

Case Study: North Eastern Transport Improvement Project (P161305)

Disclaimer

“The Case Study presented in the PPT format were prepared for training purposes of World Bank staff. The information shown are only illustrative and meant to describe how to calculate and present climate co-benefits. Accordingly, the information contained in the PPT may not the same as those shown in the Project Appraisal Document of the project case.”

April 1, 2022

Case Study: North Eastern Transport Improvement Project (P161305)

Project Overview



Component (IDA US\$ 750M)	Activities
A (US\$ 638M)	Upgrading of Roads and Installation of Fiber Optics (522km)
B (US\$ 9M)	Facilitation of Regional Trade
C (US\$ 27M)	Basic Social Services Development
D (US\$ 76 M)	Institutional Capacity Building

Climate Co-Benefits : What we have done?

1

CONCEPT REVIEW

PCN on September 14, 2016

Done: IBRD climate and disaster risk screening

No consultation with Climate Change Group

No consultation with GP Focal Point

No CCB assessed at Concept Review

Lack of understanding of procedure and required actions

2

DECISION REVIEW (on March 18, 2020)

1. Consulted with GP Focal Point and obtained advice on the way forward on CCB and GHG accounting

2. Incorporated suggestions from GP focal point

3. 2nd consultation with GP focal point

4. GP focal point Initiated consultation meetings with task teams and invite CCG for consultation

5. 1st Consultation with Climate change group

6. Incorporated suggestions from CCG

7. First quantitative climate Co-Benefits assessment **with recommendations (34.1%)**

8. 2nd Consultation with CCG

10 Re- assessment of quantitative climate Co-Benefits

9. Incorporated suggestions from CCG

No. 3 to 10. GP focal point provided sectoral advice on integrating climate change into project design supported task teams in incorporating CCG recommendations in project design and project documents
Task team communicated with GP front office

What have to be in PAD and in which sections? NETIP (P161305)

ELEMENTS



Sections	Subsections	Elements included
I. STRATEGIC CONTEXT	A. Country and Regional Context	1
	B. Sectoral and Institutional Context	1
	C. Relevance to Higher Level Objectives	2
II. PROJECT DESCRIPTION	B. Project Components	3
IV. PROJECT APPRAISAL SUMMARY	D. Climate and Disaster Risk Screening	1
Annex	Annex 5: Resilience to Natural Disasters and Climate Change Impacts (additional annex adopted by NETIP)	1,2,3

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 1: STATE CLIMATE RISKS AND VULNERABILITY

PAD SECTION: A. COUNTRY CONTEXT

“The climate for the project location is classified as a desert climate with 57 hot days and 123 hot nights per year. Since 1960, the mean annual temperature has increased by 1.0°C and temperature is project to increase by 1.0°-2.8°C by 2060. The number of hot days and nights are also projected to rise significantly. These arid and semi-arid lands are prone to harsh weather, mainly droughts in dry season and flooding in rainy season. With increasing mean annual temperatures and number of hot days and nights, droughts are expected to become more frequent and severe with climate change. Rainfall is projected to increase during the rainy season raising the risk of flooding, erosion, washouts, scour, and debris/siltation, making roads impassable.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 1: STATE CLIMATE RISKS AND VULNERABILITY

PAD SECTION: B. SECTORAL AND INSTITUTIONAL CONTEXT

“Repairing and maintaining the road network, is particularly important in the Northeastern region of Kenya, where the network is significantly less dense and has low levels of redundancy. This region is severely affected by natural hazards that affect roads including: (a) flooding; (b) landslides; (c) washouts; (d) scour; (e) erosion; and (f) debris/siltation. These hazards are triggered primarily by the climactic effects of precipitation and temperatures. Though there is some seismic activity in the southwestern end of the route, precipitation is the primary cause of landslides, rather than earthquakes. Climate change is already being felt in the region and is project to continue, increasing the risk of natural hazards.

The major river crossing of the Ewaso Ngiro, which empties into the Lorian Swamp, crosses the road corridor near the town of Habaswein and is prone to expansive flood incidents on a stretch of 20 kilometers along the Isiolo-Mandera corridor. The 100-year flood mapping tool from the Global Data Risk Platform revealed that the Isiolo-Mandera corridor crosses several minor, six (6) major, and one extreme flood areas, most of which suffer flood depths of up to 2 meters during a 100-year flood event and these features have been taken into account in the detailed engineering designs of the respective road sections supported by the project. Furthermore, institutional capacity needs strengthening to handle effectively the aftermath of climatic natural disasters. ”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 1: STATE CLIMATE RISKS AND VULNERABILITY

PAD SECTION: B. SECTORAL AND INSTITUTIONAL CONTEXT

“The proposed project will complement the GoK’s plans in upgrading selected sections of the Isiolo-Mandera road corridor to complement other NEDI initiatives. Isiolo-Mandera is the main transport artery traversing the counties of Northeastern Kenya and yet it is in poor state [and highly vulnerable to the impacts of climate change](#). The plan to upgrade the entire corridor is presented in Table 5, [with road sections selected also considering the need to enhance resilience to climate change impacts](#). GoK plans to use its own financing to upgrade the 142km Elwak-Rhamu, and 75km Rhamu-Mandera of the corridor. The intervention of Elwak-Rhamu will involve staged construction with a shorter design life given the size of available funds which is not enough for scope of works expected under the Bank financed sections. Nevertheless, [these interventions will ensure the entire road corridor is motorable year-round, thus enhancing resilience of the local communities and economy to natural hazards and climate change](#).”

“The proposed project will also finance the installation of a new fiber optic network along the corridor as the existing one has [either been destroyed by floods or erosion](#). Although an optical fiber backbone currently runs along the Isiolo-Mandera road B9 (740km), the network does not provide any diversity, nor does it fully serve the communities along the corridor, such as schools, hospitals and other social facilities. [This link requires rehabilitation and restoration as some sections have been destroyed by floods and erosion](#).”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 1: STATE CLIMATE RISKS AND VULNERABILITY

PAD SECTION: B. SECTORAL AND INSTITUTIONAL CONTEXT

“Given the fragility of the area from a climate perspective, a climate vulnerability assessment was carried out for the entire Isiolo-Mandera road corridor, with financing from the Global Facility for Disaster Risk Reduction (GFDRR). The recommendations thereof were used to select the road sections to be rehabilitated as to enhance resilience of the network, and to inform the detailed engineering designs for the road contracts. This will contribute to improving management as well as reducing risks associated with potential climate and geophysical hazards.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 2: STATEMENT OF INTENT

PAD SECTION: C. HIGHER LEVEL OBJECTIVES

“The proposed project also supports Kenya’s National Climate Change Framework Policy (NCCFP) and Act by building the institutional capacity to coordinate and enhance mainstreaming climate change and natural disaster data, information and considerations at the sector level, and putting in place mechanisms linking climate change data and information with national country planning processes. Kenya’s National Adaptation Plan 2015-2030 included the prioritization of actions to enhance climate proofing of infrastructure, namely in the transport sector, ICT, and buildings.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 2: STATEMENT OF INTENT

PAD SECTION: C. HIGHER LEVEL OBJECTIVES

“Activities supported by the project are consistent with and advance climate change resilience objectives in substantial ways. The investment project aims to enhance climate change resilience of the transport sector, of the communities served and of the economy in the fragile Northeastern region of Kenya. This will be done through rehabilitation of road sections that are critical to enhance resilience of local communities, improvements in the construction standards of key roads, through the rehabilitation of the fiber optic network, which have been destroyed by flooding, and through enhanced institutional capacity. This will improve access and connectivity of vulnerable communities to products and services at equitable prices, throughout the year. A climate resilience assessment was carried out and recommendations incorporated in the selection of road sections for rehabilitation and in the construction design standards. An application to utilize carbon credits has been submitted for consideration. The project’s civil works include investments to respond to and better manage resources in the aftermath of shock events such as flooding.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 2: STATEMENT OF INTENT

PAD SECTION: PROJECT DEVELOPMENT OBJECTIVES

“The proposed project development objectives are to improve the movement of people and goods, access to digital and selected social services; and capacity building of transport and related institutions, in order to enhance the climate resilience of communities and of the economy in Northeastern Kenya.”

ALTERNATIVE:

“The proposed project development objective is to enhance the climate resilience of communities and of the economy of Northeastern Kenya, through improved movement of people and goods, access to digital and selected social services and through capacity building of transport and related institutions.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ELEMENT 3: DESCRIPTION ON HOW RELEVANT COMPONENTS ENHANCE RESILIENCE

PAD SECTION: PROJECT DESCRIPTION

“Activities supported by the project are consistent with and advance climate change resilience objectives in substantial ways. The project includes upgrading the main transport artery traversing the counties of Northeastern Kenya, which is critical for the climate resilience of the transport network and communities and economy of the region. The sections of the road selected are in poor condition and are highly vulnerable to natural disasters and climate change impacts. Given the fragility of the area from a climate perspective, a climate vulnerability assessment of the entire Isiolo-Mandera road corridor was conducted with financing from the Global Facility. The recommendations thereof were used to select the sections of road requiring rehabilitation and used to inform the detailed engineering designs for the road contracts. This will contribute to improving road management and maintenance as well as reducing risks associated with potential climate and geophysical hazards.

The project includes provisions for rehabilitating and restoring the fiber optic cable along the corridor and installing a new fiber optic cable in some of the sections of the network, which have been destroyed by flooding. The project also builds institutional capacity to support the preparation of future projects with climate vulnerability analysis, including the development of a plan for additional collection of climate and maintenance data regarding rainfall, hydrology, and incidents to increase resilience of the roadway network against climate factors. Institutional capacity will be enhanced with a focus on maintenance management and materials testing thus facilitating the resilience of new and existing infrastructure. The project includes investments to respond to and better manage resources in the aftermath of shock events like flooding and landslides.”

Adaptation Climate Co-Benefits: NETIP (P161305) Example

ANNEX 5: RESILIENCE TO NATURAL DISASTERS AND CLIMATE CHANGE IMPACTS

TO COVER ALL REQUIRED THREE ELEMENTS IN ONE SECTION

- Summary of Climate Change and Resilience related descriptions in main text
- Additional explanation of project activities with climate resilience angle

Link project activities to the Government climate strategy

Build resilience through the capacity building component

Sample descriptions from Annex

Sub Component D3	Descriptions in Annex
<p>Institutional strengthening of</p> <ul style="list-style-type: none"> • State Department of Transport (SDoT) in overseeing the non-road transport activities • National Transport and Safety Authority (NTSA) in providing oversight on road safety matters 	<p>This subcomponent will contribute to meeting GoK's GHG reduction target. Kenya aims to achieve a low-carbon, climate-resilient development pathway, and transportation is one pillar of this mitigation plan to ensure a decrease in GHG emissions.</p> <p>The GoK is a signatory to the Paris Agreement on Climate Change and has committed to a 30-percent reduction in greenhouse gas emissions by 2030, compared to a business-as-usual scenario. The transport sector will contribute to this objective by cutting emissions by at least 8 percent (minimum target).</p>
<p><i>Activities</i></p>	<p style="text-align: center;">Spell out the climate resilient elements</p>
<p><i>Finalizing the development of a 50-year integrated multi-modal transport masterplan</i></p>	<p>The finalization of the multimodal transportation master plan and guidelines for the development of roadside systems will incorporate climate change and green mobility aspects,</p>
<p><i>Automation of selected Motor Vehicle Inspection Centers</i></p>	<p>Automated vehicle inspection will start measuring and monitoring GHG emission of tested vehicles.</p>

Articulate the anticipated mitigation measures

Adaptation Climate Co-Benefits: NETIP (P161305) Example

Sub Component A1	Descriptions in Annex
<p data-bbox="155 382 817 479">Upgrade the Isiolo-Mandera road corridor</p> <p data-bbox="155 579 817 676"><i>rationale for the road selection from climate resilience perspective</i></p> <p data-bbox="155 1022 817 1062"><i>intention as adaptation measure</i></p>	<p data-bbox="886 382 2397 472">The Isiolo-Mandera road corridor is the only artery road that runs in and connects the project target counties of Isiolo, Wajir, and Mandera to the Southern part of the county.</p> <p data-bbox="886 534 2461 668">The selection of this corridor was also confirmed based on the identification of climate hazard hotspots. Once repaired, it will ensure that the entire road corridor is passable year-round.</p> <p data-bbox="886 736 2410 1182">Climate vulnerability assessment was carried out for the entire Isiolo-Mandera road corridor, with financing from the Global Facility for Disaster Risk Reduction (GFDRR). The recommendations of the vulnerability assessment were, thereof, used to select road sections for rehabilitation from the perspective of network climate resilience enhancement. The findings and recommendations of the vulnerability assessment have also informed the detailed engineering designs of the corridor. The designs of spur roads (40 km) have also been prepared in line with the recommendations of the Vulnerability Assessment, which was done for the adjoining section of the corridor, as the spur roads experience the similar climate risks as the adjoining section of the main corridor.</p> <p data-bbox="886 1243 2435 1378">Such a climate resilience approach to the design of sections will contribute to improving sustainability of road assets as well as reducing risks associated with potential climate and geophysical hazards.</p>

Adaptation Climate Co-Benefits: NETIP (P161305) Example

Sub Component A2	Descriptions in Annex
<p data-bbox="155 382 851 482">the installation of a new fiber optic network along the corridor</p> <p data-bbox="175 515 759 615"><i>Link project activity to climate vulnerability context</i></p> <p data-bbox="175 739 843 839"><i>Making the investment resilient to impacts of climate change</i></p> <p data-bbox="175 958 733 1058"><i>Building resilience to climate change</i></p>	<p data-bbox="886 382 2346 539">The proposed project will also finance the installation of a new fiber optic network along the corridor since the existing cable has been destroyed by floods and/or erosion.</p> <p data-bbox="886 611 2440 996">The new fiber optic cable will provide some redundancy and will serve communities along the corridor, such as schools, hospitals and other social facilities, by creating opportunities to disseminate climate and weather-related information and advising communities on how to get prepared and address major climate adaptation risks along the project corridor. Based on the technical assessment, rehabilitation and a new fiber optic cable will be installed deeper than previous standards to reduce the risk of being damaged by flooding.</p>