

i. Title/Heading.

Constructing a culture of resilience against climate change for rural families in Bolivia

ii. Context and rationale.

Rural development and agriculture in the Plurinational State of Bolivia is highly susceptible to the impacts of climate change. Most targeted municipalities have a climate change vulnerability index of high to very high. Community members were concerned with climate variability, drought, frost, hail and floods, which badly affect crops and livestock. However, they were also interested in opportunities generated by the increasing temperatures in the highlands such as growing fruit trees, which have a higher market value than traditional crops. The poorest and most populated regions of the highlands (Altiplano) and valleys are subject to deforestation for firewood, because products such as kerosene and butane are not readily available. This exacerbates the impact on livelihoods, leading to the loss of crops, livestock, infrastructure and increased conflict over scarce resources. Due to the success of the talking maps in the IFAD project [ACCESOS](#) in Bolivia and the payment for environmental services in Peru, a project is currently being designed that uses some of these successful techniques and components in Bolivia.

iii. An overview of the contribution.

- 1) Capacity-building for community adaptation: This component will strengthen community capacities through increased awareness about climate change issues and the development of adaptive capacity. This will be done through information and communication strategies which raise awareness and disseminate knowledge and experiences about indigenous adaptation practices that have potential for replication.
- 2) Nature-based budgeting and planning: The component will utilize a talking map methodology for a participatory planning of investments, based on community specific natural resource management and climate vulnerabilities,.
- 3) Climate risk management: This component will help promote better climate risk management at the community and municipality levels, supported by local government investments in the necessary infrastructure, equipment and services.

iv. How the contribution leverages living natural systems as a solution to avert climate change?

The project contributes to the improvement of livelihoods in rural areas while protecting the local biodiversity and restoring the ecosystem services through investments in resilient irrigation and water distribution technologies, watershed conservation, recovery and protection of productive soils, afforestation and reforestation of lands with high risk of erosion. Definitions of investment prioritization follow a nature-based participatory municipal and community planning approach through the talking maps methodology. This system, which is now being utilized by municipalities to improve resource allocation, brings together local and ancestral knowledge, natural science and policy makers in the definition of focalized investments that generate higher resilience capacities and socio-environmental co-benefits based on land and climate vulnerabilities following a micro watershed approach, irrigation potentials, and CC adaptation technologies.

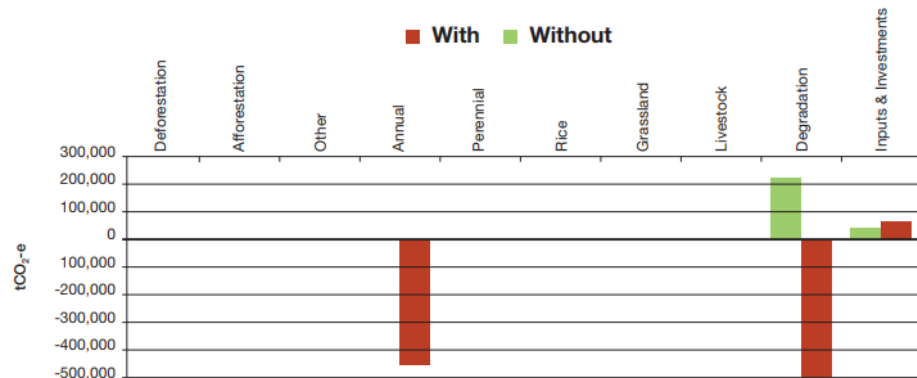
v. How might the contribution support both climate, mitigation and adaptation as well as other important co-benefits and social, economic and environmental outcomes in coming years including:

- a. **Reduction in carbon emission and carbon capture (GTonnes)** – The following figure shows the expected benefits of the ‘with project’ scenario for ACCESSOS (in red) compared with a ‘without project’ scenario (in green). Similar results could be expected for all similar projects. These benefits stem mainly from carbon sequestration that could be achieved through the rehabilitation of forested areas, resulting in a reduction of around -478,000 tons of CO₂e. In comparison, the ‘without project’ scenario that envisages an increase in forest degradation would result in

emissions of over 200,000 tons of CO₂e. Benefits are also generated by the improved management of annual crops, such as onion, beans and groundnut, as well as better water management (estimated at -430,000 tons of CO₂e). However, the use of fertilizer in the fields and fuel for vehicles, as well as the construction of infrastructure are dampening some of this effect, resulting in moderate GHG emissions in both scenarios.

GHG fluxes with and without project in the Plurinational State of Bolivia

Forest rehabilitation has the highest mitigation potential in the Plurinational State of Bolivia



Source

Project GHG fluxes and GHG balance (table 20). CCAFS, FAO and IFAD. 2015.

- b. **Increasing climate resilience** – As above
- c. **Social impact (job increase; poverty reduction, etc.)** – As above
- d. **Impact on realization of the 2030 Agenda for Sustainable Development (in particular SDGs 1,2,6,12,13,14,15,16)** - This initiative contributes to: SDG1 (payment for ecosystem services), SDG6 (clean water), SDG12 (responsible consumption of water and other natural resources such as firewood), SDG13 (halting degradation and erosion), SDG14 (protecting biodiversity within watersheds) and SDG15 (protecting forests and other natural resources from over-exploitation).
- e. **Just transition**- As above
- f. **Food security** – As above
- g. **Minimising species extinction and ecological losses and fostering an increase of biodiversity.** - As above
- vi. **Which countries and organisations are involved in the contribution?**
The Global Environment Facility (GEF), IFAD, Helvetas, Plurinational State of Bolivia, Peru and potential to scale up within the Dominican Republic.
- vii. **How have stakeholders (for example indigenous peoples, local communities, and youth) been consulted in developing the contribution?**
Through Participatory mapping and engagement with community groups; participatory land-use planning and management; and through behavioural changes enabled by economic incentives and capacity building.
- viii. **Where the contribution can be put into action?**
In Watersheds globally.
- ix. **Is this initiative contributing to other Climate Action Summit workstream (industry transition; energy transition; climate finance and carbon pricing; infrastructure, cities and local action; resilience and adaptation; youth and citizen mobilization; social and political drivers; mitigation strategy)?**
This initiative could contribute towards the workstreams on: resilience and adaptation; youth and citizen mobilization; social and political drivers; mitigation strategy.

- x. **Examples of experiences to date: how does this contribution build upon this experience? How does the contribution link with different ongoing initiatives?**
[The Conservation and Sustainable Use of High-Andean Ecosystems through Compensation of Environmental Services for Rural Poverty Alleviation and Social Inclusion](#) in Peru and [ACCESOS](#) in the Plurinational State of Bolivia.
- xi. **Mechanisms for funding (with specific emphasis on potential for partnerships).**
This contribution is in the form of separate projects in various countries that build upon the experience of past projects. The governments may apply for loans or grants from IFAD, and through IFAD, agencies such as the GEF. The projects then conduct payment for watershed based ecosystem services.
- xii. **Means of stewardship, metrics for monitoring.**
GIS (including hydrological maps), Community development plans, supervision and mid-term evaluations.
- xiii. **Communication strategy.**
Currently there is not a separate communication strategy for these projects or actions, however they fit into the wider IFAD communications strategy. A Specific strategy could be developed.
- xiv. **Contact details of proponents (indicating the degree of commitment among the countries and organizations that are named).**
For MERESE and ACCESSOS, both the Peruvian and Bolivian governments are fully committed to these projects which are under implementation. For the upscaling of ACCESSOS in Bolivia and for the same watershed management techniques to be brought to the Dominican Republic, IFAD is still in negotiations with government counterparts however is confident of these projects going ahead.
Ricci Symons – IFAD – r.symons@ifad.org
Rene Castro – IFAD – r.castro@ifad.org