



Annex 2-II: Illustrative Sets of Indicators for Environmental Peacebuilding

This annex provides illustrative indicators for nine theories of change for environmental peacebuilding, selected from Annex 2-I. For any particular project, the indicators will need to be adapted to the particular

context, and additional indicators may be needed. For each set, the Theory of Change is provided in the dark green bar at the top. These indicators were developed at a hackathon on August 8, 2023 and by the authors of this toolkit, and edited accordingly.



If natural resources are effectively governed for the economic needs of a community, then inter-communal violence will decrease because communities have access to sufficient and sustainable livelihoods.

Considerations	Indicators	Notes	Sources/Examples
<ul style="list-style-type: none"> Natural resources can help immediately restore economic activity post-conflict. Natural resources can diversify and strengthen economies. Livelihood support can be useful in reintegrating ex-combatants or community members in conflict. Sustainable livelihoods offer alternative income sources to conflict-related activities. 	<p>If/Activities & Short-Term Outcomes</p> <ul style="list-style-type: none"> Implementation of natural resource governance mechanisms % of people who believe that [the natural resource in question] is being effectively governed <p>Then/Long-Term Outcomes</p> <ul style="list-style-type: none"> # of instances of inter-communal violence Evidence of other approaches being used to resolve conflicts <p>Because/Medium-Term Outcomes</p> <ul style="list-style-type: none"> % of people employed % of households with sufficient income to meet their basic needs Perceptions of sufficiency and sustainability of livelihoods <p>Unexpected Outcomes</p> <ul style="list-style-type: none"> Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> Gender Age Rural/urban or geographic Sector Ethnic or religious group Political identities Livelihoods group <p>Indicators data can be collected via:</p> <ul style="list-style-type: none"> Community or household surveys Community informants/reports Interviews or focus groups <p>The context will determine what is effective governance and what are sufficient and sustainable livelihoods. Communities are often best placed to define this themselves.</p>	<p>Livelihoods Centre n.d.</p>

If different or improved and sustainable livelihood activities are used to meet the needs of groups in conflict, then conflict between them will decrease, because the incentives for engaging in conflict are lessened or removed, and engaging in conflict is more costly.

Considerations	Indicators	Notes	Sources/Examples
<ul style="list-style-type: none"> While new or improved livelihood activities must meet economic needs, cultural or social needs should also be considered, as some livelihood activities may be less socially acceptable or desirable. Different stakeholder groups will have different needs; it is important to be inclusive. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> # or % of people participating in sustainable livelihood activities Perceptions of suitability or desirability of livelihood activities <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> # of instances of violence or conflict Evidence of increased capacity to prevent or resolve conflicts <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> % of people employed % of households with sufficient income to meet their basic needs Perceptions of sufficiency and sustainability of livelihoods, including expectations that the future economic situation will be better than the present Perceptions of the cost of engaging in conflict <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> Gender Age Rural/urban or geographic Sector Ethnic or religious group Political identities Livelihoods group <p>Indicators data can be collected via:</p> <ul style="list-style-type: none"> Community or household surveys Community informants/reports Interviews or focus groups <p>The context will determine what counts as a sufficient or sustainable livelihood. Communities are often best placed to define this themselves</p>	<p>FAO 2022 Livelihoods Centre n.d.</p>

If groups in conflict participate in collaborative activities related to shared interests in the environment, then there may be reductions in intergroup conflict and more positive intergroup attitudes and relationships because that hostility between groups is perpetuated by unfamiliarity and separation and engagement with those groups can increase understanding of the other and challenge negative stereotypes (USAID 2013, p. 20).

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> Bringing groups in conflict together alone is not sufficient; joint activities must take place in a conflict-sensitive way or risk exacerbating the conflict dynamics. The activities should reflect the needs or important areas to all participating groups. Management and implementation of the activities should also reflect those groups. It is important to consider whether the interests of groups really align. It is also important to consider scale, as it may be easier to find common ground and build people at a local level. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> # and type of joint activities organized by third-parties # of people participating directly (and indirectly) in the joint activities Perceptions of the relevance of activities to needs or their degree of importance Perceptions of activities as truly collaborative and/or tackling real interests Perceptions of process equity and fairness <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> # of instances of violence or conflict Reduced willingness to engage in conflict Increased relationships or trust between groups % of people reporting increased friendships with those of the other group Changes in perception of the other groups Changes in values and priorities Opportunities for joint peaceful environmental collaboration were seized Strengthened collaborative networks <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> % of people reporting increased understanding of the other group Changes in perceptions of the other group, particularly regarding stereotypes Evidence of social learning, including improved understanding of social and ecological issues as well as other groups' and one's own perceptions (self-awareness) of those issues. More peaceful social relations and governance, especially around shared environmental issues Evidence of groups finding (shared) value in the process/activities Evidence of challenging institutional and cultural practices <p><i>*Where does social learning end and peacebuilding begin? Learning is a process and an outcome; you can have indicators for both.</i></p> <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> Gender Age Rural/urban or geography Ethnic or religious group Political identities Livelihoods group Income level <p>Indicators data can be collected via:</p> <ul style="list-style-type: none"> Individual interviews or surveys Observation Behavioral stories Observations (especially if focused on elites or others who may not participate in surveys or focus groups) Rumor tracking <p>Maintaining anonymity or confidentiality in data collection is important; some of those participating in the activities may be reluctant to share improvements in their perceptions of the other group in public settings.</p> <p>It is important to combine perception-focused surveys or interviews with other methods to avoid bias.</p>	

If the ability of communities and countries to adapt to climate change is strengthened in ways that conserve local ecosystems and strengthens their capacity to address climate-related conflicts in an equitable way, then communities and countries will be more resilient to changes in climate, environment, and natural resources as well as conflict risks and other knock-on social effects because climate change adaptation and the essential services it provides support local and national actors in anticipating and adapting to shocks.

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> Climate adaptation strategies can include the use of climate-smart agricultural practices, resource risk management strategies, inclusive financing mechanisms, disaster risk reduction, etc. It is essential that approaches account for sustainable ecosystems that conserve natural resources; nature-based solutions (NbS) may be helpful. Equitable distribution of benefits is essential to avoid exacerbating conflicts across the various stakeholders (avoid repeating structural violence). Consider long-term climate effects and expand or enlarge the spatial scale. From an environmental peacebuilding perspective, a climate-resilient ecosystem service The Theory of Change should try to include both environmental and conflict resolution pathways. Ensure the root causes of vulnerability are addressed by the intervention. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> # of people participating in climate adaptation activities/intervention # of people able to access inclusive financing mechanisms (e.g., social bonds) % of community aware of climate adaptation and resilience strategies. Collaborative governance arrangements for the ecosystem Perceptions of inclusion in the activities Identification of alternative livelihoods as part of ecosystem preservation <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> Availability of quality infrastructure (transportation, energy, etc.) Availability of natural resources (e.g., water) Quality of institutions for responding to climate change . Capacities to manage conflict Levels of conflict Alternative livelihoods relying on ecosystem services. Improved adaptation measures. <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> % of community utilizing climate adaptation and resilience strategies Availability of essential services and their performance under shocks or stresses Increased capacities in both ecosystem governance and conflict resolution <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> Gender Age Rural/urban or geographic Livelihoods group Income level Ethnic group Political group <p>Indicators data can be collected via:</p> <ul style="list-style-type: none"> Interviews Surveys Observation <p>*Disaggregation should help implementers understand the diversity present and avoid elite capture</p> <p>Resilience can be defined differently based on the scale and context. Indicators of resilience have traditionally focused on the existence of economic, social, and infrastructure conditions.</p>	CARE 2015

If early warning systems are established to identify environmental, fragility, and conflict risks before they escalate, then stakeholders can take steps to increase their resilience and avoid conflict because the early warning system provides timely information to support coordination and collective action at different scales to mitigate or otherwise address risks.

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> ● It is important to know who will use the data (government, community councils, etc.), and whether they have the capacity to use/process the data securely. ● Theory of Changes often mentions early warning system, but creating new parallel structures may not be necessary (or the best system). You need to consider whether you are capitalizing on an existing institutional mechanism or creating an entirely new one. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Operational level of the early warning system ● Accessibility of early warning system (e.g., language) ● Existence of a legal mandate to: <ul style="list-style-type: none"> ● Warn ● Respond ● Monitor responses <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Did the early warning system prevent conflict? ● Steps taken to avoid conflict/# of responses ● # of conflicts potentially prevented <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> ● # of risks identified ● Relevance of the information provided ● Timeliness of the information provided ● #/% of community receiving information ● Sustainability of early warning system <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> ● Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> ● Stakeholder v. Decisionmaker ● Ethnicity ● Nationality ● Gender ● Types of actions undertaken <p>Indicator data can be collected via:</p> <ul style="list-style-type: none"> ● Surveys ● Interviews (esp. for counterfactuals) ● Observation 	





If women are provided safety and security in natural resource access and management, then gender-based violence will decrease because increased protections reduce vulnerability to structural inequalities and opportunities for them to be attacked or otherwise harmed.

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> ● GBV extends beyond women and girls, and the exclusion of men can result in increased violence towards women. ● Consider the impacts of interventions on traditional gender roles and norms, and recognize impacts that come with this deviation from the status quo. ● Environmental defenders are a special case. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> ● #/% of women that have ownership rights of natural resources ● #/% of women participating in natural resource management leadership positions <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> ● # of instances of gender-based violence. ● # of instances of forced early marriage. ● Perceptions about gender-based violence prevalence and causes. <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Perceptions regarding whether women have safe and secure access to natural resources. ● Perceptions regarding whether women have access to decision-making processes or other relevant governance mechanisms; perceptions of inequality. <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> ● Were there any unexpected outcomes (positive or negative)? Please describe. 	<p>Relevant disaggregation may include:</p> <ul style="list-style-type: none"> ● Gender ● Age ● Rural/urban or geographic ● Livelihoods group ● Income level ● Ethnic group ● Political group <p>Data can be collected via:</p> <ul style="list-style-type: none"> ● Surveys ● Interviews ● Review of documents regarding participation in natural resource governance processes <p>Note that it is particularly important to examine changes in attitudes regarding women's participation among all gender groups.</p>	<p>A study in NE Nigeria on violence and humanitarian context found that because most of the programs on gender supported women, they left out both boys and men.. Accordingly, men did not have access to psychosocial support, which then increased the violence toward women. Moreover, young men who were excluded from accessing livelihood support were more prone to recruitment into violence.</p>



If there is [equitable][optimal] redistribution of and access to land, forests, minerals, and other natural resources as well as their revenues and indirect benefits, then the risk of new and renewed conflict is minimized because resource-based grievances would be addressed and the opportunity costs of future conflict would be increased.

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> The maturity of legal and administrative systems will affect the enforcement of ownership rights. When power is unevenly distributed, the allocation of resources and revenues might perversely incentivize conflict. This theory of change only works when the conflict is not active. Whether redistribution itself effectively addresses grievances depends on the ability and collective buy-in to maintain the new arrangement. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> # of resource rights redistributed Size of the resource rights redistributed (e.g., hectares) # of people participating in redistribution <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> # of instances of new or renewed conflict Perceptions of peace and reasons for peace <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> Perceptions regarding whether the redistribution was fair and effective Perceptions of the utility of conflict #/% of people who feel that their resource-based grievances have been addressed 	<p><i>Relevant disaggregation may include:</i></p> <ul style="list-style-type: none"> Gender Economic group Community group Ethnicity Power <p><i>Data can be collected via:</i></p> <ul style="list-style-type: none"> Interviews Surveys 	

If quick gains supporting livelihoods and the delivery of basic services are achieved in the peace process through sustainable natural resource management, then social cohesion, stability, trust in the peace process, and state legitimacy are increased because stakeholders are incentivized to sustain negotiations, cooperation, and other peacebuilding processes (McCandless 2012, p. 16).

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> ● Consider which types of quick-impact interventions are most effective. ● Ensure that the design of and participation in intervention involve a sufficient diversity of stakeholders to avoid elite capture. Diversity should be multidimensional. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> ● # of beneficiaries/participants ● % of community receiving basic services ● Timeliness of the provision of assistance to livelihoods or basic services ● Type of intervention ● How was the QIP decided/designed? Who decided/designed (note particularly re disaggregation factors)? ● Perceptions of the utility or relevance of livelihoods and basic services provided <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Positive perception of the peace process and/or state and state institutions ● # of instances of conflict ● Improvement of relationships between different groups ● % of participants willing to work with someone from the other group <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Increased confidence in peace process due to the quick-impact projects ● % of people willing to continue participating in the peace process ● % of people who support the peace process <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> ● Were there any unexpected outcomes (positive or negative)? Please describe. 	<p><i>Relevant disaggregation may include:</i></p> <ul style="list-style-type: none"> ● Race ● Ethnicity ● Gender ● Income ● Age ● Rural/urban ● Direct and indirect participation <p><i>Data can be collected via:</i></p> <ul style="list-style-type: none"> ● Surveys ● Interviews ● Observation 	

If the governance of minerals necessary for the transition in a carbon-neutral world are managed in a transparent, participatory, and equitable way with the sharing of benefits with local communities, then the likelihood of conflict will be reduced because many of the primary causes of the green resource curse will be proactively addressed (Stein, Bruch, & Dieni 2023).

Considerations	Indicators	Notes	Sources
<ul style="list-style-type: none"> ● Ensure that related interventions are inclusive for sustainability. ● Minerals are often extracted from fragile and conflict-affected situations. In such circumstances, it is key to consider who is getting the money and that tensions are not being fueled or funded. 	<p><i>If/Activities & Short-Term Outcomes</i></p> <ul style="list-style-type: none"> ● # of people consulted/% of communities consulted on mineral governance mechanisms or agreements ● # of mineral governance agreements or processes put into place that are transparent, participatory, and equitable ● Perceptions of transparency, participation, and equity in mineral governance <p><i>Then/Long-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Perceptions on the likelihood of conflict ● # of instances of conflict <p><i>Because/Medium-Term Outcomes</i></p> <ul style="list-style-type: none"> ● Perceptions of fair/economic gain compensation at the local level ● #/% of people/communities receiving certain types of benefits from mineral extractive or processing <p><i>Unexpected Outcomes</i></p> <ul style="list-style-type: none"> ● Were there any unexpected outcomes (positive or negative)? Please describe. 	<p><i>Relevant disaggregation may include:</i></p> <ul style="list-style-type: none"> ● Financial flows ● Gender ● Ethnicity ● Socioeconomic classes ● Geography ● Direct or Indirect participants <p><i>Data can be collected via:</i></p> <ul style="list-style-type: none"> ● Surveys ● Interviews ● Observation ● Rubrics 	





Annex 2-2 References

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