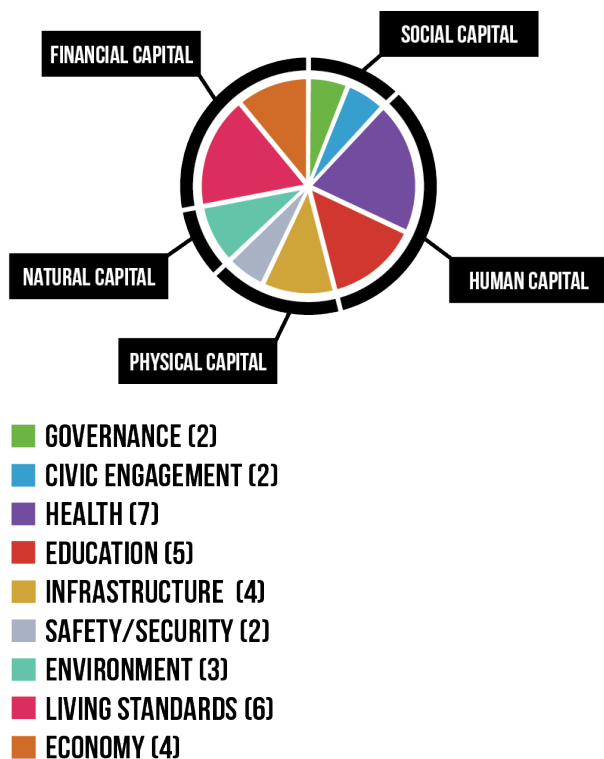
Figure 4: Inclusive stakeholder dialogue



# WHAT DOES BZH MEASURE?

The BZH Framework uses a set of core indicators to ensure a level of consistency in what gets measured in the participating communities. The Core Indicators are designed to cover a broad and inclusive range of categories that encompass community well-being. The categories are governance, civic engagement, health, education, safety and security, infrastructure, living standards, and economy. (See figure 5.)

Figure 5: Indicators broken down by category



The Core Indicators are intended to provide a balanced snapshot of well-being that can be monitored over time. They aim to answer the most fundamental question(s) about each thematic area, for example:

**Governance:** Does the community have effective governance?

**Infrastructure:** Does the community's infrastructure support basic needs as well as growth and development?

**Economy:** Does the community have a growing and sustainable economy?

In building a comprehensive and balanced set of core indicators, significant research went into identifying the thematic categories of well-being, as well as the actual indicators themselves. As a starting point, over 15 unique global well-being indices were benchmarked to ensure the categories of indicators were appropriate.

Throughout the development of the BZH Framework, the Sustainable Livelihoods Framework was also used to ensure a balance in the core indicators, covering the different types of capital it identifies. Developed by the International Fund for Agricultural Development (an agency of the UN), the Sustainable Livelihoods Framework is used around the world to understand the complexity of issues involved in assessing and addressing poverty and vulnerability. (See figure 6.)

Figure 6: The Sustainable Livelihoods Framework



Source: International Fund for Agricultural Development

The selection of core indicators was guided heavily by expert academic input and repeatedly evaluated by leading field practitioners. Core indicators were selected based on the frequency of their use in other global indices (inferring they are widely supported and applied as accepted indicators of well-being) and their practicality at the local level (manageable from a cost, logistical, and social/cultural perspective). For a more comprehensive overview of how the core indicators were identified, see Appendix A.



# CORE INDICATORS

The Core Indicators are shown in the table below:

Category	Core Indicators	Dimension
Governance	1. Government self-evaluation of governance capacity 2. Citizen evaluation of level of governance capacity	Social Capital
Civic Engagement	3. Percentage of people reporting a strong sense of community 4. Percentage of women who report being able to attend community meetings without asking for permission	
Health	5. Immunization coverage 6. Maternal mortality rate 7. Under-five mortality rate 8. Life expectancy 9. Prevalence of stunting in children under 5 years of age 10. Ability of women/girls to autonomously decide on the number and/or spacing of children 11. Current use of tobacco product	Human Capital
Education	12. Adult literacy 13. Primary school enrollment rates 14. Secondary school enrollment rates 15. Primary school completion rates 16. Secondary school completion rates	
Infrastructure	17. Proportion of population using an improved sanitation facility 18. Proportion of population using improved drinking water source 19. Proportion of population using electricity 20. Proportion of population using telecommunications network	Physical Capital

Category	Core Indicators	Dimension
Safety and Security	<p>21. Official rates of theft, assault and homicides</p> <p>22. Percentage who feel safe walking home alone after dark</p>	Physical Capital
Environment	<p>23. State of the natural environment (provisional ecosystem services)</p> <p>24. Impacts of natural events on the community (resiliency)</p> <p>25. Impact of human activity on the natural environment (pollution)</p>	Natural Capital
Living Standards	<p>26. Local Rate of Inflation/cost of living</p> <p>27. Estimated average monthly monetary expenditure per household</p> <p>28. Level of household income</p> <p>29. Level of household food security</p> <p>30. Proportion of households with a legally recognized form of land tenure</p> <p>31. Percentage gap in women's and men's perception of their having a say in the majority of decisions on how household income is used</p>	Economic Capital
Economy	<p>32. Proportion of population with waged (or salaried) employment</p> <p>33. Percentage of surveyed women and adolescent girls, compared with men and adolescent boys, who are able to travel outside the village for more than 24 hours</p> <p>34. Degree of wealth equality/distribution</p> <p>35. Level of economic diversity</p>	

# HOW ARE RESULTS INTERPRETED?

To be of any use, the data generated from the BZH process needs to be translated into information for decision-makers. Generally, results generated from the BZH Framework can be used to evaluate:

- changes in well-being over time;
- how a community's well-being compares to available national/regional data and trends; and,
- components of the population (disaggregated data).

The evaluation and interpretation process is an integral extension of the collaborative multi-stakeholder process used to plan and implement the framework itself. The BZH Framework Guidance Notes provide general guidance on how to interpret results, but do not provide information on the interpretation of specific indicators. The Beyond Zero Harm Indicators document contains indicator profiles that offer both a methodology for data collection as well as a rationale for each indicator, which also provides useful insight for interpreting results.

**Do the results look at mining impacts?** The BZH Framework is not intended to be used to assess the specific impacts of a mining project. BZH looks at community well-being from a community-centric point of view and does not attempt to determine causation or attribution in the data. While the BZH process can inform other assessment approaches, tools like Environmental and Social Impact Assessments are more appropriate for measuring mining impacts. Specific guidance is included in Phase IV.

**What if the results are negative?** Because the BZH Framework looks at a number of indicators across a range of dimensions, participants should expect that results in some areas

will show negative trends. In most cases, numerous factors will influence and contribute to a specific trend, both with positive and negative results. As such, the purpose of the framework is not to evaluate the performance of actors - be they government authorities, civil society group, or companies - but to collaboratively identify strengths and weakness and work together to create and build on opportunities for development.

## A Note to NGOs

This framework is primarily intended for mining companies, but NGOs and other civil society organizations, both local and international, may find it useful and seek to be active partners in its implementation.

For the civil society members of the BZH Working Group, the initiative represents an increased interest by mining companies in community-led processes for identifying priorities and measuring well-being. In many ways, this is a transformative platform for dialogue and engagement between the company, community, and other local stakeholders - something the Working Group agrees that NGOs should support and reinforce.

The BZH Framework incorporates best practices in baseline data collection, measurement of well-being, and community-led multi-stakeholder processes for development planning. For NGOs that are not already implementing this approach, the Framework can provide a useful starting point.

NGOs considering participating in the BZH-process with a company are encouraged to consider what role they could play in the process outlined in this document: are you in a position to act as an implementing partner? Would you want to work closely with the community to enable them to engage in the process? Would you want to provide technical expertise to the process? Would you want to participate in a steering committee for a BZH process? There are many ways civil society can be involved in the BZH Framework and their participation is important to making it a collaborative and sustainable process.

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## WHERE IS BZH APPLICABLE?

The BZH Framework was designed with mining-affected communities in mind. That said, the framework can be applied in any community and implemented by any community-driven, multi-stakeholder group, not solely by a company.

The BZH Framework is designed to be implemented in a developing country context. While the process laid out in the framework would be applicable in any setting, the core indicators focus on issues that are more relevant for the developing world. Appendix A gives an overview of how the core indicators were chosen.

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## WHEN IS BZH APPLICABLE?

### At the Community Level

The BZH Framework is an excellent tool to accompany existing community development planning processes. The Guidance Notes discuss how the framework can be integrated into a company's existing community initiatives. BZH can also be implemented as a 'stand-alone' project, as a precursor to a new or improved community planning process.

### Mining Life Cycle

The BZH Framework is most easily implemented during feasibility studies or during the Social and Environmental Impact Assessment process. However, the process has applicability at any point in the lifecycle.

### Feasibility & Permitting

Prior to the development of a mine, a great deal of work goes into baseline data collection around environmental and social impacts. The BZH Framework aligns closely with this work and can easily be integrated at this stage. The community-focused stakeholder dialogue that is integral to BZH would also serve as an effective way to establish relationships with stakeholders based on mutual trust and good faith.

### Production

For mines that are already in production, but which have many years of operations forecasted, BZH can provide a focus for communities looking to leverage the economic benefits generated by the mine into broader growth over the longer term.

### Pre-Closure

For mines nearing the end of mine life, the BZH Framework can be adapted as a planning tool to help identify strengths and weaknesses for post-mining community development.



## WHAT IS THE TIME FRAME FOR IMPLEMENTING THE BZH FRAMEWORK?

The BZH Framework is not intended to be a one-time exercise. While some aspects of the process laid out in the Guidance Notes (such as the co-creation of indicators) may only occur once, the data collection and many of the dialogue processes are intended to be progressive and repeated periodically. Although the initial planning, dialogue, and co-creation of indicators are not particularly resource-intensive steps, by their nature as collaborative, coordinated, iterative processes, they can take 6–12 months or more, depending on the scope of the area involved, the capacity of participating stakeholders, and the number of existing initiative(s) to which the BZH Framework becomes connected.

The frequency with which the data is collected will be determined uniquely in every context. Because most of the indicators do not change quickly, every 2–3 years is suggested as a minimum time between data collection periods; while for consistency purposes it is not recommended that more than 5 years elapse between data collection periods. Data collection periods may also shift depending on the phase of the mining project and the needs and circumstances of the community. There may also be some indicators that are deemed by stakeholders to be extremely important and could therefore be monitored on a more frequent basis, such as monthly, quarterly or annually.

## WHAT TYPES OF RESOURCES ARE REQUIRED TO IMPLEMENT THE BZH FRAMEWORK?

Implementing the BZH framework will be context specific, with different levels of human and financial resources required for each setting. Some of the most significant contributing factors that could impact the time and cost of implementation will be:

- the company's capacity to contribute internal expertise to specific parts of the processes;
- the existence and availability of local, regional and national expertise in various areas; and,
- the extent to which BZH can correspond and complement existing local or regional activities (e.g. dialogue process, development planning process, etc. or even a company's social and environmental impact assessment process).

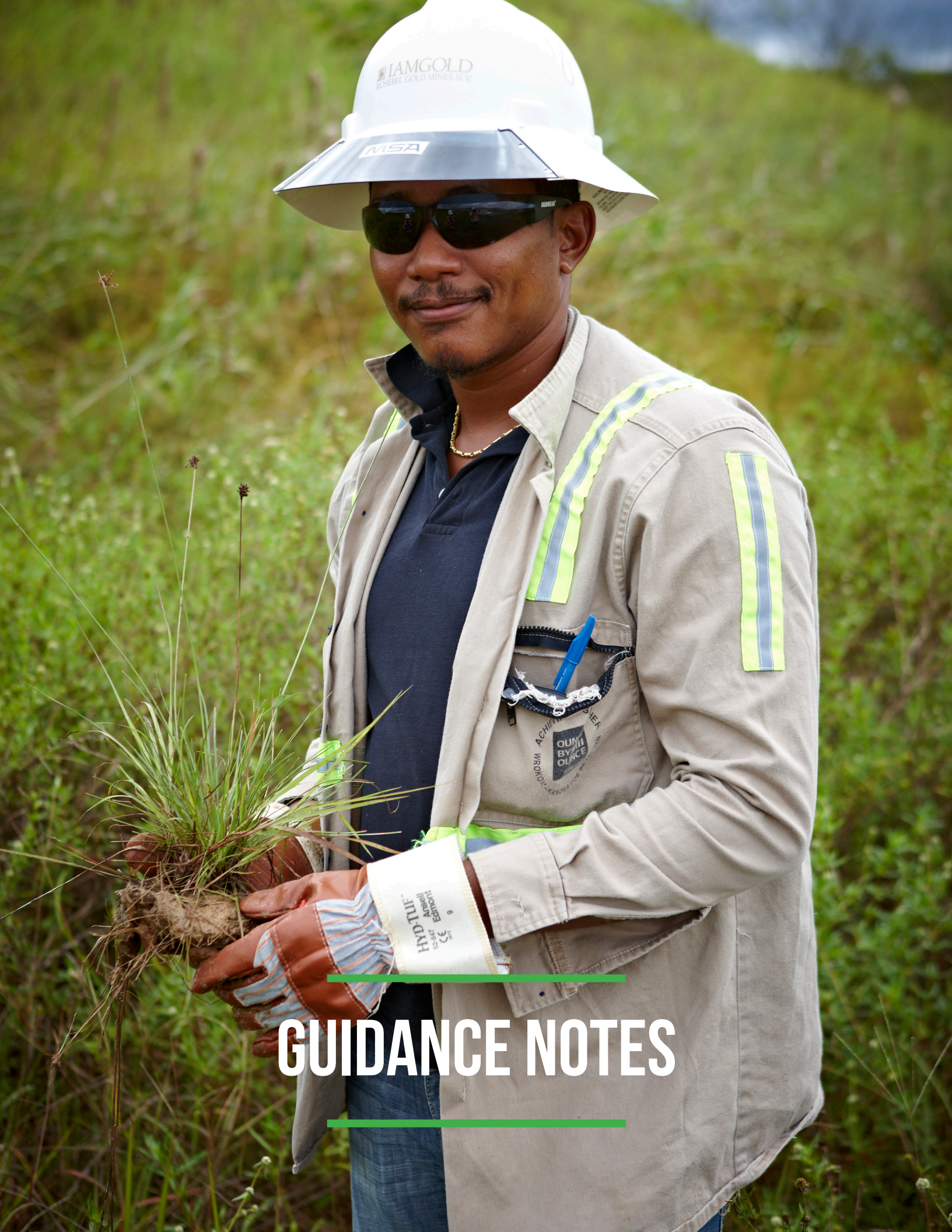
Specific skillsets and expertise will be required in the implementation of the BZH Framework. Here is a quick overview of those needs:

- Dialogue and facilitation: This will be the most important skillset required throughout implementation. A company will likely have some expertise in the area, however, as one of the objectives of the Framework is to move away from a mining-centric development dialogue, engaging external resources for dialogue and facilitation purpose is recommended.
- Survey implementation and management: Although not directly required until Phase 3, this is a critical component. Consideration of a potential partner(s) to conduct and

manage surveys should begin almost immediately upon initiating the BZH process.

- Database management: This skillset may come with a survey partner. The mining company may also have expertise in this area, but for the purpose of promoting greater community ownership it is recommended that data management be housed outside of the company.
- Statistical analysis and interpretation: The ability to both understand and interpret data will be important at the conclusion of the survey process. This skillset may be found in a university setting.
- Gender analysis: Part of the statistical analysis and interpretation process will be to look at the data with specific gender considerations. In addition to universities, larger (international) NGOs operating in-country are likely to have in-house expertise in this area.
- Environmental science: During the co-creation of indicators, there is a specific facilitation process for discussing environmental indicators. The process would be greatly aided by someone with an Environmental Sciences background in order to help inform and guide the discussion.





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# GUIDANCE NOTES

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# PREAMBLE

## The Objective

### **Flexible with minimum standards. Focusing on community participation.**

The BZH Guidance Notes are intended to provide general direction on how to roll out the Beyond Zero Harm Framework at any given site. The Guidance Notes are written in such a way that they provide specific-enough direction to be clear and actionable, while maintaining sufficient flexibility to adapt the process to any community setting. They are not meant to be a blueprint for implementation, but to provide some parameters for how the Framework will be implemented and how community participation should be incorporated. While the Core Indicators are an important part of the BZH Framework, the participatory process outlined here is the foundation of the Framework. The Guidance Notes aim to ensure not only community participation but ultimately community ownership.

## Explaining Key Terms

The Guidance Notes explain the terminology used throughout the BZH Framework, however there are three key terms that appear frequently in the Guidance Notes and merit early clarification:

**Steering Committee:** The Steering Committee is a group of people that will oversee and govern the BZH process. There is no maximum or minimum size for a steering committee, but ideally, it should consist of individuals who are involved in community development planning and associated activities. The company will likely want to be part of the BZH Steering Committee.

**Implementing Partner(s):** An implementing partner or partners will act primarily as a facilitator and project manager, while providing specific expertise in select areas. As the idea of the BZH Framework is to move the company

out of the center of the process, it is important to have a third party in this role.

**Entry Point:** The entry point is the forum or mechanism through which the Framework is introduced to community stakeholders. There may be existing initiatives in the community or region that have a similar process or objectives as the BZH Framework, and could serve as the foundation or starting point for the BZH process. It may be the initiative itself that aligns with the BZH Framework, or it may be the individuals involved that make it an ideal 'entry point'.

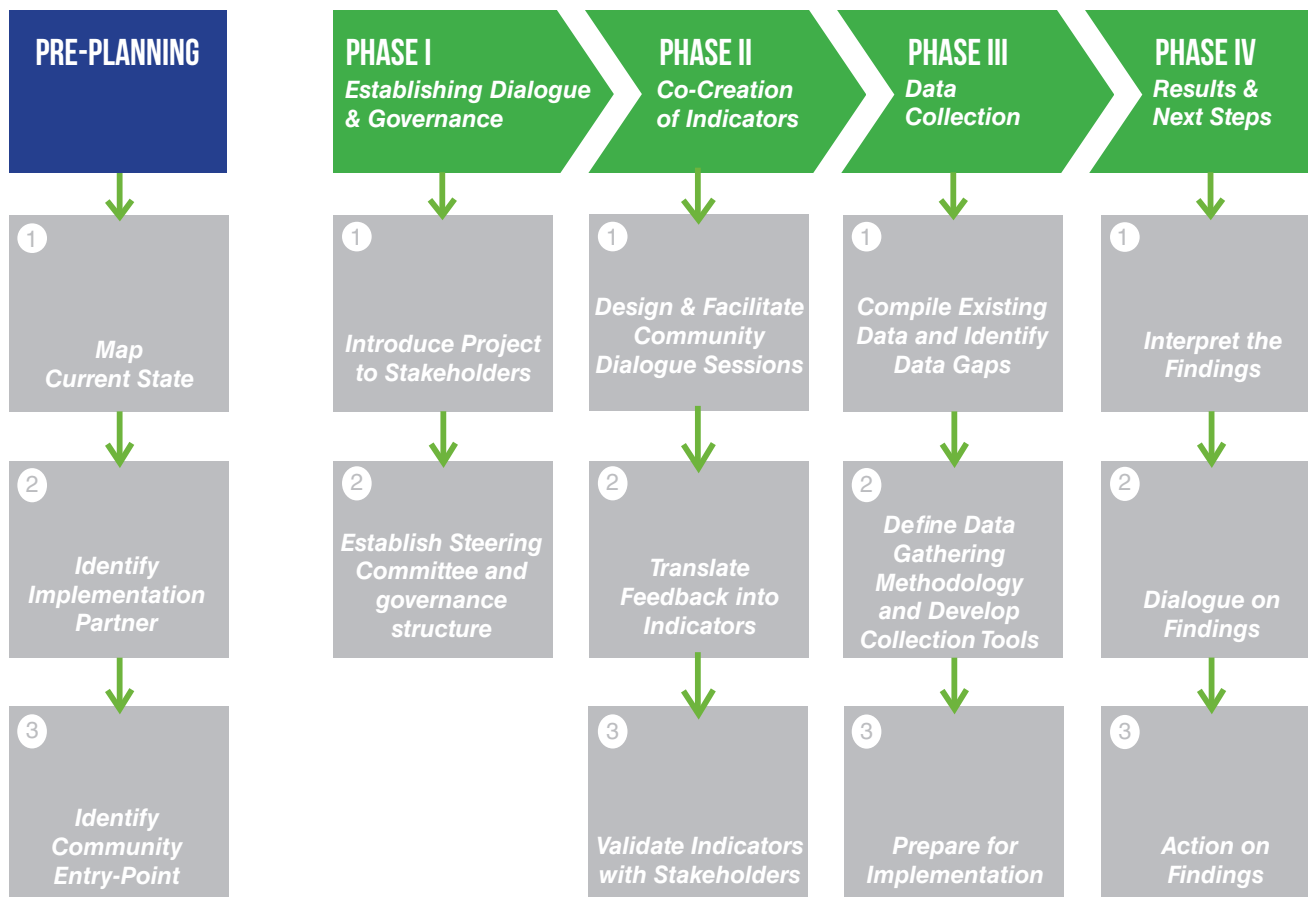
## Overview of the Four Phases

The BZH Guidance Notes are structured in four phases, detailed below, with an additional pre-planning phase specifically for companies.



# BZH FRAMEWORK

The four phases of the BZH process are preceded by an initial pre-planning phase designed for mining companies. Each phase of the BZH is explained in the following pages of this booklet.






A photograph of three people, two men and one woman, looking intently at a small wooden model of a building. They are positioned under a large, traditional thatched roof structure. The man on the left wears a dark cap and a light blue shirt. The woman in the center has dark hair and is looking closely at the model. The man on the right wears a dark cap with a logo. The model is a simple wooden frame with a flat roof. The background is a dense, textured thatched roof made of palm fronds or similar natural materials.

# PRE-PLANNING AND ANALYSIS PHASE FOR COMPANIES

Specific guidance for mining  
companies



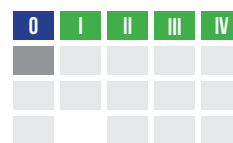
The BZH Framework is to be implemented as a participative, multi-stakeholder process. However, as the Framework is most likely going to be introduced by mining/extractive sector companies, and companies will likely have to assume a leadership role at least in the early stages of the process, a pre-planning and analysis phase has been included specifically for companies. The other phases of the BZH Framework should be rolled out with the participation of community stakeholders and other partners.

The Pre-Planning Phase is designed to give a company some guidance on how the BZH Framework could be introduced to the community and how it might be incorporated in to existing initiatives or dialogue processes (the 'entry point'). These are initial points for consideration only; the Framework is intended to be a participative or community-driven process and it is important to maintain flexibility in the project design.

As part of the Pre-planning and Analysis Phase, companies will need to consider how BZH will be resourced internally. Specific questions should be answered:

- How would the current relationship between the company and local communities/stakeholders be characterized?
- Does company staff have the requisite skills and/or experience to initiate this project?
- Who within the company will be responsible for the company's participation in this initiative?
- What financial resources are required to implement BZH?





## 0.1 MAP CURRENT STATE

### Objective

To develop an understanding of the following key elements:

- Stakeholders that could/should be involved in the implementation of the BZH Framework and individuals or groups in the community that might have the capacity or interest to play a leadership role
- Dynamics and relationships between stakeholders
- Existing data and data collection processes
- Existing or planned community development planning processes (may or may not involve the company)
- Potential geographic scope for the BZH process

### Key Outputs

- Stakeholder map identifying project participants and potential Steering Committee members
- Geographical map of the scope of communities to be included in well-being monitoring
- List of options for the entry-point to introduce the process to key stakeholders
- List/map of known or possible data sources relevant to well-being monitoring

### Key Considerations

This phase is meant to be a primarily internal (company) exercise, but external stakeholders could be involved in various discussions. This phase will help the company identify options for how the project could roll out, but decisions on these points will be made collaboratively with stakeholders during Phase I.

### Description

#### 1.a) Develop a stakeholder map

Based on current knowledge, identify and map out the key stakeholders with an interest and/or potential stake in this process and/or community development more broadly. The map should include company, community, NGO and government stakeholders. Vulnerable groups (minorities, women, youth, disabled, etc.) should also be considered. This map will help identify who should be included in the process and who might be part of the steering committee. The map should also provide guidance on who (internally and externally) needs to be informed of the BZH process and whose buy-in needs to be secured. Finally, the map should identify existing groups and vehicles (community consultation committees, task forces, working groups, etc.) that could be involved and potentially serve as 'entry points' for the BZH process. These groups might be connected to other company initiatives, such as a social impact assessment, resettlement process, community investment group, etc., or these groups could be independent of the company, such as a municipal working group or village council. More guidance on this is provided in Step 3 of this phase.

#### 1.b) Define options for geographic scope

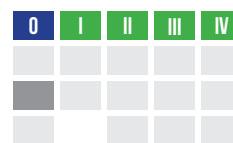
One of the first questions to consider is which communities the process will involve. In other words, what is the geographic scope of the area that will be included in the measuring and monitoring of well-being indicators. A company should consider its area of impact and the existing geopolitical/administrative boundaries relevant to the area. It should also take into account the area of interest and responsibility of other stakeholders and potential partners in the process. The scope will of course have cost implications and will also inform which stakeholders need to be engaged, including local and regional governments.

### 1.c) Review available data sources

Identify any existing data sources that relate to community well-being indicators. For example, national census information might be disaggregated to provide insights. Likewise, provincial/district/state/municipal governments as well as hospitals, schools, law enforcement agencies and NGOs might have relevant data that could be useful to the process. An understanding of what is already available will help in determining what kind of data needs to be collected and may influence some of the co-defined indicators selected for monitoring. Likewise, note what baseline data already exists from a baseline study and/or ESIA.

#### *What is meant by 'Community Entry Point'?*

The Entry Point is the where/how the Framework could be introduced to community stakeholders and how it might work into other existing initiatives or dialogue forum.



## 0.2 IDENTIFY IMPLEMENTATION PARTNER

### Objective

To assess the need for an implementing partner and to:

- Identify potential key implementing partners for the process
- Review initial roles/responsibilities with an implementing partner and identify basic administrative issues.

### Key Outputs

- Agreement with implementing partner
- Stakeholder engagement plan for initiating the process.

### Key Considerations

It is possible to have more than one implementing partner, each with unique roles in the process. In this early stage, it will be important to differentiate those responsibilities.

### Description

#### 2.a) Assess the need for an implementing partner

The implementing partner (or partners) will be responsible for introducing the concept of BZH to community groups and leaders (via the entry point to be identified in Step 3) and/or helping to establish and facilitate a steering committee. The partner(s) will also potentially engage community members in defining indicators and coordinate the data collection and analysis process, under the steering committee's direction.

Engaging a neutral third party facilitator can help remove the company from the center of the process. This is important to establishing a community-driven process that focuses on overall well-being, not solely on mine-related issues. While it is normal that the mine's impact on the community (negative or positive) will be a theme that is discussed throughout the BZH process, the aim is to broaden the dialogue to a discussion about more general community well-being.

#### 2.b) Identify potential key implementing partners for the process

In considering potential implementing partners, consider experience and work in the region and technical expertise in participatory monitoring and surveys. Expertise in developing and tracking indicators would also be an asset.

Here are some of the roles and associated skillsets that might be required by an implementing partner:

### Implementing Partner Roles

### Skillset/Attributes

#### Facilitation

The success of a participatory process depends on the facilitator(s) and their ability to generate productive dialogue (and move away from unproductive discussions) in a way that leaves all parties feeling their views have been taken into account.

- *Ability to act and be perceived as acting neutrally*
- *Experience facilitating community dialogue, translating dialogue into indicators*

#### Coordination

This is a multi-faceted program with multiple stakeholders and numerous steps, which can fail if details are not well managed.

- *Project Management Skills*
- *High level of engagement/interest in BZH*
- *Existing relationships/experience in the region and contextual knowledge (helpful)*

#### Technical

The ability to design and conduct surveys in a way that ensures quality and consistency in the data and does not negatively influence perceptions is critical.

- *Experience in participatory monitoring*
- *Experience creating surveys and collecting and managing data*

#### Capacity Building / Training

Technical and non-technical knowledge transfer will be important to ensure that the local owners of the process can continue data monitoring and analysis without the support of an implementing partner.

- *Skills in training and capacity building*

#### Communications

Help share and understand survey results

- *Understanding of community development*
- *Experience in community dialogue*

**Note:** It is fine to have a couple of people or agencies in different roles, so long as they are clear on responsibilities and coordination.

## **2.c) Review initial roles/responsibilities with an implementing partner and identify basic administrative issues**

Any agreement (formal or informal) with a potential implementing partner should seek to clarify the following:

- The purpose and desired outcomes
- Roles and expectations of each
- Key deliverables and/or activities and relevant timeline
- Data management and data ownership
- Overall project budget
- Participation stipends for community stakeholders (transportation, etc.)
- Budget/compensation for the implementing partner
- Guiding principles, including transparency, objectivity, and inclusivity
- Process for scope change.

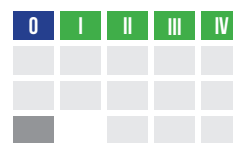
One of the key administrative issues that should be considered early on is the budget. Although all budget implications may not be fully defined at this point, it is good to have a template that can be transparently reviewed throughout the process. See the Budget Template in Appendix C for an overview of what should be considered in a budgeting process for BZH.

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## **Tools and Resources in Appendix**

- Budget Template (Appendix C)





## 0.3 IDENTIFY COMMUNITY ENTRY-POINT

### Objective

To consider possible entry-points and determine the best option to introduce the BZH concept to key stakeholders. This will involve:

- Considering existing dialogue forums
- Consulting key stakeholders
- Selecting the appropriate forum
- Developing a stakeholder engagement plan.

### Key Outputs

- Decision on what group or process (new or existing) to approach as the initial point of entry for BZH.

### Key Considerations

- At this stage in the process, an implementing partner could be taking more of a lead role.
- When selecting an entry point, consider both company-specific stakeholders, who simply need to be informed about the plans for such a process, and broader development-related stakeholders, such as local/regional leaders, development planners, agencies, etc.
- Although BZH is not specifically a planning framework, the processes and data that emerge from it can be woven into an existing development planning process, or it can be considered as a precursor to a new development planning process. Keep this in mind when identifying potential entry points.

### Description

There may be existing committees or forums - such as municipal or regional development councils and community development organizations - that could govern the BZH process, or there may be a need to create a new forum or committee for BZH. The stakeholders involved with these existing groups would likely form the base of or help create a BZH Steering Committee and provide advice on the successful launch of the process.

Keeping in mind that one of the primary objectives of the BZH Framework is to encourage and reinforce community participation in planning decisions, stakeholders responsible for such plans – regional and/or local government, NGOs and other agencies – should ideally be at the center of this process. They should be engaged early and often.

#### 3.a) Consider existing dialogue forums

Based on the groups/forums identified in the stakeholder mapping exercise, consider the mandate and weigh the risks and opportunities of each as an entry-point and possible basis for the steering committee. In particular, consider the following:

- The extent to which the group/forum is broadly representative of community stakeholders;
- How well the BZH process fits with their current mandate, structure and funding;
- The extent to which the existing group could modify its composition for the purpose of forming the BZH Steering Committee; and
- The likelihood of the group owning the process in the long-term and making use of the resulting data.

It may prove easier to tap into an existing community group/forum to initiate the introduction of the process to community stakeholders, as it would have an established working dynamic, structure and possibly a familiarity with the issues.

### **3.b) Consult key stakeholders**

As part of your assessment, consider testing your proposal informally with key members of the existing or proposed group in advance and seeking their feedback and advice on how best to present BZH to a wider community audience.

### **3.c) Develop a stakeholder engagement plan for introducing the concept**

The plan could be developed by the implementing partner, the company or both, and should be designed based on the identified entry point. This plan should encompass the engagement of any stakeholder who is associated with the entry-point for the project, as well as the broader community. Some questions to consider in the engagement plan are:

- Does it cover a representative range of demographics and vulnerable groups?
- How will you explain the idea? How you will approach the community and inform them of the well-being monitoring process?
- What tools will you bring with you to present the process? Will you discuss BZH in advance with any group members?

Assess the expectations of different stakeholders. As part of the stakeholder engagement plan, address risks and delineate key steps for developing and maintaining public trust. The plan should include key messages on the intended goals and outcomes of the BZH process, timelines and limitations.



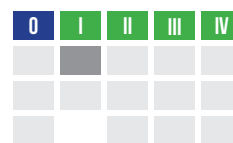


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# PHASE 1

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Establishing Dialogue & Governance



# 1.1 INTRODUCING PROJECT TO STAKEHOLDERS

## Objective

- Introduce BZH to a range of key stakeholders and build community support for the process.

## Key Outputs

- Agreement among various groups/ stakeholders to support and/or participate in the Beyond Zero Harm process.

## Key Considerations

It is strongly recommended that the implementing partner lead this phase in order to avoid it becoming a company-driven process.

As you implement this step, keep the next step in mind: establishing a steering committee and general governance structure. Remember the ultimate goal is not speed, it is community involvement and eventual ownership of the process. Be patient; it may take longer than expected to build support and buy-in.

Some stakeholders may see BZH as a source of risk – that their authority may be challenged or that the results may show them in an unfavourable light. Likewise, each stakeholder will have a different perspective on the potential value of the process and how the results should be used. During this initial phase these issues should be discussed and addressed. It is advisable to keep key stakeholder groups that are not directly involved informed of progress and to identify opportunities for them to get involved later on.

## Description

### 1.a) Initiate Dialogue

Based on the Stakeholder Engagement Plan developed in the Pre-Planning Phase, initiate dialogue through the selected entry point.

### 1.b) Describe the BZH Process

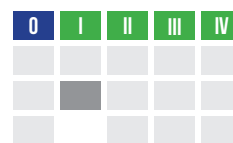
How the project gets described to local stakeholders will be determined by local circumstances. However, there are a few key points that should always be included:

- **The core indicators:** The BZH process is built on well-recognized, broadly accepted development indicators. While there may be a few indicators that are simply too difficult, too expensive or too sensitive to measure locally (and therefore will be removed from the survey), the core indicators should generally be considered a fixed part of the survey.
- **Co-creating indicators through community dialogue:** It is important that stakeholders have a say in how “well-being” is defined and measured in their context. To ensure local ownership and relevance, the process aims to engage diverse community groups and local stakeholders to discuss measures of well-being; those discussions are then used to create new, context-specific indicators. If the indicators are to be used in future community planning, it is important that this process incorporate a broad perspective of views.
- **Managing expectations:** The framework is about taking stock of the current state of community well-being, with the ultimate purpose of improving future planning and prioritization of initiatives. As such, BZH should not become a forum for project or donation requests – those discussions



should be referred to the appropriate company mechanisms.

At this stage, it is important assess whether there is sufficient support for the project in order for it to move forward. While having general community support is important, active participation and a certain level of ownership over the process should be the goal. How this is measured will be different in every setting, but active participation by the community (in particular, leaders and/or development planners) in a steering committee should be considered the minimum requirement. More guidance on this topic is provided in the next sections.



## 1.2 ESTABLISHING STEERING COMMITTEE AND GOVERNANCE STRUCTURE

### Objective

- Establish a steering committee that will oversee the process and ensure inclusivity and long-term community ownership. Determine with the steering committee how the process will be governed, as well as the roles, responsibilities and contributions of its members.
- If you are tapping into an existing committee or group to oversee this process, then the objective is to clarify the role of that group in steering the BZH process.

### Key Outputs

- List of members in the steering committee
- A steering committee agreement (such as a Memorandum of Understanding or Terms of Reference) outlining its mandate, structure, membership and responsibilities, as well as agreement on participation incentives (if necessary).

### Key Considerations

At this point, a neutral third party (such as the implementing partner) would be best positioned to lead the process. This should help facilitate consensus-building around committee membership.

Determining who will be part of the steering committee is one of the most critical steps in the BZH process. Local leaders and administrators will likely need to be involved in some way, as will local development planners, however, a steering committee should also look to have a balance of perspectives.

### Description

The role of the steering committee is to oversee and advise the process as it evolves and becomes incorporated into planning and decision-making at the local level.

The steering committee (SC) oversees the process of selecting indicators, collecting and analyzing data, and communicating the significance of insights gained. The SC shares data and recommendations with decision-makers who are then able to act to improve community well-being.

### 2.a) Build a common understanding of SC membership

It is important that there is a clear understanding among stakeholders of the role of the SC and the importance of broad representation through its membership.

The steering committee should include various stakeholder representatives, such as:

- Government representatives (local, regional and/or national)
- Community members/leaders including representatives of any Indigenous People
- Representatives of vulnerable groups including, women, youth, minorities, etc.
- Civil society
- Company representatives
- The implementing partner.

If there is resistance to expanding the group or to including certain representatives, then return to the function of the steering committee, which is to govern a process overseeing community well-being, meaning it requires broad representation reflective of the community.

## **2.b) Determine SC membership**

Should any key stakeholders – as identified in the stakeholder mapping process and with the entry-point – not yet be represented at the table, determine who could be approached. Each prospective member should commit to serve for a set length of time on the steering committee.

## **2.c) Determining participation stipends/incentives**

In some cases, local custom may mean that people expect some compensation for participation. Research what the acceptable range of incentives or compensation is in the region. Consider who will manage the budget for participation incentives, keeping in mind the need to remove the company from the center of the process.

## **2.d) Establish the mandate of the group**

For an existing body or group, propose that the group reviews and revises the committee's current mandate or terms of reference (TOR) to reflect the needs of the process. For a new group, draft terms of reference or a memorandum of understanding (MOU) can be prepared for discussion.

Whether within the TOR document or in another document (like an MOU), ensure that the purpose and role of the steering committee is clear. Certain basic principles of the MOU/TOR should be standardized, then during the first steering committee meeting, more detail can be added or amendments made. The MOU/TOR should be kept on record and referred to frequently.

Whether for an existing or new group, the terms of reference or memorandum of understanding should clarify:

- The purpose of the group
- Guiding principles, including transparency, objectivity, and inclusivity
- Membership and specific roles and responsibilities (including of the Implementing Partner)
- Meeting procedures
- Project management team or staffing and commitment
- Communication and engagement protocol

This process should be highly participatory and facilitated by a neutral third party (such as the Implementing Partner). This process is key to establishing buy-in and a sense of purpose and cohesion in the group.

## **2.e) Collaborate with local and regional authorities/leaders**

By this point, discussions will likely have occurred with various regional authorities about the project. As one of the principle objectives of the process is to build regional capacity for defining, measuring and (eventually) planning around community well-being, it is in the best interest of the project to coordinate any sort of data collection efforts with those of regional authorities. Pulling them into the process can build capacity, and improve outcomes and general support for the project, especially at the steering committee level.



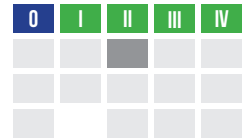


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## PHASE 2

Co-Creation of Indicators

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## 2.1 DESIGN & FACILITATE COMMUNITY DIALOGUE SESSIONS

### Objective

- Design and facilitate dialogue sessions for community participants to provide input on well-being – what it means to them, how they define it, what their specific hopes are for community development, etc.

### Key Outputs

#### Workshop plan:

- Facilitation questions and contextually appropriate methodology
- Decisions on attendance, format, length and number of sessions
- Context specific messaging on how the BZH concept will be introduced and explained to the participating community members.

### Key Considerations

While the company may be involved in this step of the process, in order to ensure the conversation does not revolve around the company's impacts, it is not recommended that the company lead the facilitation of this workshop(s). It would be helpful for an implementing partner or third party facilitator to take the lead on this step of the process.

### Description

Co-creation workshops can be facilitated in many different ways. The information below provides some guidance on various considerations that have to be addressed in planning. Overall the workshop should accomplish the following:

- Provide a collection of ideas/concepts of well-being for translation into indicators at a later phase.
- Facilitate a better understanding of how communities determine the state of well-being at a given point in time (i.e. what is well-being and how do you know when you have it).
- Ensure stakeholders feel that they are part of a process and that their input is respected and valued.
- Create interest in the process and the next steps .

Here are some of the major considerations/decisions for the planning of this step:

#### 1.a) Decide on workshop attendance, format, length and number of sessions

**Who should attend?** Identify trusted individuals and community leaders who can help organize these dialogue session(s). Speak with them in advance of the larger community session and get their input on how it should be structured. The greater the community participation at this step, the greater the chance of community ownership over the entire process going forward.

**Is the process participatory?** The most important element at this stage is that the process is genuinely participatory and the ideas are community-driven. While it is unlikely that the entire community will participate, input should come from various groups of stakeholders (and not just community leaders) in order for it to be - and for it to be perceived as - legitimate.

The aim is to maximize both involvement and engagement throughout the sessions. Consider vulnerable groups and how to best capture



their input. Decide if different stakeholder groups should be engaged separately or in larger, mixed group sessions. The steering committee (with input from other community leaders/groups) can help determine this.

***What is the right format?*** There are many different approaches to hosting a workshop and to getting the input that is needed to create indicators. Using a combination of different approaches is helpful and will likely yield the most comprehensive information and broad participation. Here are three examples of participatory methodologies:

- Focus group (small workshops): Facilitated group sessions that break down larger community groups into more manageable sizes. This typically encourages more input and more meaningful discussions than larger, town hall type meetings.
- World Café (large workshop): A version of a focus group session with multiple small group discussions taking place in a venue/room at one time. Each group focuses on one specific topic for a short time and then they move to a different part of the venue/room to discuss a different topic.
- Key informant interviews (one-on-one): Focused one-on-one interviews with a range of stakeholders. This can be a valuable addition to other group processes, but is not particularly efficient (in terms of use of time) or broadly inclusive.

Regardless of the format(s) chosen, it is important to explain to the community and stakeholders that the feedback from these sessions will be ‘translated’ into indicators. Depending on the context, capacity level, and interest level of the participants involved, community members may wish to be involved in this next step – the translation of indicators.

### ***Length and number of workshops***

Depending on the scope of the project (i.e. how many communities are involved and how large the communities are), multiple workshops may be needed. Even in small communities, multiple workshops may be necessary in order to incorporate input from various groups (e.g. youth, women, elders, etc.).

### ***Discussing environmental indicators***

There is no standardized set of environmental indicators in the list of core indicators because environmental indicators are necessarily context-specific. Consequently, environmental indicators must be defined through the co-creation phase of the process.

The approach to co-defining environmental indicators will be similar to the rest, but should be modified slightly due to the specific nature of these types of indicators. Appendix E provides additional guidance on how to have a structured and productive session on community-identified environmental indicators.

### **1.b) Decide on approach for Step 2 – translation of indicators**

As part of the planning for the workshop(s), it is important to think ahead about how the feedback from the session(s) will be translated into specific indicators. There are two options:

- Option 1 – Small group or individual: Taking the feedback from the session(s), a small group, such as the implementing partner (potentially in collaboration with other groups, like academic organizations or NGOs) or a qualified individual would work through the feedback, translating the ideas expressed in the workshop into specific indicators. The work then gets presented back to communities for validation.

- Option 2 – Community developed: Participants from the workshop actively participate in the process described above. While beneficial in building capacity and general support for the process, this approach will likely be more cumbersome, as it can be a relatively academic process and will require some level of input from a specialist in this field.

### **1.c) Decide how the concept will be introduced and explained to the broader group**

#### ***Introducing BZH***

By this point, discussions on the BZH process and survey have likely already taken place with a number of important stakeholders. However, there may be many new people in the room for this workshop and the concept of combining core indicators with community-defined indicators will be important to explain. From a transparency and trust perspective, participants should be aware of the broader framework being applied and that a set of internationally recognized core indicators will be measured as a part of the study.

It is equally important to consider how introducing the core indicators to participants will influence their contributions and characterizations of well-being. You may wish to go into some detail about the core indicators at the beginning of the session or you may wish to talk about them at a more general level.

#### ***Clarifying the objectives***

In many contexts, dialogue around community well-being can raise expectations for community development initiatives or community investments from the participating mining company. When opening these discussions, it's important to clarify that the objective is to define well-being from the perspective of the community and its members (recognizing that communities are not homogeneous) for the purpose of conducting a community-level survey. The survey will then be used to inform better community planning by all relevant stakeholders and actors. Participants

should be reminded that the objective is not to develop a 'wish list' of community development projects.

### **1.d) Develop a facilitation guide and questions**

In order to facilitate a productive session(s), a basic facilitation guide should be developed that outlines, at a minimum, the agenda and some questions to guide the conversation. It is recommended that the facilitator start with more open-ended questions and then progress to more specific or guided discussions about specific development themes – health, education, infrastructure, etc.

#### ***Facilitate open-ended discussion***

Beginning with open-ended questions will allow for more unstructured feedback than what may emerge from specific thematic discussions. The results here will also provide a more unfiltered view of the community's concerns and priorities. These types of sessions can be more challenging to facilitate and the discussion may naturally focus solely on one or two priority issues. The facilitator(s) must actively manage the discussion to provide space to explore other important themes, while also ensuring different ideas and perspectives can be expressed. For samples of open-ended facilitation questions, see additional guidance on co-creating indicators in Appendix D.

#### ***Facilitate specific thematic discussions***

Based on what comes out of the broader discussion around well-being, group the feedback into the core themes/categories (health, education, infrastructure, etc.) and use a set of leading questions around each theme to get into more specific conversations. Reviewing the specific core indicators themselves may be a useful way to structure the conversation. Additional guidance on the types of leading questions can be found in Appendix D.

## **1.e) Facilitate Session**

### ***Document feedback***

Ensure that you are prepared to capture the information and discussion from the workshops and/or interviews. Depending on the approach you choose, as well as the literacy rates in area, you may want to begin categorizing key points into themes by putting questions, comments and ideas on to flip charts or sticky notes on a wall.

### ***Manage expectations***

This type of dialogue can raise expectations for community development initiatives or community investments by the participating mining company. As discussed in the section above on clarifying objectives, it is extremely important to explain that the objective is to define well-being from the perspective of the community, not to define a 'wish list' of development projects for the company to support. To avoid this, the discussion has to be actively managed by the facilitator.

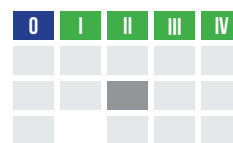
### ***Discuss next steps - translation of indicators***

When clarifying the objectives at the beginning of the session, as well as at its conclusion, make sure that all participants are clear that the feedback they give will be translated into specific indicators (i.e. something that can be measured). It is also important for participants to understand that they will have an opportunity to hear what indicators are being proposed and provide feedback on them before they are finalized.

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## **Tools and Resources in Appendix**

- Facilitation Guide for Co-Creating Indicators (Appendix D)
- Facilitation Guide for Environmental Indicators (Appendix E)



## 2.2 TRANSLATE FEEDBACK INTO INDICATORS

### Objective

- Work through the community feedback, identifying and categorizing themes (a process already started in the previous step) and designing measurable indicators that can be incorporated into the survey of the core indicators.

### Key Outputs

- A list of indicators to bring back to some (or all) community groups for validation, ensuring the indicators reflect what was articulated in the community feedback session(s).

### Key Considerations

The group who facilitated the workshop will most likely manage this step as well. However, some professional input will likely be required by experts who have experience with development indicators.

This step may be challenging, as the volume of feedback will likely be quite large. There is no minimum or maximum number of co-created indicators that need to be developed, but the more indicators, the more time will be required for data collection and processing. As such, this step is about focusing on what issues are most important to communities and producing a reasonable number of indicators.

### Description

#### 2.a) Finalize who will be involved

As outlined in the previous step, it might be beneficial for the translation of indicators to be done by a small group or an individual with specialized knowledge in this field, rather than through broader community involvement. Both approaches have benefits and drawbacks. A hybrid approach between the two options can also be considered, where a small number of community participants are involved. Designing a small working group to participate directly in the development of the indicators and give immediate feedback on initial drafts will help produce a strong set of indicators before going back to the community for validation.

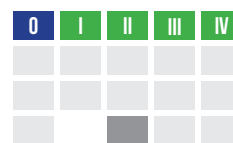
#### 2.b) Develop the first draft of co-created indicators

There is no blueprint for translating dialogue and discussion into quantitative indicators, nor is there a specific target number of co-created indicators that should be developed. Feedback from the previous step should provide a sense of priorities and key measures of well-being.

Designing a good indicator means that it can be measured in the context of a community survey. The two key questions that need to be answered when designing indicators are:

- **How is it measured:** What information/inputs would be needed to measure the proposed indicator?
- **How is it collected:** How can this information be collected in a local/regional context or what types of questions need to be asked to get the information?





## 2.3 VALIDATE INDICATORS WITH STAKEHOLDERS

### Objective

- Validate the indicators developed in the previous step with a wider group of community stakeholders.

### Key Outputs

- A final draft of co-created indicators
- Finalized collection methods for new indicators.

### Key Considerations

The group that facilitated Step 1 of this phase would likely facilitate this process as well. It is possible that this step will require several iterations and adequate time should be provided to hold more than one feedback session if it means greater support/buy-in from participants.

### Description

#### 3.a) Validate indicators with community participants

If the process of translating feedback into specific indicators is done with a smaller group of individuals, the indicators should be validated by a wider group of community stakeholders. Design a community feedback session(s) to achieve this, potentially using the same venue and stakeholders as in Step 1 of this phase.

#### 3.b) Finalize the collection methods for the new indicators

Once the co-created indicators have been validated, finalize the set of questions and/or data inputs that will be used to measure the new indicators. Those questions/inputs must be incorporated into the data collection methodology defined in the next phase.

As discussed in the previous step, when an indicator is proposed, determine exactly how the indicator would be *measured* (what information/inputs would be needed) and how that information would be *collected* (where can you find the information and/or what types of questions need to be asked to obtain it). Some other basic considerations are:

- **Scope and sample size:** How big of a sample is necessary for the data to be statistically significant? Is this something that should be measured on the local or regional level? Expert input on appropriate sample sizes may be necessary.
- **Cost:** Some indicators may be cost prohibitive, because information is too complicated or takes too long to collect. For purposes of transparency and trust, if an indicator is excluded for this reason, the rationale should be shared with the community.



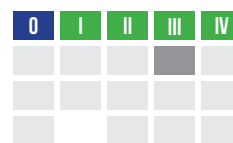


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# PHASE 3

Data Collection

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## 3.1 COMPILE EXISTING DATA AND IDENTIFY DATA GAPS

### Objective

- Compile all relevant existing data and data sources, and align them with the core and co-created indicators for the defined geographic scope of area for the survey. Identify what information needs to be collected and what can be re-purposed from other sources.

### Key Outputs

- A list of required data to be collected at the household, community and regional level.
- A database to house quantitative and qualitative data and produce summary reports for analysis.

### Key Considerations

This step requires some technical expertise in data collection and therefore might be led by the implementing partner, or by the steering committee with support from a third party specialized in surveys/data collection.

One of key considerations will be the 'housing' and 'ownership' of the data. The company may have competencies in this area that can be utilized, but also consider how/if that could impact the ownership of this project by the community. It may be worth the time and cost to support the local/regional municipality or planning authority to develop its own data management system to fulfill this need.

### Description

#### 1.a) Review existing data sources

An initial list of available data sources should have been drafted in Phase 1. Revisit this list, and compare with the final list of core and co-created indicators. Depending on the state of data collection in the country, there may be a reasonable amount of regional (and possibly local) data that can be used. In some countries (or for some communities), there will be little to no data from external sources. When data is available locally or regionally, you may want to consider coordinating the timing of your data collection efforts with regional authorities.

#### 1.b) Establish a database and data management system

The data collection process needs to be feed in to a database. Ensure that you have a central location for inputting and managing information. A data management system should include a clear process for inputting data and for flagging any discrepancies or data quality issues. It should also include measures to secure the data and protect privacy.

Where the database will be housed is an important consideration. While a participating company may have the most competence in this area, consider the message this sends about the ownership of the project. For this reason, it is encouraged, where possible, to house the database in more community-based location.

Databases don't need to be complicated, but they will likely require more functionality than a simple excel spreadsheet. Important qualities to look for when collecting a database:

- **Flexible** – The system is designed to give the end-user and the system’s administrator the capacity to manage, maintain and modify most of the components of the system.
- **Intuitive and user friendly** – Considering that deadlines can be tight and not all people accessing the database will have been trained, the system should ideally have an easy and intuitive user interface.
- **Visual** – Visual reporting and mapping is valuable in conveying ideas.
- **Accessible** – In remote areas, there are many challenges to accessibility. Consider the advantages of local intranet versus the web – or, ideally, a system that can operate cross-platform. Desktop, tablet and mobile accessibility are possible through some software systems.
- **Secure** – Ensuring the security and integrity of data is paramount. Spreadsheet programs like Excel are not very secure as data can be changed by anyone who has access to it; whereas some software systems can create permissions for varied levels of access.
- **Cost** – Consider the pricing model of the software. Some are free, some have a one-off cost, and some have ongoing fees and/or fees for reporting, which can be prohibitive.

### **1.c) Collaborate with local and regional authorities**

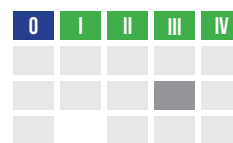
Discussions should have already been held with various regional authorities about the project as a whole. As one of the principle objectives of the project is to build regional capacity for defining, measuring and (eventually) planning around community well-being, it is in the best interest of the project to coordinate any data collection efforts with those of regional authorities. Engaging them in

the process can improve capacity, outcomes and general support for the project.

### **1.d) Decide who will conduct data collection**

Data will likely need to be collected from various sources; third party sources (e.g. census databases and municipal governments), as well as through household surveys and other mechanisms (discussed above). A third party with specific experience in conducting surveys should be engaged to ensure that the data collection process will be seen as relatively neutral. It is important to ensure data collectors are adequately trained before commencing the process.





## 3.2 DEFINE DATA GATHERING METHODOLOGY AND DEVELOP COLLECTION TOOLS

### Objective

- Define the methods that will be used in the data collection process and develop necessary data collection tools.

### Key Outputs

- Data collection matrix outlining the data required for each well-being indicator, with the method(s) to be used to gather the data.
- Data gathering tools (e.g. household questionnaire).

### Key Considerations

In this step, it is important that the lead actor be experienced in surveying and data collection (such as a consultant or academic), but that they also be perceived by the community as a relatively neutral party.

### Description

#### 2.a) Create data collection matrix

In consultation with the steering committee, prepare a data collection matrix that outlines the data required and the method(s) to be used to collect it (i.e. household survey, focus group, informant interview and/or community mapping).

#### 2.b) Design survey questionnaire

Many of the core and co-created indicators will be measured through a household survey. A sample household survey for the core indicators is included in Appendix F. The

Sample survey must be adapted to fit the specific context and additional questions to collect the data for the co-created indicators will need to be incorporated into the survey.

#### 2.c) Consider other methods of data collection

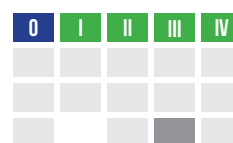
Household surveys will likely be the most common approach to collecting the type of information required for this process, along with information from sources like schools, hospitals, and local/regional governments. However, there are other methods of data collection that can complement and enhance quantitative data to enrich the understanding of the local context – these may be community mapping (potentially very effective for environmental indicators) or focus group discussions. Community mapping is a participatory, physical mapping of a given area in order to identify important physical areas, items and issues – it is a hands on way of facilitating discussions around material issues.

#### 2.d) Determine sample size required

Calculate the sample size needed for the survey to ensure the sample is representative of the wider population. A good rule of thumb is that a sample size should generally result in a 5% margin of error. Expert input on appropriate sample sizes may be necessary.

### Tools and Resources in Appendix

- Householder Survey Sample (Appendix F)



## 3.3 PREPARE FOR IMPLEMENTATION

### Objective

- Ensure the survey team are well prepared for the data collection process and initiate the survey.

### Key Outputs

- A detailed implementation plan approved by the steering committee
- Finalized survey instrument
- A communication strategy approved by the steering committee and then executed.

### Key Considerations

It is not recommended that the company be overly involved in data collection as this could influence how participants respond to the questionnaire. Third party support will be required here, particularly if surveying is not a skill set held by the implementing partner.

### Description

#### 3.a) Develop an implementation plan, including a work plan, schedule and budget

The implementation plan should demonstrate how the household surveys and other forms of data collection will be undertaken and the results presented back to the communities. This includes:

- logistics (i.e. training, transportation, equipment, translation if required);
- data collection, data management system and inputting quality control;

- recruitment and training of enumerators (consider recruiting from participating communities);
- pre-test and finalization of survey instrument;
- feedback plan; and
- agreement on confidentiality.

The quality of your data starts with the preparation of good surveys, collection methods, and storage. Here are some tips on maintaining quality on key issues.

#### *Data collection:*

- Make all necessary arrangements to address logistic requirements for data collection, such as scheduling, appointments, transportation, catering, payments to participants in focus groups, etc.
- Establish data collection protocols (i.e. when to collect what, and how to do so).
- Establish quality assurance and quality control (QA/QC) protocols for data collection and input (i.e. when, how, and by whom is data quality reviewed).
- Conduct a practical training workshop with data collection agents and use real life examples to demonstrate how to implement tools and protocols.
- Test run (pilot) data collection tools and protocols to ensure they are effective, and make necessary adjustments before finalizing them.
- Provide supervision in the field and review the results each night to ensure data collection tools are being implemented correctly and that the data collection program has been well planned or is adjusted as necessary.

- Review data collection results to ensure that the tools are capturing information on all important social characteristics and activities of community members.

***Data input:***

- Consider using a specialized information management system to enter data. If not possible, make sure to establish an efficient excel database.
- Integrate QA/QC protocols to ensure data is collected and entered in a consistent format.
- Attempt to have data input clerks enter information into database immediately after data collection.

***Data storage:***

- Establish a protocol for filing electronic and physical copies of information. Consider how to ensure easy access and confidentiality, and address risks of losing information (fire, theft, etc.).

Confidentiality is very important. Access to databases and files with attributed data (i.e. any ability to identify to whom the data is referring or which individual provided it) should be very limited. This information must always be kept secure. Unattributed data can be more widely accessible. Confidentiality must be part of the data management plan and reiterated continuously. Risks to confidentiality must be mitigated and monitored on an ongoing basis.

### **3.b) Prepare a communications plan**

The plan should ensure participating communities understand the purpose of the process and are aware of the data collection and community feedback plan. The communications plan should be reviewed with the steering committee and other key people/groups.

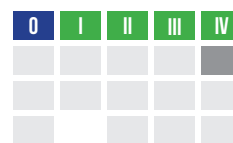


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# PHASE 4

Results and Next Steps

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## 4.1 INTERPRET THE FINDINGS

### Objective

- Make sure data is accurate and translated into information that community stakeholders/decision makers can use.

### Key Outputs

- Gender analysis of data
- Analysis of differences in well-being for different demographics (age, ethnicity etc.)
- Organized set of key insights garnered from the data
- Audience-specific messaging and presentation of the results.

### Key Considerations

Data analysis is a challenging task. The implementing partner(s) may have experience with data analysis and interpretation, but if not, third party assistance will likely be needed. It is not recommended that the company lead the interpretation of the results as it could influence how the community perceives and decides to use the data.

### Description

There are many different ways to interpret data and again, experienced practitioners should be engaged for this step, so the guidance in this section is fairly light.

#### 1.a) Clean the data

Data hygiene refers to issues such as duplicate, incorrect or incomplete data. Quantitative electronic data are 'cleaned', most often at the data analysis stage in preparation for reporting. These procedures ensure that errors and gaps do not skew summaries of results (aggregated data).

#### 1.b) Perform a gender analysis of the data

It is widely acknowledged that women are key actors in economic and social development. Understanding how well-being evolves differently between genders is critical to developing planning. The purpose of a gender analysis is to specifically identify and describe the ongoing gender dynamics and inequalities in the community, and to demonstrate how they affect well-being. The focus and unit of analysis is the gender dynamic or the relationship.

As this could be a controversial topic in some jurisdictions, the way the gender analysis is presented and explained will need to be context-specific.

#### 1.c) Contextualize the data – look for key insights

Examine the results in terms of how they align or do not align with what is already known about well-being in the region. How do the results compare to national data or historical data if it exists? What major events or dynamics could have impacted the results? What aspects of well-being appear to be the weakest and the strongest? Based on dialogue throughout



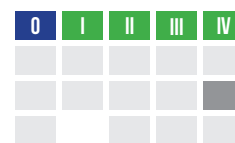
the process, do the results reflect the priorities and hot topics shared by the stakeholders involved?

While the first round of local data collection is intended as a baseline to which future years of data will be compared, with a bit of research, key insights should emerge from even this first round of data collection. Along with comparisons to national level data, sources like the UN Human Development Programme and UNICEF are great starting points to help contextualize survey results.

#### **1.d) Package/present data for different audiences**

Different audiences will understand data in different ways. This is typically based on their level of familiarity and experience with indicator-based information and the cultural biases they may have on the issues being measured. It is important to present the information in a constructive and engaging way, and keep messages objective and de-politicized. Adapt information according to different audiences: which groups are you presenting the data to and what is the most relevant and appropriate way to engage them? Is there an opportunity to build capacity around data analysis and interpretation? For example, with community participants, the focus can be on describing and discussing the results with some visual aids and diagrams. Infographics may be more effective than an index. Build off formats or successful tools from previous engagements when relevant.

## 4.2 DIALOGUE ON FINDINGS



### Objective

- Utilise the results of the study to spur discussion on the current and future state of well-being

### Key Outputs

- Facilitation questions to help generate discussion of results
- Workshop (and/or other forums) to discuss the results with various stakeholders
- Documentation of community stakeholder reactions to results of study.

### Key Considerations

It is not recommended that the company lead the interpretation of the results as it could influence how the community perceives and decides to use the data. Ideally, the steering committee would be heavily involved in this step with support from the implementing partner, an NGO or another external third party.

### Description

#### 2.a) Develop workshop facilitation approach and begin validation of results

Preparation for this step begins in Step 1 of this phase and should conclude with the development of questions. Looking at each of the key results, the discussion with the community should touch on the following points:

- What do we think this result means? Why do you think it is low/high?
- Given what the data is saying, what do we think is going well? What are the opportunities for improvement? Do these relate to the vision we established earlier for community well-being?
- What are the key factors that impact/influence this result (for each prioritized result)? What indicators (or issues) would we like to see improved?

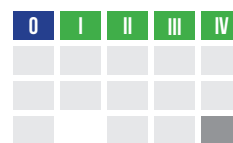
The facilitator should always be cognisant of the need to manage expectations. In particular, the facilitator should refer back to the goal and objectives of BZH: to measure and monitor community well-being in order to inform decision making on development programming and planning amongst the community and stakeholders. It should be made clear that the data does not imply a promise for specific changes, but rather allows for better insight into what the community could prioritize as important areas for development.

## **2.b) Begin identifying themes**

Feedback from this workshop may bring to light new themes, issues, priorities and concerns. It may also serve to confirm some of the positions expressed during the step of co-creating indicators (Phase II). Typically, people want to discuss actions on findings (i.e. how do we fix this problem) as they are presented. This type of conversation has to be carefully navigated, as it is important to summarize feedback (which can ultimately be filtered into appropriate planning groups and processes), but not to get deep into planning discussions. Remain within the scope of the project.

## **2.c) Follow-up report**

After discussing the results, follow-up the first report with a second report that includes community and steering committee interpretations and feedback (i.e. from Step 2.b). This will ensure that a fulsome understanding of the status of well-being is documented for reference during the next data collection period.



## 4.3 ACTION ON FINDINGS

### Objective

- Ensure the continuation of the dialogue on and measurement of community well-being

### Key Outputs

- Summary of findings and recommendations for municipal/community planning
- Data storage plan and agreement between the implementing partner and the 'owner' of the process going forward (it's possible that the implementing partner will continue to own the process)
- Action Plan with roles and responsibilities for the next data collection process
- List of roles and responsibilities for those who will be advocating for and acting on the findings (if applicable).

### Key Considerations

The BZH Framework is not a one-time exercise. The most critical part of closing out the project is establishing agreements to continue the process and to ensure data-collection reoccurs. The steering committee should take a role in ensuring accountability for future data collection and would most likely lead this step.

### Description

#### 3.a) Develop key recommendations from summary report

Based on the dialogue and analysis in the previous step, the steering committee summarizes the findings of the study, how the results were received by stakeholders, and provides a set of key recommendations or areas of focus for local development planning.

This could be presented to an existing regional or municipal planning body, or be used by the steering committee itself.

#### 3.b) Reconfirm the data storage plan

This should already have been agreed upon in Phase II, but it is critical enough to discuss again; determine if the group housing the data has the necessary capacity to protect and maintain the data. If the company has been providing support services in this area, this would be the appropriate time to put an action plan in place to facilitate the housing of the data within an appropriate authority/planning body. This could be a lengthy capacity-building process, but should be approached as an important part of communities managing their own development.

#### 3.c) Establishing agreement on roles, responsibilities and the future of BZH

The implementing partner and the steering committee need to determine ongoing roles and responsibilities going forward. The following key questions need to be answered when agreeing on next steps:

- Who will measure and monitor the indicators in the future?
- Who owns the process at this point?
- Where will the funding come from?
- When will data be collected again?
- What kind of engagement can take place between this point and the next round of data collection?

The frequency with which the data is collected will be determined uniquely in every context. For cost purposes, every 2-3 years is suggested as a minimum time between data collection periods, while for consistency purposes it is not recommended that more than five years elapse between data collection

periods. Data collection periods may also shift, depending on the phase of the mining project and the needs/circumstances of the community. There may also be some indicators that are deemed by stakeholders to be extremely important and could therefore be monitored on a more frequent basis, such as monthly, quarterly or annually.







# APPENDICES

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# APPENDIX A

## Research Behind the Core Indicators

The Beyond Zero Harm Framework incorporates two different types of indicators for well-being measurement; a set of 35 pre-defined Core Indicators, and an undetermined set of Co-created Indicators, which are defined jointly with communities around issues that are most material to them. The combination of these two different types of indicators ensures that what is measured is relevant to global development standards as well as the local contexts.

The Core Indicators, which were adapted from global development indices, are intended to be applicable in any developing-country context and cover a comprehensive range of categories around governance, civic engagement, education, health, infrastructure, safety, living standards, the environment and the economy. The Co-created Indicators are developed through a guided dialogue process with community stakeholders in order to reflect local realities.

This appendix looks more closely at how the Core Indicators were identified/selected. The draft Core Indicators were developed over an intensive eight-month process of research and consultation with a range of experts.

The research process began with a comprehensive scan of over 17 different global development indices, including:

- Millennium Development Goals (MDGs)
- Gross National Happiness

- Sustainable Development Goals (SDGs) (Draft)
- World Council on City Data,
- UN Human Development Index
- Townsend Deprivation Index
- UNDP Gender Inequality Index
- Global Hunger Index
- Economic Freedom in the World Index
- UNICEF Index of Urban Child Development
- Environmental Performance Index
- UNDESA: Indicators of Sustainable Development
- Sustainable Communities Index
- IFC Development Outcome Tracking System
- UNICEF Child Well-Being in Rich Countries
- Canadian Index of Wellbeing
- OECD Better Life Index
- World Health Statistics (WHO).

A significant amount of extractives-specifics research was also reviewed to identify industry relevant indicators<sup>1</sup>. This initial phase of research produced a total of over 570 indicators. This database was then catalogued by category (e.g. Health, Education, Economic, Living Standards, Environment, etc.) and reduced to remove both redundancies (i.e. the same or very similar indicators that appear multiple indices) and indicators that were not applicable for the local level<sup>2</sup>.

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<sup>1</sup> Particular attention was given to Franks, D. (2012). Social impact assessment of resource projects. Retrieved from International Mining for Development Centre

<sup>2</sup> Given that the focus of the Beyond Zero Harm Framework is on local level issues, non-applicable indicators refer simply to macro-level indicators that are not relevant at the community level.

With a reduced list of 130 indicators, a screening methodology was developed to begin reducing that list to a more manageable range of ~30. This number was identified after considerable consultation with both companies and indicator/survey experts<sup>3</sup> to find a sufficient range of indicators that could effectively capture a broad and balanced snapshot of community well-being, while still being 'manageable' for both communities and companies.

The screening process looked quantitatively and qualitatively at the following considerations, in relative order of importance:

**1. Consistency with Global Indices<sup>4</sup>:**

The more frequently with which an indicator would appear in various indices was viewed as an indicator of the consistency with which it was viewed by experts as a legitimate and effective indicator of well-being. It also significantly increases the likelihood that that data would be collected (at a minimum) at the national level, making local – national comparisons.

**2. Outcome / Impact:** The focus was on identifying indicators that were indicative of broad scale change and not simply inputs/outputs from specific and targeted community investments.

**3. Cost:** Cost prohibitive indicators significantly hinder the likelihood of adoption of the framework.

**4. Mining-Relevant:** Although the focus is getting a balanced picture of well-being of communities, indicators that were more likely to be influenced by a mining project (positively or negatively) were given slightly more weight.

**5. Feasibility:** The likelihood that they indicator could be collected in any setting.

**6. Simplicity:** Indicators that are relatively straightforward to measure, analyze and understand increase the likelihood of adoption and the general usability of the data.

**7. Stability/Longevity:** Indicators that provide a view of a sustained or sustainable change rather than ones that are overly volatile to basic stimulus.

The screening process was not a pure quantitative methodology as a significant amount of interpretation was required in order to apply the screens. The process was heavily informed by Professor Trevor Hancock, a leading expert on community health and development indicators<sup>5</sup>. The final list of core indicators was 35.

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<sup>3</sup> The process was guided by Dr. Trevor Hancock (more on Dr. Hancock in footnote 5) and by a number of professionals at rePlan with extensive experience conducting community baseline surveys.

<sup>4</sup> Particular attention was given to the UN Human Development Index, the Millennium Development Goals (MDGs) and the draft new Sustainable Development Goals (SDGs), which are generally regarded as three of the most prominent of global development indices.

<sup>5</sup> Dr. Trevor Hancock is a Professor and Senior Scholar at the School of Public Health and Social Policy at the University of Victoria. He has worked as a consultant with the World Health Organization and was one of the creators of the Healthy Cities project. He has led a team of colleagues to prepare a report on the public health implications of global change, released by the Canadian Public Health Association in May 2015.

# APPENDIX B

## Research Bibliography

- Alkire, S., & Foster, J. (2007). *Decomposable Threshold Method*.
- Aragon, F. M., & Rud, J. P. (2011). Natural Resources and Local Communities: Evidence from a Peruvian Gold Mine. *American Economic Journal: Economic Policy*, 5.2, 1-25.
- BHP Billiton. (2009). *Olympic Dam Expansion Draft Environmental Impact Statement Appendix Q*. Retrieved from BHP Billiton: <http://www.bhpbilliton.com/home/aboutus/regulatory/Documents/odxEisAppendixQ10SocialIndicators.pdf>
- BIO Intelligence Service. (2012). *Indicators on linking resource use to the economy*. Prepared in response to Information Hub Enquiry, No 2012-002 for the Environmental Data Centres on Natural Resources and Products, European Commission, DG Environment.
- Bradshaw, B., & Siebenmorgen, P. (2011). *Eabametoong First Nation Community Well-Being Baseline Study*.
- Bradshaw, B., & Siebenmorgen, P. (2012). *Development of Community Well-Being Indicators in Eabametoong First Nation*.
- Bradshaw, B., & Siebenmorgen, P. (2013). *Tracking Community Well-Being in Northern Ontario's "Ring of Fire"*. University of Guelph.
- Calverley, J., & Amerasinghe, S. (2013, September 13). *Measuring sustainable development*. Retrieved from Standard Chartered: <https://www.sc.com/en/resources/global-en/pdf/Research/Sustainability.pdf>
- Chamaret, A., O'Connor, M., & Recoche, G. (2007). Top-down/bottom-up approach for developing sustainable development indicators for mining: application to the Arlit uranium mines (Niger). *Int. J. of Sustainable Development*, 10. 1/2, 161 - 174.
- Economic and Social Development Department. (2010). *Measuring Resilience: A Concept Note on the Resilience Tool*. Retrieved from Food and Agriculture Organization of the United Nations: <http://www.fao.org/docrep/013/al920e/al920e00.pdf>
- Economic Commission for Africa. (2004). *The African Gender and Development Index*. Addis Ababa: Economic Commission for Africa.
- Emerson, J. W., Etsy, D. C., Hsu, A., Levy, M. A., de Sherbinin, A., Mara, V., et al. (2012). 2012 Environmental Performance Index and Pilot Trend Environmental Performance Index. New Haven: Yale Center for Environmental Law and Policy.
- Esteves, A. M., Franks, D., & Vanclay, F. (2012). Social impact: the state of the art. *Impact Assessment and Project Appraisal*, 34-42.
- Fonda, M., & Anderson, E. (2009). Diamonds in Canada's north: A lesson in measuring socio-economic impacts on well-being. *Canadian Diversity*, 107-111.
- Franks, D. (2012). *Social impact assessment of resource projects*. Retrieved from International Mining for Development Centre: [http://im4dc.org/wp-content/uploads/2012/01/UWA\\_1698\\_Paper-02\\_Social-impact-assessment-of-resource-projects1.pdf](http://im4dc.org/wp-content/uploads/2012/01/UWA_1698_Paper-02_Social-impact-assessment-of-resource-projects1.pdf)
- Gross National Happiness. (2014). *9 Domains*. Retrieved from Gross National Happiness: <http://www.grossnationalhappiness.com/9-domains/>

- Hancock, T., Labonte, R., & Edwards, R. (1999). Indicators that count! Measuring population health at the community level. *Canadian Journal of Public Health*, 90.1, 22-26.
- Helliwell, J. F., Layard, R., & Sachs, J. D. (2013). *World Happiness Report 2013*. Retrieved from Sustainable Development Solutions Network: <http://unsdsn.org/resources/publications/world-happiness-report-2013/>
- (n.d.). *Indicators of Ecosystem Health*.
- International Food Policy Research Institute. (2013). *Global Hunger Index*. Retrieved from International Food Policy Research Institute: <http://www.ifpri.org/book-8018/ourwork/researcharea/global-hunger-index>
- Jeffery, B., Abonyi, S., Hamilton, C., Bird, S., Denechezhe, M., Lidguerre, T., et al. (2006). *Community Health Indicators Toolkit*. University of Regina and University of Saskatchewan: Saskatchewan Population Health and Evaluation Research Unit.
- Klugman, J., Rodriguez, F., & Choi, H.-J. (2011). *The HDI 2010: New Controversies, Old Critiques*. United Nations Development Programme Human Development Reports.
- Lapalme, L.-A. (2003). *The Social Dimension of Sustainable Development and the Mining Industry: A Background Paper*. Ottawa: Minerals and Metals Sector Natural Resources Canada.
- Odell, C. J., Scoble, M., & Recharte Bullard, J. (2011). Improving socio-economic outcomes at Andean mines. *International Journal of Mining, Reclamation and Environment* 25.2, 133-151.
- OECD. (2011). *Compendium of OECD Well-Being Indicators*. The Organisation for Economic Co-operation and Development (OECD).
- OECD. (2014). *How's Life*. Retrieved from OECD Better Life Index: <http://www.oecdbetterlifeindex.org/>
- Pronyk, P., Muniz, M., Nemser, B., Somers, M.-A., McClellan, L., Palm, C. A., et al. (2012). The effect of an integrated multi-sector model for achieving the Millennium Development Goals and improving child survival in rural sub-Saharan Africa: a non-randomised controlled assessment. *The Lancet*, 397.9832, 2179-2188.
- Serrano, J. G. (2012). Indicator System Implementation for the Mining Industry. *IAIA12 Conference Proceedings: Energy Future - The Role of Impact Assessment*. Porto: Environmental Assessment Service.
- Sustainable Communities Index. (2013). *Sustainable Communities Index*. Retrieved from <http://www.sustainablecommunitiesindex.org/>
- The Heritage Foundation. (n.d.). *Methodology - Index of Economic Freedom*. Retrieved 2013, from Heritage: <http://www.heritage.org/index/book/methodology>
- The International Council on Mining & Metals (ICMM). (2013). *Making a development impact: Approaches to understanding human and social development outcomes from mining*. ICMM.
- The International Fund for Agricultural Development (IFAD). (2001). The Sustainable Livelihoods Framework. *IFAD SL Workshop*, (pp. 1-16).
- The World Bank. (2013). *Mining and Poverty Reduction*. Retrieved from Oil, Gas, and Mining Unit: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTOGMC/0,,contentMDK:20246101~menuPK:509392~pagePK:148956~piPK:216618~theSitePK:336930~isCURL:Y,00.html>
- UNICEF. (2014). *Statistics by Area*. Retrieved from ChildInfo: Monitoring the Situation of Children and Women: <http://www.childinfo.org/statsbyarea.html>
- United Nations Department of Economic and Social Affairs. (2007, October). *Overview of the revised CSD Indicators of Sustainable Development*. Retrieved from Indicators

- of Sustainable Development: Guidelines and Methodologies: <http://www.un.org/esa/sustdev/natlinfo/indicators/guidelines.pdf>
- United Nations Development Programme. (2014). *Human Development Reports*. Retrieved from Human Development Reports: <http://hdr.undp.org/en/reports>
- United Nations Development Programme. (2014). *Inequality-adjusted Human Development Index (IHDI)*. Retrieved from Human Development Reports: <http://hdr.undp.org/en/statistics/ihdi>
- United Nations Statistics Division. (2014). *Millennium Development Goals*. Retrieved from The Official United Nations Site for the MDG Indicators: <http://mdgs.un.org/UNSD/MDG/Host.aspx?Content=Indicators%2fOfficialList.htm>
- University of Waterloo - Faculty of Applied Health Sciences. (2014). *Canadian Index of Wellbeing Framework*. Retrieved from University of Waterloo: <https://uwaterloo.ca/canadian-index-wellbeing/our-products/framework>
- Vanclay, F. (2002). Conceptualising social impacts. *Environmental Impact Assessment Review* 22.3, 183-211.
- Vanclay, F. (2003, March). *International Principles for Social Impact Assessment*. Retrieved from International Association for Impact Assessment (IAIA): <http://www.iaia.org/publicdocuments/sections/sia/IAIA-SIA-International-Principles.pdf?AspxAutoDetectCookieSupport=1>
- WBCSD Social Capital. (n.d.). *Measuring socio-economic impact: A guide for business*.
- World Health Organization. (2013). *World Health Statistics*. Retrieved from Global Health Observatory (GHO): [http://www.who.int/gho/publications/world\\_health\\_statistics/en/](http://www.who.int/gho/publications/world_health_statistics/en/)
- Worrall, R., Neil, D., Brereton, D., & Mulligan, D. (2009). Towards a sustainability criteria and indicators framework for legacy mine land. *Journal of Cleaner Production* 17.16, 1426-1434.



## Indices

### **Canadian Index of Wellbeing**

<https://uwaterloo.ca/canadian-index-wellbeing/>

### **Global Hunger Index**

<https://www.ifpri.org/topic/global-hunger-index>

### **Economic Freedom in the World Index**

<http://www.heritage.org/index/>

### **Environmental Performance Index**

<http://epi.yale.edu/>

### **Sustainable Communities Index**

<http://www.sustainablecommunitiesindex.org/>

### **UNICEF Child Well-Being in Rich Countries**

[http://www.unicef-irc.org/publications/pdf/rc11\\_eng.pdf](http://www.unicef-irc.org/publications/pdf/rc11_eng.pdf)

### **Millennium Development Goals (MDGs)**

<http://www.un.org/millenniumgoals/>

### **[Draft] Sustainable Development Goals (SDGs)**

<https://sustainabledevelopment.un.org/content/documents/7261Post-2015%20Summit%20-%202020June%202015.pdf>

### **World Health Statistics (WHO)**

[http://www.who.int/gho/publications/world\\_health\\_statistics/en/](http://www.who.int/gho/publications/world_health_statistics/en/)

### **OECD Better Life Index**

<http://www.oecdbetterlifeindex.org/>

### **UNDP Gender Inequality Index**

<http://hdr.undp.org/en/content/gender-inequality-index-gii>

### **Gross National Happiness**

<http://www.grossnationalhappiness.com/>

### **Townsend Deprivation Index**

<http://census.ukdataservice.ac.uk/get-data/related/deprivation>

### **UN Human Development Index**

<http://hdr.undp.org/en/content/human-development-index-hdi>

### **UNICEF Index of Urban Child Development**

[http://www.cityindicators.org/Deliverables/UKID%20Overview%20and%20Preliminary%20Results\\_10-2-2013-140975.pdf](http://www.cityindicators.org/Deliverables/UKID%20Overview%20and%20Preliminary%20Results_10-2-2013-140975.pdf)

### **UNDESA: Indicators of Sustainable Development**

<https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=107&menu=1515>

### **IFC Development Outcome Tracking System**

[http://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/IDG\\_Home/Monitoring\\_Tracking\\_Results/Tracking\\_System](http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IDG_Home/Monitoring_Tracking_Results/Tracking_System)

### **World Council on City Data**

<http://www.dataforcities.org/>

# APPENDIX C

## Sample Budget Template

	# of units	Unit Price	Cost
<b>STEERING COMMITTEE</b>			
Stipends			\$-
Meeting space			\$-
Transportation			\$-
Food/drinks			\$-
Sub total			\$-
This should cover all engagements, starting in Phase 1, through to Phase 4. It may also include an allowance for ongoing occasional meetings after Phase 4 to continue to promote the work and plan monitoring process.			
<b>WORKSHOPS / FOCUS GROUPS / KEY INFORMANT INTERVIEWS</b>			
Meeting space			\$-
Stipends			\$-
Facilitator			\$-
Paper / special supplies			\$-
Transportation			\$-
Food/drink			\$-
Sub total			\$-
This should include at least 3 workshops with community stakeholders: envisioning community wellbeing (Phase 2), confirming indicators (Phase 2), reporting back on findings(Phase 4). Note that you might hold separate workshops for different stakeholder groups for each of these engagement points.			
<b>QUANTITATIVE DATA COLLECTION</b>			
Survey team lead			\$-
Surveyors			\$-
Transportation in field			\$-
Training of team - food			\$-
Training of team - meeting space			\$-
Training of team - stipend			\$-
Training of team - transportation			\$-
Data input administrators			\$-
Sub total			\$-
This should cover full cost of data collection and input for the BZH (Phase 3).			

	# of units	Unit Price	Cost
<b>ITC + ADMINISTRATION</b>			
Telephones / cell phones			\$-
Internet			\$-
Computers / laptops			\$-
Database system			\$-
Ongoing data storage			\$-
Printing / photocopies			\$-
Graphic design work			\$-
Supplies			\$-
Work space			\$-
Sub total			\$-
This should cover all admin, communications and technology costs for BZH.			
<b>PARTICIPATION OF STAFF/CONSULTANTS/OTHERS NOT LOCATED AT SITE</b>			
Flights/ transportation to site			\$-
Per diem			\$-
Lodging			\$-
Consultant fees			\$-
Sub total			\$-
Staff from a Regional or Corporate office may participate in BZH. Consultants may be need to be engaged as the “Implementing Partner” or to support specific pieces of work (like data analysis, workshop facilitation and stakeholder engagement, or data collection oversight).			
<b>TOTAL BUDGET</b>			<b>\$-</b>

# APPENDIX D

## Facilitation Guide for Co-Creating Indicators

This appendix is designed to offer guidance for facilitating the co-creation of indicators. It is important to note that depending on the scale of the Framework implementation, you may need to consider running this workshop a number of times so as to involve a sufficient number and representation of community members (i.e. adequate geographic, gender, ethnic representation etc.) It may also be important to consider whether separate sessions are necessary for particular groups given the socio-political context.

### Overview

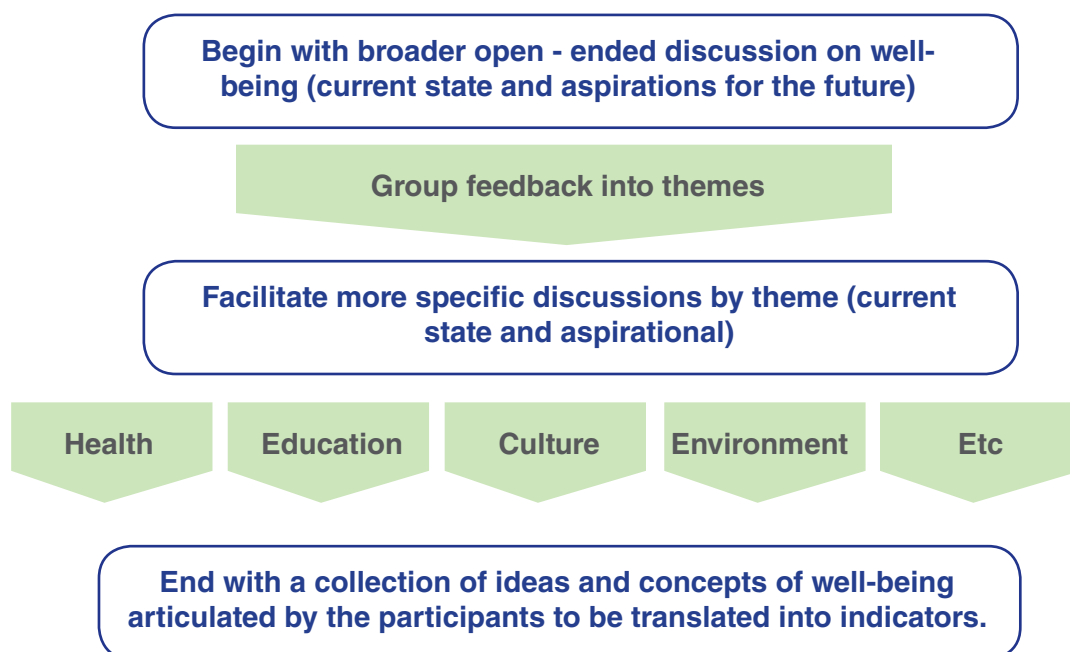
**Objectives:** by the end of this workshop, you will have accomplished the following:

1. A collection of ideas/concepts of well-being

2. Develop a better understanding of how communities determine the state of well-being at a given point in time (i.e. what is well-being and how do you know when you have it)
3. Ensure stakeholders feel that they are part of a process and that their input is respected and valued
4. Create interest in the process and the next steps

**Community Representatives:** Volunteers, typically part of other development discussions at the community level; participants in local governance processes; and focus groups comprised of an inclusive cross-section of the community (i.e. Women and youth organizations, socio-professional groups, marginalized and vulnerable groups etc.).

### Suggested Approach:



Facilitators: recommend the workshop has an overall facilitator, a note taker, and additional facilitators identified who can assist with breakout sessions

**Materials:** Flip charts (3); markers, tape

**Suggested Agenda:**

1. Introduction - Overview & Objectives
2. Open-Ended Questions
3. Grouping of Themes
4. Thematic Discussion
5. Feedback & Next Steps

**Guidance**

**1. Introduction: Overview & Objectives**

**Overview:** Describe the BZH Process in general terms, focusing on:

**1.1 How BZH Works**

The Framework combines globally-defined, universally recognized development indicators with co-created indicators (i.e. community specific / community defined) in a process that brings together many or all of the relevant local and regional stakeholders.

**1.2. Purpose of BZH**

To start (or improve) the monitoring of community well-being, with the intention of using the data for better dialogue and planning on community development by all of the various stakeholders involved.

**1.3 Purpose of This Session**

To begin the process of co-creating locally-relevant indicators. In other words, for the community to define what unique well-being issues can and should be measured. The goal of the session is to produce specific feedback, which can (later) be translated into indicators.

**1.4 What the Session Isn't About**

Although the company is involved as an interest party, this session is not about creating a list of priorities for funding. Similarly, this session isn't about creating or evaluating community development programs. This is one of the reasons it will be important for there to be an objective, third party facilitator as opposed to having staff of the mining company facilitate.

**1.5 Who is involved**

Provide overview of the steering committee, who has been involved to date and where the initiative was initiated.

**1.6 Agenda**

Provide a basic overview of the how the day will work – moving from broader discussion to more focused discussion around development themes/areas, such as education, health, infrastructure, etc. The role of the facilitator will be to stimulate and guide discussion and work towards getting as specific as possible feedback as possible, in order to be able to create indicators (in the next step, likely not in the same day or days in which this workshop is held).

## 2. Open-Ended Discussion on Well-Being

**Overview:** The purpose of this session is to encourage brainstorming and the expression of ideas/feedback that might not be perfectly captured in more specific thematic discussions which will come later. It is important to begin with the open-ended approach to avoid steering the conversation in any particular direction. Open-ended questions also allow participants to ‘warm up’ to ideas around community well-being (i.e. what is important to them) before getting into specifics thematic discussions about health, education, infrastructure, etc.

### 2.1 Form Small Groups

Small groups make for better discussion and more feedback. Groups of 5 – 10 are an ideal size to balance the volume of feedback with the quality of discussion. Explain the process to the group (read the 3 steps below) and designate a ‘recorder’ for the group, i.e. someone who can report back to the broader group with the major themes.

### 2.2 Begin Questions

It may be difficult to start the discussion, below are a sample of questions that can be chosen to help stimulate the dialogue.

#### SAMPLE FACILITATION QUESTIONS

##### Current State

- What is “well-being” for this community?
- What is important to you?
- What is going well in the community today? What isn’t going well?

##### “Aspirational, forward looking”

- What are your hopes/concerns for the future of your community? Hopes for your children?
- Flip forward 20 years and describe the community in terms of results/examples
- What does “success” look like for this community?

### 2.3 Report back

When some (or all) of the questions are covered, or after 1+ hour of conversation, groups should then report back to the broader group about their major themes of discussion.

### 2.4 Document Feedback

As feedback is coming in, be sure to summarize as much of the feedback as possible (on flip charts). Document allows participants to feel acknowledged (and will continue to participate more) and will allow for better management of the session in general.

**3. Grouping of Themes** - by facilitator in between the open-ended session and the thematic session (lunch break or in between days)

**Overview:** In order to get community feedback that is specific enough to be able to turn into indicators, the more general feedback will have to be grouped into categories or themes – use the themes laid out in the core Indicators (see immediately below). If these don’t exactly capture the feedback from the session, create more categories.

- Social
  - Governance
  - Civic Engagement & Culture
- Human
  - Health
  - Education
- Natural
  - Environment
- Physical
  - Infrastructure
  - Safety & Security
- Financial
  - Living Standards and Economy



**Facilitation Tip:** Colour code comments (using markers or post its) for each theme during the open-ended discussions. Grouping the feedback into themes during the break will be much quicker.

### 3.1 Break

Use the break to begin categorizing the feedback into the above areas. Some feedback may fit into more than one category.

### 3.2 Feedback the results to the Grouping

Before proceeding into more specific discussions, show the group how their comments have been grouped. While there may not be 100% agreement on how things are grouped, it's important to review it with the group and see if there are any major concerns.

## 4. Thematic Discussion

**Overview:** Assign each table a different theme – Living Standards, Financial, Education, etc. and ask participants to pick a table/theme for discussion, indicating that they will get a chance to rotate to different tables.

Each table should have a facilitator

### 4.1 Form small groups to each theme

Designate 4 – 6 discussion areas to cover different thematic areas (health, education, economy, etc.). Indicate to participants to choose a discussion area. Each group will cover a different theme for ~30 minutes and then switch to one of the other discussion areas of their choice. Each participant will get a chance to discuss 2 of the 3 topics covered. Facilitation guidance is provided below.

**Facilitation Tip:** The facilitator's job is to encourage participants to get more and more specific on their responses. For example, if participants are discussing jobs (during the Economy discussion), the facilitator should explore around what kinds of employment is considered 'good'? I.e. Is waged labor or self-employment preferred in the community and why?

### 4.2 Facilitation Dialogue

Below are ideas for more specific questions around each theme in order to help the facilitator begin to stimulate discussion and more specific feedback for each category. Overall, the objective is to begin to identify what is important to the community (both positive and negative) and how they know if things are getting better or getting worse.

Dimension	Category	Potential facilitation questions
Social Capital	Governance	<ul style="list-style-type: none"> <li>Does the community have effective government?</li> <li>What does an effective government look like?</li> <li>Does the community feel that resources are distributed to the right priorities.</li> </ul>
	Civic Engagement & Culture	<ul style="list-style-type: none"> <li>What are some of the most common ways in which people get together and why are these important?</li> <li>Do social networks contribute to community well-being?</li> <li>Do people support each other in the same way they did in the past? What has changed?</li> <li>What are some of the most important ways in which the community expresses its culture? How has this changed over the years?</li> <li>What are some of the newest ways that the community discusses culture?</li> </ul>
Human Capital	Health	<ul style="list-style-type: none"> <li>What are the most critical health concerns?</li> <li>Do residents expect a long life free? If not, why not? Has this changed over the years?</li> </ul>
	Education	<ul style="list-style-type: none"> <li>Are youth provided educational opportunities that prepare them to have fulfilling livelihoods?</li> <li>What are the most significant obstacles for youth entering and/or completing (primary or secondary) education?</li> </ul>
Physical Capital	Infrastructure	<ul style="list-style-type: none"> <li>What have been the most important advances in the community's infrastructure over the past 5 years?</li> <li>Does the community's road network support it's needs?</li> <li>What major infrastructure changes would most benefit the community and why?</li> <li>Does the community's infrastructure support growth and development?</li> </ul>
	Safety & Security	<ul style="list-style-type: none"> <li>Do you feel safe at home? In the community? Has that changed?</li> <li>Is safety important to you?</li> <li>Are residents secure that their well-being and belongings are safe from threat of crime?</li> </ul>
Economic Capital	Living Standards and Economy	<ul style="list-style-type: none"> <li>What makes life easier or more difficult?</li> <li>What are signs that living standards are improving?</li> <li>Are living standards improving? How do you know?</li> <li>Does the community have a sustainable economy?</li> <li>Do you feel that you have options for employment?</li> <li>Do employment options exist for others in the community? For your children?</li> <li>Do the economic opportunities in your community offer a good life? Are wages acceptable? Is there enough to go around?</li> </ul>

# APPENDIX E

## Facilitation Guide for Environmental Indicators

### Introduction

**Background:** The follow guide provides a structured approach for facilitating a workshop(s) for co-creation of Environmental Indicators. The guideline is generally based on an ecosystem goods and services approach to understanding the environment and was develop with extensive input and guidance from both (mining) industry and non-industry environmental experts.

The environmental indicators found in the list of Core Indicators are unique from the others on the list in that they are not specific indicators, but rather thematic areas of environmental well-being around:

1. State of the Environment and the Provisional Ecosystem;
2. Resiliency to Environmental Events and Stresses; and
3. Impact of Human Activity on the Natural Environment.

Environmental health is core to community well-being. So even though these general themes will be turned into specific indicators during Phase 2.1 Co-Creation of Indicators, these placeholders are included in the Core Indicators list to ensure that environmental indicators of well-being are thoroughly discussed.

This facilitation guide is designed to help deliver a community workshop(s) that will turn these themes into specific indicators. Although this workshop(s) coincides with the rest of the co-creation process, this facilitation guide differs from the general facilitation guide for Phase 2.1. Why? Simply put, understanding community environmental health can be complex and requires more structured guidance to arrive a 'good' indicators.

**The Process:** This facilitation guide was designed for a one or two-day session in a community, which may be repeated in other neighboring communities participating in the BZH process. The workshop(s) may end up producing more than just one specific indicator. That's OK, additional indicators can be added to the general list of Co-created Indicators. A basic prioritization process at the end of this facilitation guide will help single out the most important indicator in each category to be added to list of core indicators.

**Number of Participants:** This session is designed for 10 – 30 participants. Larger groups can be better facilitated/managed by breaking into smaller focus groups of 5-10 people each.

**Community Representatives:** Volunteers, typically part of other development discussion at the community level; participants in local governance processes; and focus groups made up of women and youth organizations.

**Facilitators:** The number of facilitators will depend on the size of the group. Whether facilitating or acting in an assistance role, having someone with expertise in environmental science for this session(s) will be of critical importance to help inform and guide the conversation.

**Materials:** Flip charts (3); markers, tape.

## Part 1: State of the Environment and the Provisional Ecosystem

What aspects of the natural environment are most important to the community?

Y/N	A. Which of the following are applicable?	B. How would you describe or measure this?	C. How to tell whether this is getting better or worse?
	Crops (areas cultivated for food or cash)	Are there maps for where this occurs? Location(s), area (extent)	Quantity: yield, tonnage, height, volume, frequency, flow, depth, ...
	Livestock (pasture)		
	Water (used for drinking, bathing, irrigation)		
	Groundwater		
	Fishing (wild)	Does anyone have data on how much this occurs? Quantity: yield, weight, height, volume, frequency, depth, ...	
	Aquaculture (fish, shellfish, etc. bred in ponds etc.)		
	Hunting (small or large game, fowl, other)		
	Gathering (collecting mushrooms, nuts, etc.)	Who uses this? Everyone? Some? A few? Some vulnerable groups?	Quality: color, taste, odor, clarity, ...
	Timber (natural forest or plantation)		
	Fiber and resins (nonwood, non-fuel fibers)		
	Animal skins (cattle, deer, pigs, snakes, other)	How important is it? Critical need? Important, but can be replaced? Optional / non-essential?	
	Sand (from coral or shells)		
	Natural medicines		
	Ornamental resources		
	Biomass fuel (firewood, dung)	How does this use rely on other aspects of the natural environment (prey/ predator balance; habitat for spawning or other critical life-stage; pollenization; etc.)?	
	Cultural sites (shrines, landmarks, etc)		
	Recreational areas (trails, sports, etc.)		
	Overall aesthetic or spiritual value		

### For each component present, formulate a statement of the use:

[Who uses?] in the community uses [component], located primarily at [location, extent]. About [how much?] is used, making this [how important?]. Indicators of change include [signs getting worse] and [signs getting better].

*This statement will help formulate an indicator, specifically the information on signs that it is getting better/worse. Some indicators may be able to be developed on the spot, while others may have to be considered with expert input after this initial session is over.*

## Part 2: Resiliency to Environmental Events and Stresses

How do natural events affect the community, and is this changing over time?

Y/N	A. What natural events affect the community?	B. How is this quantified?	C. What natural features mitigate the extent, frequency, or severity of these events?
	Floods	How would you characterize the frequency and extent (area / duration / intensity)? Has this changed over time?	Forests / vegetation (flood control, erosion control, landslide control, stormbreak)
	Landslides		
	Droughts	Who is affected? Everyone? Some? A few? Some vulnerable groups?	Habitat (predators of pests, e.g.)
	Dust storms		
	Wildfires	How intense is the impact? Critical? Somewhat important? Nuisance?	Water purification, filtering
	Insects (disease vectors, crop destruction)		Water storage, groundwater recharge
	Soil erosion / degradation	What triggers these events – natural or human activities, or a combination?	
	Tornado / hurricanes		Seedbank / pollination
	Crop failure		Soil protection / generation

**For each component present, formulate a statement of the effect on the community:**

[Events] occur [frequency] and affect the community [who, intensity]. This is triggered (or made worse) by [triggers]. [Mitigating feature] are important because they [mitigate, prevent, reduce the extent] of the [events]. Indicators of better/worse could include [characterization of impacts] or [changes in natural mitigating features].

*This statement will help formulate an indicator, specifically the information on signs that it is getting better/worse. Some indicators may be able to be developed on the spot, while others may have to be considered with expert input after this initial session is over.*

### Part 3: Impact of Human Activity on the Natural Environment

What activities may generate impacts that affect the community?

Y/N	A. What activities occur in the local community?	B. How is this quantified?	C. How to tell whether this is getting better or worse?
	Small scale mining	What aspects of the natural environment are impacted	Quantity: weight, height, volume, frequency, depth,...
	Industry - discharge of effluent, air emissions		
	Sanitation – untreated discharge of human waste to streams, ground		
	Use of pesticides, herbicides, fungicides in agriculture	Are there maps for where this occurs? Location(s), area (extent)	Quality: color, taste, odor, clarity,...
	Cooking on indoor fires		
	Open / unmanaged dumping of domestic waste		
	Open / unmanaged dumping of oil/liquids from vehicle maintenance	Does anyone have data on how much this occurs? Quantity: weight, height, volume, frequency, depth,...	Monitoring: government or company sampling / analysis (where, frequency, parameters)
	Open burning of waste		
	Open burning of vegetation	Who is affected? Everyone? Some? A few? Some vulnerable groups?	
	Overgrazing		
	Deforestation	How intense is the impact? Critical? Somewhat important? Nuisance?	
	Activities that cause erosion / soil loss		

**For each component present, formulate a statement of the effect on the community:**

[Source of pollution] affects the community [where, extent, who, intensity]. The community sees [signs of better or worse] as an important indicator of impact.

*This statement will help formulate an indicator, specifically the information on signs that it is getting better/worse. Some indicators may be able to be developed on the spot, while others may have to be considered with expert input after this initial session is over.*



## Part 4: Integration and prioritization

Prioritization may happen very naturally with each categorical discussion. If not, this basic prioritization process is very useful for determining which get added to the core list as well as which additional ones might be added to the general list of Co-created Indicators.

1. Compile a list of the indicators identified in the previous parts
2. Consider any monitoring that may measure the extent of these indicators (in consultation with appropriate agencies / authorities)

Y/N	A. What activities occur in the local community?	B. How is this quantified?	C. How to tell whether this is getting better or worse?
	Air quality – ambient dust	Who? – name of agency or, if enterprise is required to monitor	Standards – do standards exist that define “safe” levels?
	Air quality – ambient gases		
	Air quality – emissions		
	Drinking water – quality	Where? – locations and frequency	Data availability – are the results published/available? Is the community notified of any unsafe levels?
	Surface water – quality		
	Surface water – flow/quantity		
	Ground water – depth/quality	What? – parameters measured	
	Wastewater/effluent – quality		
	Food		

3. Refine & prioritize the indicators based on:
  - The number of stakeholders potentially affected (including vulnerable groups)
  - The intensity (severity) of potential impacts on the community
  - The duration (reversibility) of potential impacts
  - The existence of cross-impacts / feedback loops / multiplier effects on other resources
  - The likelihood of changes
  - The ease / expense / technical viability of measurement & interpretation

See the below table for guidance. And indicators with multiple 'high' consequences should be considered as a potential Core Indicators for each category.

Consequences	Low	Medium	High
<b>Number of stakeholders potentially affected</b>	A few non-vulnerable individuals	Some groups and/or a number of individuals	A broad range of groups and individuals, including vulnerable stakeholders
<b>Uses of the natural environment affected</b>	Non-essential, can be replaced/mitigated	Important to some stakeholders	Essential, irreplaceable
<b>Duration (reversibility) of the impact of any change</b>	Temporary, short-term (reversible)	Medium term	Permanent, irreversible
<b>Intensity of impact of any change</b>	Minor nuisance, no health impacts	More than a nuisance, but not impacting health/well-being	Severe impacts to health & well-being
<b>Multiplier effects / cross-impacts</b>	No implications of impacts to other resources	Some potential impacts on other resources	Critical component affecting a broad range of other natural resources
<b>Likelihood of changes</b>	Hypothetical: Difficult to imagine a realistic scenario	Possible under some realistic scenarios	Observed, already on-going
<b>Ease of measurement</b>	Technically infeasible / complex / difficult to interpret	Possibly feasible, but requires additional investment / resources	Simple, easily measured and understood, with little additional investment