Burkina Faso: Long Term Low Emission and Climate Resilient Development Strategy

Adaptation in Burkina Faso LT-LEDS

- The modelling to derive the net-zero scenarios were done in a central Integrated Assessment Model called the Green Economy Model (GEM).
- Using historical data such as spatially disaggregated precipitation and temperature data, past impacts of changing climate on sectoral outcomes are identified and serve as the basis for estimating future impacts in the model.
- Future climate projections as per the RCP 4.5 and RCP 8.2 scenarios are incorporated into the model. To ensure consistency with the existing national processes, similar climate projection data used in the Third National Communication of Burkina Faso is also used in the LT-LEDS.
- All scenarios and macroeconomic projections presented in the LT-LEDS, such as GDP development or job creation, already takes into account the adverse impacts of climate change.
- This makes the **Burkina Faso LT-LEDS one of the first of its kind to fully integrate climate change impacts** into its long-term scenarios.
- Climate adaptation actions were modelled for the energy, agriculture and forestry sector

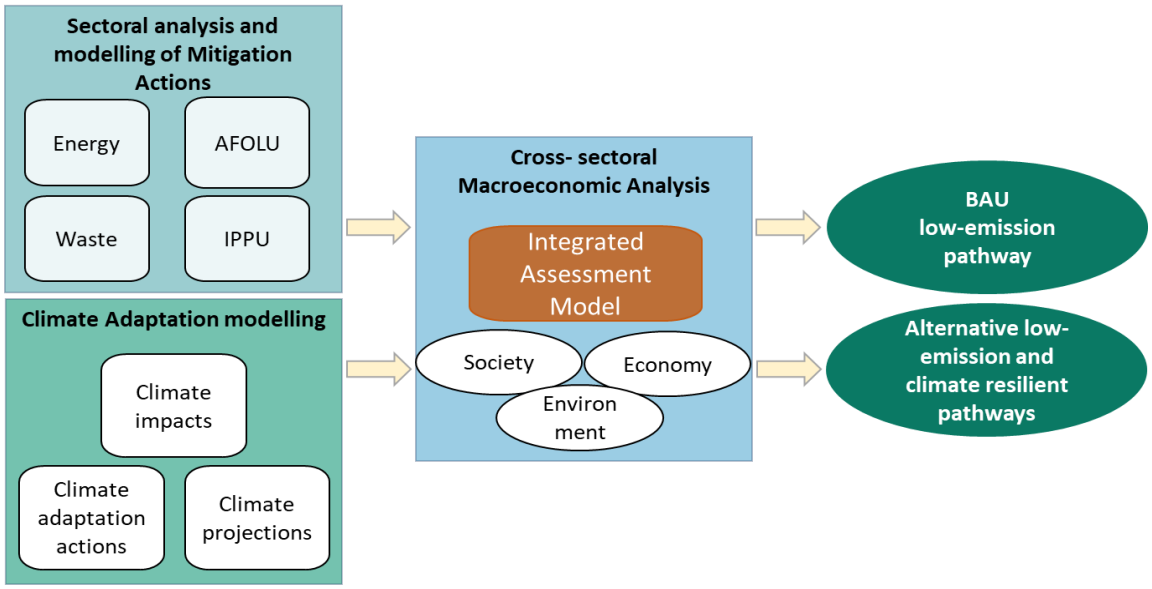

Figure 1 - Approach to incorporate climate projections, impacts and adaptation actions in the LT-LEDS scenarios

Example adaptation actions that were modelled in the agriculture sector

Adaptation intervention	Baseline indicator 2020	2030 Target	2050 Target
Reduction of fertilizer usage on sustainable agriculture land	25%	23%	10%
Share of land under sustainable agriculture practices	0%	33%	100%
Share of crop land under solar irrigation systems	0%	33%	100%
Livestock diversification: Shift from cattle to chicken	0	8%	30%
Genetic improvement of livestock	0	20%	50%

Financial partner

AFD

State partner

GGGI HQ
19F Jeongdong Building, 21-15 Jeongdong-gil, Jung-gu,
Seoul, 04518, Republic of Korea
Phone: +82 70 7117 1116
Web: www.gggi.org

www.gggi.org

Burkina Faso: Long Term Low Emission and Climate Resilient Development Strategy

Example adaptation actions that were modelled in the agriculture sector

- Projected losses in crop production due to climate change between 2020 and 2050 is estimated at 59.6 million tons (13% of maximum potential yield).
- With climate adaptation actions, the crop production losses can be reduced to only 5% of maximum potential yield, which shows the improvement in climate resilience of the agriculture sector

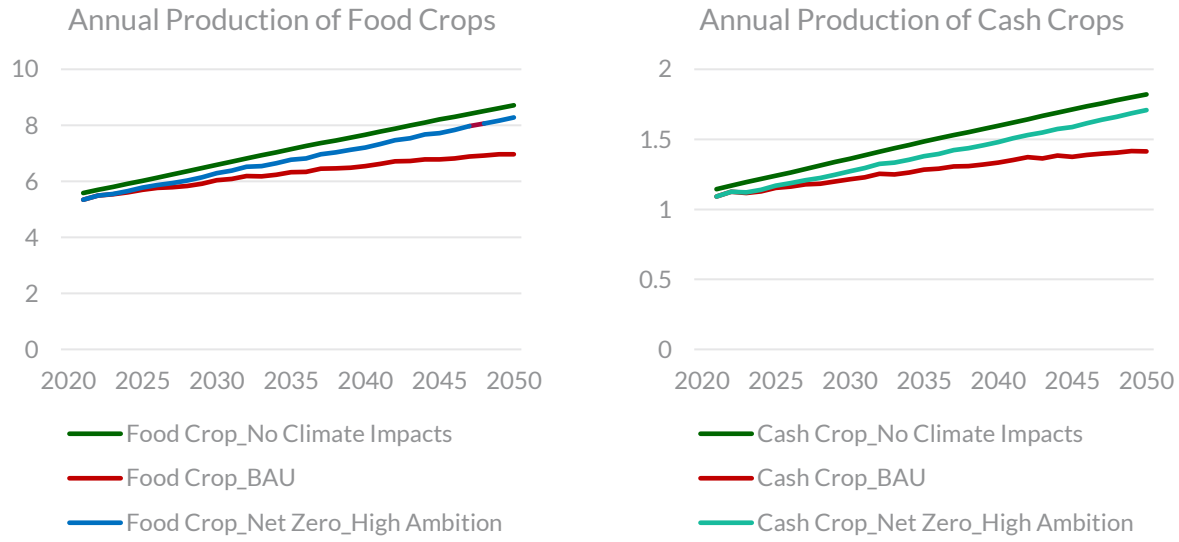

Figure 2 - Development of food crop and cash crop production. The BAU scenario (red) shows the reduction of crop production due to climate impacts. The Net-Zero High Ambition scenario (blue) shows that the losses can be reduced and increased up to the maximum potential level (green) when climate adaptation actions are implemented with the respective ambitions.

- From spatial map analysis, degraded land area (denoted as fallow land) in the BAU scenario in 2050 is expected increase. This happens at the cost of losing around 3.2 million ha of forest.
- Climate mitigation and adaptation actions will ensure that the degraded land area reduces significantly while increasing the forest area. All of this while the agriculture and settlement land requirement remaining the same compared to the BAU scenario.

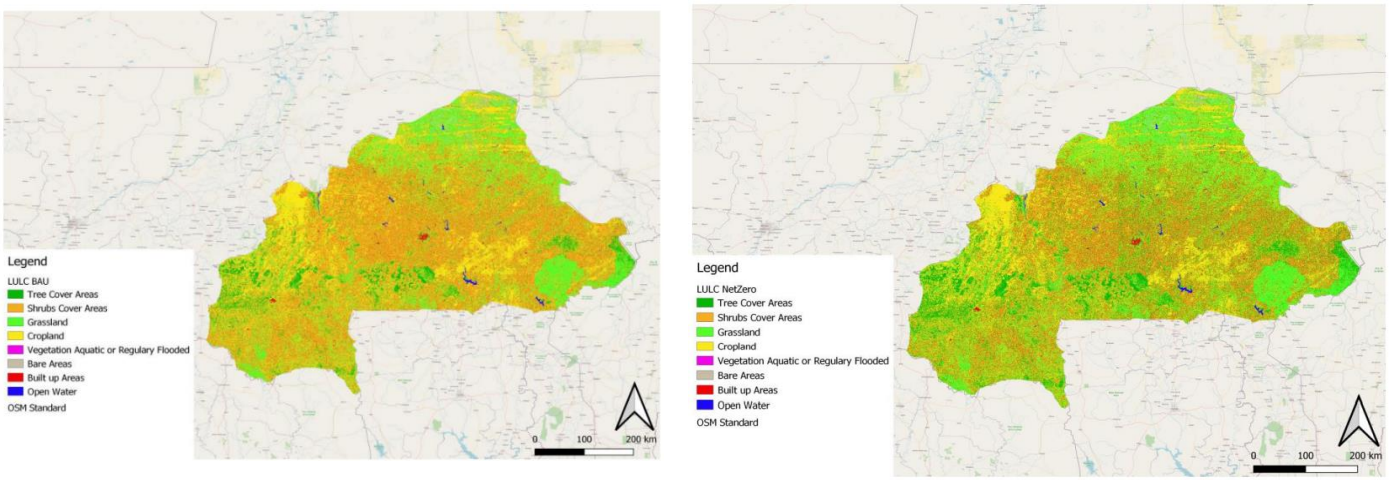

Figure 3 – Land-use changes in 2050 in the BAU scenario (left) and the Net-Zero High Ambition scenario (right) with the consideration of climate adaptation actions in the forestry sector.

Financial partner

AFD

State partner

GGGI HQ
19F Jeongdong Building, 21-15 Jeongdong-gil, Jung-gu,
Seoul, 04518, Republic of Korea
Phone: +82 70 7117 1116
Website: www.gggi.org

www.gggi.org