

### Centre d'étude et de coopération internationale (CECI) – *Shea Resilience Project*

#### Tool at a glance

**Title:** Shea Resilience Project

**Addresses:** Adaptation to climate change and sustainable management of the shea industry

**Pertains to greening:** Programming



Québec 

 Affaires mondiales Canada Global Affairs Canada

#### Overview

The mission of the [Centre d'étude et de coopération internationale \(CECI\)](#) is to fight poverty and exclusion by strengthening the development capacities of disadvantaged communities. CECI supports initiatives to promote equality between women and men, resilience and adaptation to climate change, the fight against violence, and food security in its countries of intervention by mobilizing resources and promoting the exchange of know-how.

Aware of the economic, social, and environmental issues at the global level, CECI systematically integrates the notion of sustainable development into its vision and activities, as well as the protection of the environment in all of its programming. Always in search of innovation and efficiency, CECI works on sustainable development solutions through the implementation of international programs and projects with strategic partners.

It is in this perspective that CECI, through the Shea Resilience project, aims to improve the resilience and sustainable management of shea parks in Burkina Faso, through the use of climate scenarios in decision-making and the use of alternative energy, while strengthening the economic power of women for a lasting impact. The Shea Resilience project is carried out with the financial participation of the [Government of Quebec](#) and is supported by CECI's volunteer cooperation program with financial support from the Government of Canada.

#### Improving the sustainability of the shea industry: from production to processing

##### *The problem*

The shea tree, whose products (fruit, leaves, wood) are the main source of income for women in Burkina Faso, is one of the forest species exposed to the harmful effects of climate change. However, thanks to its canopy, the shea tree plays a key role in reducing ground temperature and evapotranspiration. To protect this essential resource that sustains about 1.5 million people in Burkina Faso, 90% of whom are women, it is essential to rigorously monitor the health and establishment of shea trees in relation to the climate and to ensure that informed decisions are made regarding adaptation strategies. Women's community-based shea producer organizations are on the front line in seeing the impact of climate change on shea parks. However, they are not able to identify the best strategies to put in place to preserve this important natural resource and source of income.

In addition, despite its importance, the shea industry also faces major environmental challenges, in particular a strong demand for wood energy for the production of shea butter and (technological) difficulties in managing the waste resulting from this production.

##### *Moving towards a solution*

The Shea Resilience project was designed to respond to these issues in all their dimensions. Implemented with the collaboration and commitment of Burkinabe and Canadian strategic partners, the project aims to improve the resilience and sustainable management of shea parks through the

leadership of women and their organizations. Strategically, the project is part of Burkina Faso's National Climate Change Adaptation Plan (PNA, 2015) and contributes to the implementation of the National Economic and Social Development Plan (PNDES, 2015-2020).

More specifically, the Shea Resilience project, which has been underway since 2018, puts forward new innovative practices for Burkina Faso, namely

- The use of climate scenarios for decision making and the choice of adaptation strategies to be implemented within the shea sector
- The identification and experimentation of biochar as a sustainable alternative to wood as an energy source in the shea industry.

### Shea Resilience project

*The production of climate scenarios and the analysis of risk factors for the implementation of adapted strategies*

In collaboration with the [Ouranos](#) consortium on climatology and adaptation to climate change, climate scenarios incorporating local knowledge have been developed. Taking them into account was essential in identifying climate indicators and thresholds affecting shea parks, as well as adaptation strategies with the best cost/benefit ratio. The work carried out in collaboration with Burkinabè climate stakeholders (ANAM) to adapt to climate change and protect the shea industry can then be replicated in other sectors such as the cotton or rice sectors, for example. Local actors are now equipped to find ways to adapt, thus improving not only environmental protection, but also the resilience of marginalized groups, particularly women and girls.

*Production and use of biochar: a vector for economic and environmental change*

Less polluting than traditional charcoal production, pyrolysis makes it possible to transform traditionally non-valued biomass residues into biochar that can be used as a fuel, but also as an agricultural input. Indeed, biochar is a good fertilizer for agricultural fertilization, as it provides a reservoir of nutrients and water, increases the water retention capacity of the soil and improves plant resilience during drought. It significantly reduces (almost 50%) the fertilizer demand of plants. The production of biochar from shea butter production residues therefore allows for a reduction in the use of wood energy, as well as the valorization of production waste and an increase in the income of women shea producers.

In collaboration with the Canadian partner [Environnement GECA](#) and the Burkinabè organization [CEAS](#), a pyrolysis oven model was developed in order to efficiently transform shea butter processing residues into biochar. This model oven is simple and quick to manufacture and uses locally available materials (sheet metal, clay bricks, sand) so that local artisans are able to manufacture them in shea production areas. With the help of these ovens, women shea producers have learned how to produce biochar and can now use it as fuel, but also sell it as an input in the cosmetics industry or as a soil conditioner.

### Results

While the Shea Resilience project is still ongoing, below are the anticipated results of the project:

- Improved access to historical climate data and probable future climate scenarios produced from quality data, efficient models and local knowledge;
- Increased capacity of community leaders and institutional actors to interpret and use climate scenarios as a tool to support decision-making on adaptation strategies to be implemented in the agricultural sector;
- Increased capacity of women leaders and other dynamic leaders to inform and engage communities on adaptation strategies, alternatives to wood energy and appropriate mitigation measures;

- Increased capacity of women producers' organizations and farm households, particularly women, to select and apply agro-forestry practices adapted to anticipated climate change;
- Increased capacity of women producer organizations and farm households, particularly women, to select and use alternatives to wood energy.

### Next Steps

The Shea Resilience Project will continue until 2021 as several activities that are crucial to the achievement of results have yet to be carried out. It is a pilot project, the objective of which is to move on to a second phase at the national level and a third phase at the international level.

- Burkina Faso's institutional actors could then become the reference in the subregion and the international project could enable actors from other countries to be trained in Burkina Faso. The project would move from North-South type of support to South-South support.
- The project could also be replicated in other sectors at the national and international levels.

### Insights and Lessons Learned

- **Approach focused on women's economic empowerment:** Women are directly affected by climate change in the shea industry and all project actions must seek to increase their economic and social power and leadership on climate resilience issues.
- **Gender:** The project also works on the issue of positive masculinities and demonstrates the impact of climate change on women to community actors. These trainings have demonstrated the positive impact for a community when women have the opportunity to play an important role in economic and social development. Women shea producers are trained in the interpretation and use of climate scenarios in decision-making.
- **The importance of integrating local knowledge:** Climate scenarios were developed taking into account local knowledge and farmers' perceptions. It is thanks to this knowledge that it was possible to identify climate indicators and thresholds and thus identify the most effective adaptation strategies.

### Sources

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