

Annex B: Table 3 - Management and Mitigation Measures for the Project: Gas pipeline connecting Chiren UGS to the existing gas transmission network of Bulgartransgaz EAD in the area of Butan village

No	Management and Mitigation Measures	Project Phase	Impact to be addressed by the measure	Monitoring	Responsibilities	KPI
Archaeology and Cultural heritage						
1.	Before the start of the construction works, monitoring by archaeological teams will be awarded, thus control over the excavations will reduce the risk of possible destruction of cultural values unknown to date.	Prior to commencement of construction works,	Implementation of certain measures for the protection of registered archaeological sites.	Control over the implementation of the specified measures.	Bulgartransgaz EAD, Primary suppliers	Performed excavations and preservation of cultural heritage as documented in the Archaeological survey report
2.	Anticipating and conducting archaeological surveys to preserve the cultural heritage and archaeological monitoring.	Construction	Preventing the destruction of archaeological sites or structures.	Check for compliance with the requirements of the Cultural Heritage Act.	Bulgartransgaz EAD, Primary suppliers	Performed excavations and preservation of cultural heritage as documented in the Archaeological survey report
Biodiversity						
3.	Prior to the commencement of the construction works, the Contracting Authority shall conduct a field survey of each specific section where the investment proposal will be implemented, engaging biology experts to envisage actions to reduce mortality and prevent the loss of conservation significant plant and animal species and their habitats, including ground-nesting birds, bats, reptiles, mammals and slow-moving species.	Prior to and during construction, and prior to commissioning	Conservation of biodiversity	Site-specific field surveys by hiring expert biologists prior to the commencement of the construction activities.	Bulgartransgaz EAD, Primary suppliers	Survey Report and Protocols, if necessary.

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4.	Prior to and during construction, if specimens of slow-moving protected species of amphibians, reptiles and smaller mammals are found, they shall be promptly relocated to suitable habitat nearby.	Prior to and during construction, and prior to commissioning	Biodiversity conservation	Check and control during construction for the presence of slower moving protected species of amphibians, reptiles and smaller mammals.	Bulgartransgaz EAD, Primary suppliers	Bioiversity conservation achieved as documented in the Protocol on the executed activities, if necessary.
5.	The construction strip of the pipeline and the sites of the remaining equipment and elements of the IP must be timely secured in a manner preventing the entry of any animals and minimising the death risk.	Construction	Conservation of biodiversity	Checking for the presence of temporary fences to prevent the passage or entry of animals within the construction site before the start of construction activities.	Bulgartransgaz EAD, Primary suppliers	Biodiversity conservation achieved as documented in the Protocol on the executed activities.
6.	The activities involving the preparation of the construction strip and construction of the gas pipeline must start outside the bird breeding period (March-June).	Construction	Conservation of biodiversity	Strict control during the preparation of the construction strip and construction of the gas pipeline to allow their start outside the bird breeding period (March-June).	Bulgartransgaz EAD, Primary suppliers	Protocol on the executed activities.
7.	The gas pipeline route must be restored in its initial condition by using a vegetation only that is characteristic for the region. Using only native species for biological restoration of damaged lands due to construction activities and	Construction and Operation	Conservation of biodiversity	Control over the preparation and implementation of the project for recultivation for the availability of suitable vegetation species.	Bulgartransgaz EAD, Primary suppliers	Recultivation plan documenting requirements to achieve restoration and conservation of vegetation biodiversity.

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	implementing strict measures against the introduction of invasive alien species.					
8.	To conduct a detailed staff training in the construction activities in order to prevent impacts, such as damage and destruction of plant and animal species within the scope of the IP.	Prior to and during construction, prior to commissioning	Conservation of biodiversity	Briefing of staff regarding the strict compliance with the biodiversity component measures prior to the start of construction activities.	Bulgartransgaz EAD, Primary suppliers	Staff training performed as documented in Instructions list.
Transport and logistics						
9.	Timely informing the population in settlements close to the gas pipeline route about the upcoming construction schedule and related activities.	Construction	Procurement and Logistics	Control over the timely information of the community in the locations close to the route.	Bulgartransgaz EAD, Primary suppliers	Announcement to population and protocol on its publication.
10.	Coordination of the Traffic management plan and local municipalities and town halls with a view to limited crossing of construction equipment through populated settlements.	Construction	Procurement and Logistics	Monitoring for the availability of a Traffic management plan and coordination with local municipalities and town halls.	Bulgartransgaz EAD, Primary suppliers	Preparation of a Traffic management plan to secure limited disturbance of populated settlements by construction machinery.
Air quality and GHG emissions						
11.	Maintenance of the used transport, installation and construction equipment according to the requirements of technical standards.	Construction	Protecting air and workers' health from excess exhaust emissions from construction and transport equipment.	Daily checks for petroleum spills on the construction site.	Bulgartransgaz EAD, Primary suppliers	Technical overview of the used equipment.

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12.	Avoiding the release of excessive levels of dust from the site - use of appropriate techniques to minimise dust emissions (e.g. water misting).	Construction	Reducing air dust pollution. Protecting the health of workers and the community in the region.	Daily control on the use of irrigation (mobile) installation to suppress dust emission during the relevant operations (loading and unloading, excavation, bulk, etc.)	Bulgartransgaz EAD, Primary suppliers	Technical overview of the used equipment. Irrigation equipment use log.
13.	In rainy and muddy weather, when exiting the construction strip, trucks must be washed before entering the national transport network.	Construction	Limiting the contamination of the asphalt road surface with dust which will generate additional dust emissions from vehicle traffic.	Control of the cleanliness of heavy goods vehicles in rainy and muddy weather.	Bulgartransgaz EAD, Primary suppliers	Monitoring target achieved. A log to document the circumstances of washing the trucks in rainy and muddy weather.
14.	Avoiding the scattering of dust and loose construction materials outside the work sites (strips) - effective planning of transport activities and proper waste management.	Construction	Protecting the air, soil and health of workers and the community in the region and the correct waste management.	Daily control for compliance with the provisions of Art. 70 of Ordinance No. 1 of June 27, 2005. Prevention of scattering dust, loose construction materials outside construction sites.	Bulgartransgaz EAD, Primary suppliers	Compliance with Art. 70 of Ordinance No. 1 of June 27, 2005 achieved. Instructions on preventing the scattering of dust and building materials.
Noise and vibrations						
15.	Any works must be carried out only in daytime.	Construction	Minimising noise emissions.	Daily control to carry out construction activities only during daylight hours.	Bulgartransgaz EAD, Primary suppliers	Construction equipment operations log.

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16.	Application of good construction practices to minimise noise emissions - trucks serving the construction must move along pre-determined access roads and observe the permissible speed of movement; the construction equipment must not be allowed to stay idle.	Construction	Reducing the harmful gases in the atmosphere. Protecting the air and health of workers and the community in the region. Minimising noise emissions.	Daily monitoring for idling machines	Bulgartransgaz EAD, Primary suppliers	Traffic management plan and machinery operations log.
Geology, soil and landcover						
17.	Refuelling and maintenance of machines and waste collection must be carried out at designated places.	Construction	Preservation of soils	Daily checks for petroleum spills on the construction site.	Bulgartransgaz EAD, Primary suppliers	Spills log book to document preservation of soils.
18.	Do not allow unregulated storage of fuels and oils, waste and chemicals, as well as burning or other form of uncontrolled disposal of waste.	Construction	Preservation of soils	Daily checks for petroleum spills and hazardous chemicals and mixtures on the construction site.	Bulgartransgaz EAD, Primary suppliers	Circumstance Check Log to document preservation of soils.
19.	Avoid mixing the removed humus layer with the poorer subhumus horizons.	Construction	Protecting the humus layer. Using the humus in the recultivation of damaged lands	Verification of the conditions for removal and storage of humus.	Bulgartransgaz EAD, Primary suppliers	Protocol on humus removal and storage as part of the Recultivation plan to document achieved mitigation measure.
Waste & materials						
20.	Prior to the commissioning, an emergency plan (plan for rescue and emergency and recovery	Before commencement of operation,	Disaster related risk, due to accidental release	Control over the timely preparation of an Emergency Plan.	Bulgartransgaz EAD	Emergency Plan to document preparedness for accident response.

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	activities) for the gas pipeline will be developed, with the aim of creating an organisation to deal with disasters and failures, and technical support for the rescue and emergency and recovery activities.		of hazardous substance – natural gas			
21.	To establish the exact locations of the underground infrastructure and mark them on-site at the points of intersection with the gas pipeline route. This activity must be carried out jointly with representatives of underground infrastructure owners and operators.	Construction	An accidental release of a hazardous substance – natural gas	Control over the implementation of the activity involving the identification of the exact locations of the underground infrastructure.	Bulgartransgaz EAD, Primary suppliers	Tracing plan to achieve avoidance of any breach of underground infrastructure.
22.	Strict control in the process of pipe laying and welding and control of conditions that can lead to pipe corrosion.	Construction	An accidental release of a hazardous substance – natural gas	Control over the implementation of activities. Protocol of non-destructive testing, protocol of inspection of the insulation coating and protocol of commissioning of the ECP.	Bulgartransgaz EAD, Primary suppliers	Achieve zero release of hazardous substance – natural gas.
23.	The approach to the gas pipeline maintenance and the periodic visual inspection of the gas pipeline route (seasonal and after intense rainfall, storms, etc.) must be territorially limited within the limits of the easement, permanent facilities and access roads.	Operation	Biodiversity deterioration	Periodic control over the implementation of activities.	Bulgartransgaz EAD	Operating instructions and their application to avoid biodiversity deterioration.

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24.	Preventive organisational, engineering and technical measures to reduce the probability of the occurrence and development of emergency events during the operation of the gas pipeline, which would generate health risk and environmental risk must be planned.	Operation	An accidental release of a hazardous substance – natural gas and its consequences	Control over the planning of preventive engineering and technical measures	Bulgartransgaz EAD	Plan for engineering and technical measures to reduce the probability of an accident occurring along the gas pipeline.
25.	The generated household and construction waste must be collected, transported and treated in an organised manner.	Construction	Preventing the risk of waste contamination.	Check of the implementation of the proper management of generated waste.	Bulgartransgaz EAD, Primary suppliers	Waste properly managed. Contracts for the transport for further treatment of generated waste.
26.	Supply of chemical substances and mixtures shall be accompanied by Safety Data Sheets (SDS) in Bulgarian language complying with the requirements of Annex II of Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended by Regulation (EU) 2015/830 and Regulation (EU) 2020/878.	Construction	Compliance with the regulatory requirements for the storage and use of hazardous chemical substances.	Check for the presence of safety data sheets. Safety data sheets	Bulgartransgaz EAD, Primary suppliers	Traceability and verification of compliance with regulatory requirements.
27.	The use of hazardous substances and mixtures must be carried out in accordance with the exposure control measures specified in the SDS and the instructions for safe	Construction	Compliance with the regulatory requirements for the storage and use of hazardous	Check for the proper use of hazardous chemicals and mixtures. Instructions on the storage and proper use of the hazardous chemical substances and mixtures	Bulgartransgaz EAD, Primary suppliers	Traceability and verification of compliance with regulatory requirements.

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	use, including emergency discharge or spill measures.		chemical substances	and record of their application.		
Surface water						
28.	A technical design of the relevant facility must be prepared concerning the crossing of surface water bodies and the construction of facilities protecting against the harmful effects of water.	Construction	Water protection	Check for the presence of a Detailed Design for the construction of the facilities for the protection against the harmful effects of water	Bulgartransgaz EAD, Primary suppliers	Water protection achieved through the Preparation and implementation of the approved Technical design
29.	Timely reclamation of the construction strip must be carried out and, where necessary, stabilisation/strengthening of river banks.	Construction	Protection of surface water bodies	Control over the timely implementation of construction strip reclamation and riverbank stabilization/strengthening activities.	Bulgartransgaz EAD, Primary suppliers	Protection of surface water bodies achieved as required in the Recultivation Plan
30.	Washing and servicing of vehicles and equipment in rivers and their floodplains shall not be allowed	Construction	Protection of surface water bodies	Control over to prevent washing and servicing of vehicles and equipment in rivers and their floodplains.	Bulgartransgaz EAD, Primary suppliers	Protection of surface water bodies achieved as documented in the Log documentation.
31.	Uncontrolled discharge of water from the gas pipeline hydrotest into water bodies shall not be allowed.	Construction	Water protection	Control over preventing uncontrolled discharge of the water from the hydrotest.	Bulgartransgaz EAD, Primary suppliers	Water protection to be achieved through preparation of Instructions for conducting a hydrotest.
Hydrogeology - Groundwater						
32.	In the event that the sprinkling water for the temporary roads for the purpose of preventing dust emissions will be taken from a surface or underground water body, the relevant permits for	Construction	Water protection	Control over the implementation of the applicable regulatory requirements related to the Water Act.	Bulgartransgaz EAD, Primary suppliers	Submission of an application for a permit under the Water Act, if necessary.

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	water use must be obtained in advance.					