

ENVIRONMENTAL IMPACTS ON OUR PROJECTS



2020

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

The main environmental and social impacts of our activities are defined for the different phases of the projects: Construction, Operation and Maintenance of infrastructure.

The necessary management measures are also established in order to minimize, prevent and offset the impacts of our activities, including social and environmental offsets.

PHASES FOR ASSESSING IMPACTS ON PROJECTS

Planning

The route with the least environmental impact is selected, the environmental and social impact assessment is conducted and the communities (ethnic and non-ethnic) participate in the impact assessment and in defining the environmental management measures.

Environmental procedures

Socio-environmental licenses or permits are either requested modified with the environmental authorities, as applicable, for the approval of environmental management measures for the impacts identified.

Construction

The construction of the infrastructure begins once the environmental license is approved and after the authorities inform the communities about the scope of the project authorized by the Environmental Authority and the measures approved.

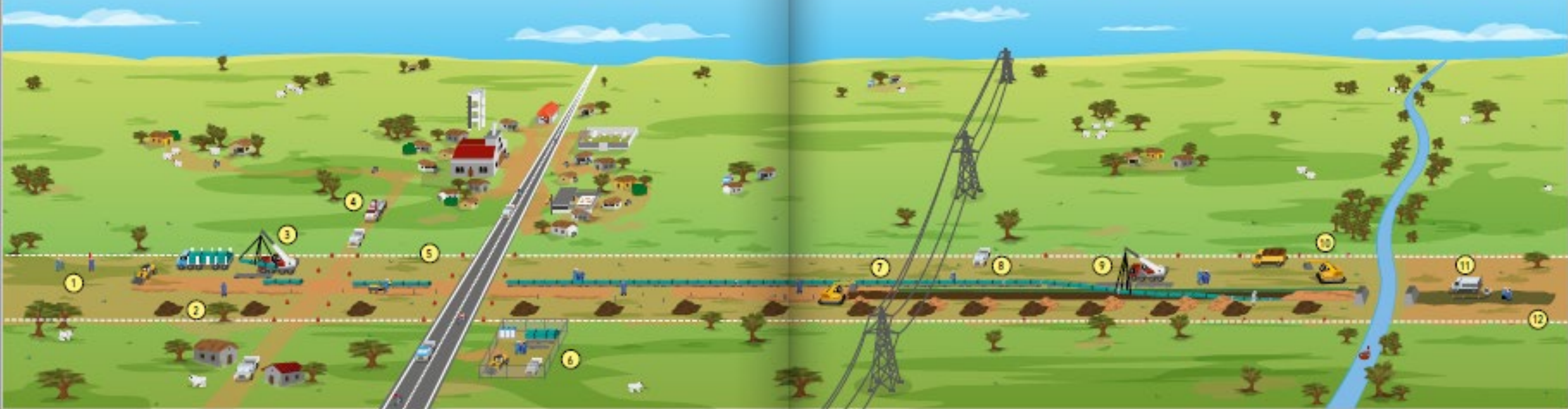
During and after completing the construction, the environmental impacts are monitored and the community is kept informed about the progress of the project.

Operation and maintenance

During the operation, maintenance activities are carried out to ensure the integrity of the environment, the communities and the gas pipeline. The impacts of the activities are periodically assessed and the authorities and communities are informed about the contingency plan and the operational conditions of the projects.

What is the project about?

Objective: Natural gas transport
Length: 84.37 kilometers approximately
Pipeline diameter: 24 inches
Pipeline material: Carbon steel
Right of way: 25 meters
Installed pipeline: 1.5 meters deep, at least



Activities

- 1 Location and topographic survey (stakes, poly shade netting, area enclosures).
- 2 Clearing, removal and stockpiling of organic soil.
- 3 Equipment to work fronts and land adaptation.
- 4 Transport and stringing pipeline along the right of way.
- 5 Preparing and installing the pipeline on the right of way (bending and alignment). Fitting and coating of joints.
- 6 Storage yard. 7 throughout the work site.
- 7 Trenching and soil storage for gas pipeline installation.
- 8 Inspection of joints and coating.
- 9 Lowering pipeline into the trench.
- 10 Trench backfilling with excavated material.
- 11 Hydrostatic and pneumatic testing to check the status of the pipeline.
- 12 Adaptation and restoration of land affected by the project.

IMPACTS IDENTIFIED IN THE PROJECTS

FACTOR	COMPONENT	ENVIRONMENTAL IMPACT
ABIOTIC	GEOSPHERE	Alteration of the geological formation.
		Activation or generation of erosive processes.
	SOIL	Loss of organic soil.
		Loss of soils and increased sedimentation due to erosion processes.
		Change in the physicochemical properties of the soil due to improper disposal of removed soils and rubble.
		Change in the physicochemical properties of the soil due to eventual hydrocarbon spills.
	HYDROLOGY	Change in the physicochemical properties of water bodies due to: - discharges of water produced during the construction of the gas pipeline, - effect of the construction of the gas pipeline, - intervention of water flow, - disposal of solid wastes generated during the construction of the gas pipeline, - disposal of removed soil and debris, - possible fuel spills.
	ATMOSPHERE	Change in air quality by: - particulate matter resuspended on the work fronts, - change in air quality due to emissions from vehicles and machinery
		Increase in noise levels

FACTOR	COMPONENT	ENVIRONMENTAL IMPACT
BIOTIC	LANDSCAPE	Alteration to the natural landscape.
	FLORA	Loss of vegetation cover due to felling.
		Fragmentation of forest habitats.
	FAUNA	Wildlife run over.
		Change or loss of wildlife habitats.
	AQUATIC ECOSYSTEMS	Change of aquatic communities.
SOCIOECONOMIC	DEMOGRAPHIC	Stability in the supply of natural gas to the country
	CULTURAL	Generation of expectations among the communities in the area of direct influence.
		Generation of community conflicts.
	SPATIAL	Direct intervention in the social infrastructure.
		Change in the demand for goods and services in the region.
		Increase or alteration of vehicular traffic.

ENVIRONMENTAL MANAGEMENT PLAN

To avoid and reduce impacts, we implement prevention, control and offsetting actions in the construction and the operation

Abiotic

AIR RESOURCE MANAGEMENT

Control of gas emissions in mobile sources

Control of emission of particulate matter generated by the adaptation of land and the traffic of vehicles and machinery

SOIL AND WATER RESOURCE MANAGEMENT

Excavation soil management
Environmental management of directed horizontal crossing
Adequate management of intervention points of social infrastructure and services
Management, formation, stabilization and/or forestry of slopes and soils exposed to erosion
Management of construction materials
Management and protection of crossings and bodies of water
Management and disposal of domestic wastewater
Management and disposal of industrial wastewater
Management and disposal of water from hydrostatic testing
Management of conventional solid waste
Management of hazardous solid waste
Adequate management of hydrocarbons and oils
Runoff management (Right of way – platforms -stockpiling center)

DURING CONSTRUCTION



Tarped loads



Road wetting



Excavation soil management



Directed horizontal crossing



Installation of portable toilets

DURING CONSTRUCTION

Biotic

SOIL MANAGEMENT

- Management of vegetation cover removal and stripping
- Plant life management
- Forest use management

WILDLIFE MANAGEMENT

- Wildlife management

MANAGEMENT OF SENSITIVE HABITATS

- Management of threatened species of fauna and flora

LANDSCAPE MANAGEMENT

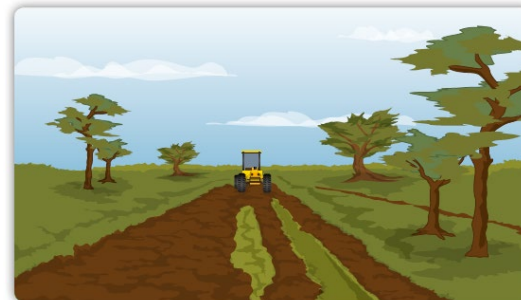
- Landscape management



Wood harvesting



Wildlife rescue



Landscape management

Socioeconomic

INFORMATION AND COMMUNITY PARTICIPATION PROGRAM

Information and communication to the communities about the project and its progress

Complaints and grievances services
quejas y reclamos (ing)

EDUCATION AND TRAINING PROGRAM

Education and training on environmental issues for personnel linked to the project

SOCIAL INFRASTRUCTURE MANAGEMENT PROGRAM

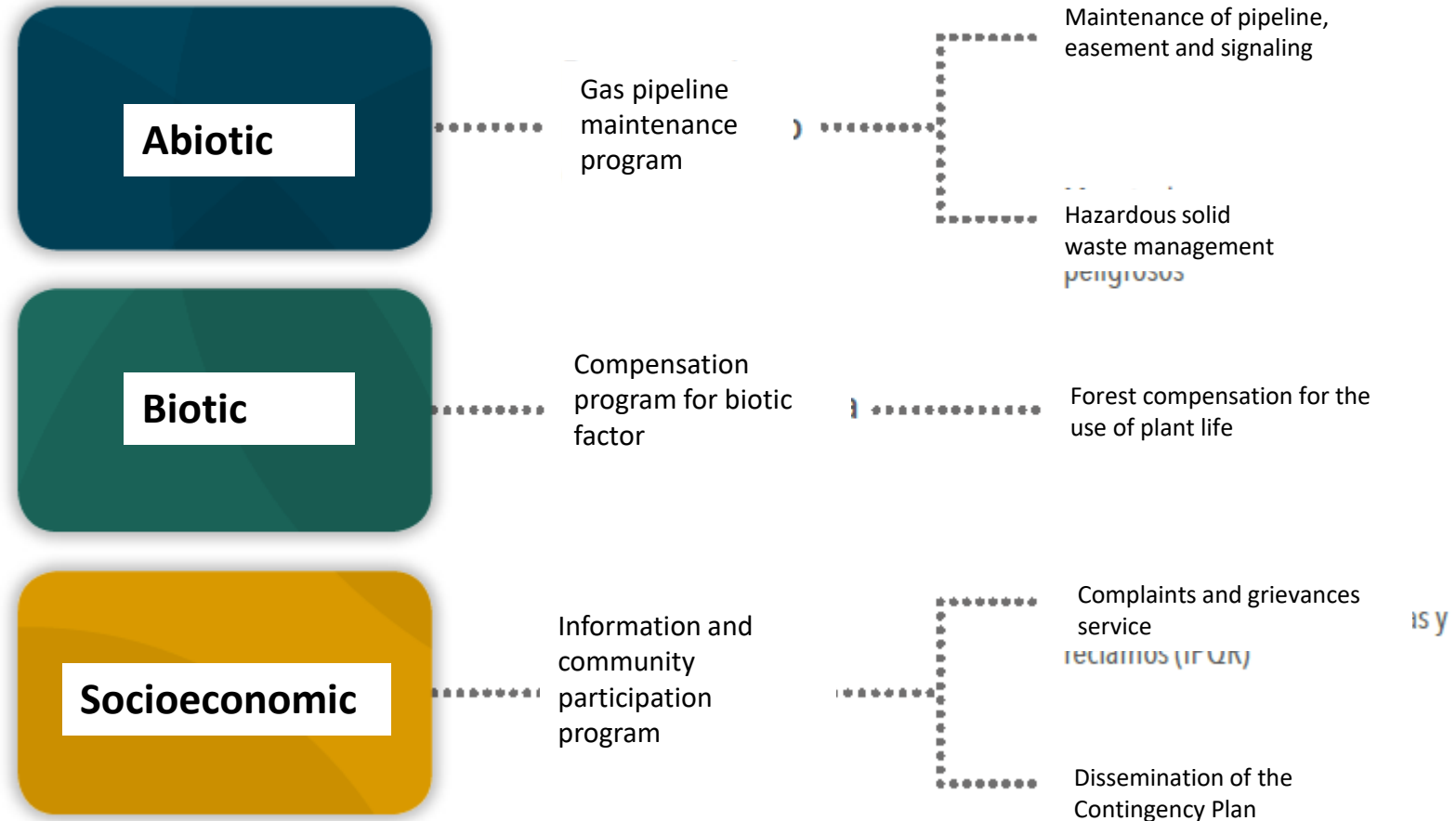
Management of social infrastructure in the area of direct influence during the construction of the gas pipeline



Informing communities

MANAGEMENT MEASURES IN THE OPERATION

| Operation stage





PROMIGAS

