

# Environmental and Social Screening Report

*Bageshwori Energy Pvt Ltd  
Bijaynagar Rural Municipality-3, Kapilvastu*

## Environmental and Social Impact:

**The purpose of this checklist** is to identify potential environment and social issues related to subproject.

### (A) Project Background

1.	Name of Proposed Project	Waste to Energy Large Scale Biogas Subproject
2.	Subproject Location	Bijaynagar Rural Municipality – 3, Jagadispur Village, Kapilvastu, Lumbini Province Coordinates: [27°36'3.66" N, 82°48'3.17" E]
3.	Subproject objectives	CNG and Fertilizer production
4.	Subproject Developer	Bageshwori Energy Pvt. Ltd.
5.	Contact Details	Name: Shyam Shrestha Phone: 9817435503 Email:
6.	Brief description of the subproject	The subproject will be Continuous Stirred Tank Reactor (CSTR) based biogas plant for the efficient production of biogas through the continuous digestion of organic waste with an anaerobic digester.  The organic material such as animal waste (cow dung) manure, and plants material (Napier Grass) will be used as feedstock in the subproject.  This subproject aims to establish through the technical and financial support of GoN (AEPC) and World Bank to establish a sustainable and circular economy where organic waste is transformed into valuable energy and agricultural inputs, promoting environmental, social, and economic sustainability and resource efficiency.
7.	Define project's boundaries and area of influence	<u>Area of Influence</u> Janathpur village
8.	Capacity or size of the subproject	60 TPD
9.	Relevant E&S national requirements (assessment, threshold limits etc.)	Technology service provider is Green Planet and is preparing the Initial Environmental Examination (IEE) and it is final stage approval from Provincial Government.
10.	Relevant E&S required as per ESMF of MGEAP and World Bank	Environmental and Social Impact Assessment (ESIA)
11.	Total Project Cost	NPR 211,806,364.63 (With VAT and ESIA implementation cost)

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## (B) Social Screening Checklist

Potential Social Impacts				
SN	Screening Questions	Yes	No	Comments (Provide information)
1.	Permanent land acquisition	✓		The proposed land for the subproject is privately owned land. As the land is agricultural, developer cultivates seasonal crops on it. During the field visit on Nov. 18-21, 2025, the proposed land was barren and not under cultivation.
2.	Temporary land acquisition		✓	The proposed subproject does not require any additional land acquisition. The developer possesses adequate private landholding to meet the project's requirements. The developer owns approximately 2 <i>Bigha</i> of land, of which only 14.64 <i>Kattha</i> (53,374 sq. ft) will be utilized for the construction and operation of the subproject.
3.	Type of land Private land ✓ Public land Government land Leasehold land	✓		The proposed subproject development will be implemented entirely on private land owned by the developer.
4.	Type of land procurement Voluntary donation Involuntary acquisition Negotiation			The proposed land is privately owned.
5.	Loss of productive land	✓		The designated land is agricultural, previously used by the developer for seasonal crop cultivation. During the field visit, it was found uncultivated and intentionally left barren for the development of the large biogas subproject.
6.	Impacts on livelihoods/ economic displacement?		✓	The project area is private land. It is used for left barren and uncultivated by project development. Hence, the project development will not impact any livelihood/economic displacement. Hence, No such impacts is envisioned.
7.	Impacts on ecosystem services for local communities?		✓	The land allocated for the biogas subproject is privately owned and was previously used for seasonal crop cultivation. As observed during the field visit, the land has been left uncultivated in preparation for the subproject development. Since the site is private and not relied upon by the wider community for ecosystem services, the subproject

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				will not obstruct or diminish the availability of provisioning, regulating, or cultural services for local people. Accordingly, no adverse impacts on ecosystem services for surrounding communities are anticipated.
8.	Is there any household need to be relocated?		✓	The nearest settlement from the proposed subproject site is approx. 300 m away, and there are no structures on the proposed land. The subproject development does not require relocation of any household.
9.	Is the resettlement site environmentally and/or culturally sensitive?		✓	The subproject development does not engage in the resettlement.
10.	Project's construction will cause any damage to the existing local roads system?		✓	Accessible via earthen road which is accessible throughout the year.
11.	Will project activities have adverse impact on school, drinking water supply system, other facilities?		✓	There is no drinking water supply exist in the proposed subproject area. However, an irrigation canal is adjacent to the proposed land.
12.	Will project need to use existing or open new access roads? What will be the impacts of increased traffic on communities?		✓	The subproject area is accessible via existing roads, with no need for additional routes. Increased traffic during material transport may generate dust and noise affecting nearby villagers. A Traffic Management Plan should therefore be prepared to assess these impacts during the ESIA study.
13.	Will project cause encroachment on historical/cultural/religious areas?		✓	No historical, cultural, or religious sites are located within 1 km of the proposed subproject area. Therefore, the subproject activities are not expected to impact such places.
14.	Acquisition of private land leading to loss of shelter and livelihood		✓	The developer owns approx. 1.5 Bigha of land, of which only about 12 Kattha will be used for purpose of subproject development. Therefore, the land used for the subproject will not result in any loss of shelter or livelihood.
15.	Involuntary land taking resulting in loss of income, livelihood, sources of livelihood, loss of access to common property resources and/or private residential and/or property resources		✓	The proposed subproject will be implemented on the developer's private land. The use of land will not result in loss of income, livelihood, and access to common property resources, or private residential assets.
16.	Possible conflicts with and/or disruption to local communities		✓	As the subproject site needs to be accessed via an existing road passing through Jagadispur Village, community members may have concerns regarding dust and noise from the transportation of construction materials to the site. Therefore, it is recommended to conduct an Environmental and Social Impact Assessment (ESIA) for further

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				analysis.
17.	Is there a possibility of activities supported by the project that have impacts on international waterways? If yes, what are the potential impacts?		✓	There is no possibility that activities supported by the proposed subproject will have impacts on international waterways. The nearest river, Surai Khola, is located approximately 2.5 kilometres away from the subproject site. Given this distance and the nature of the planned activities, the project will not interact with or affect Surai Khola. Therefore, no potential impacts on international waterways are anticipated.
18.	Is the project site located in disputed territory?		✓	The subproject area is not located in disputed territory, as land required for the subproject development is private land.
19.	Uncontrolled human migration into the area, made possibly by the subproject activities		✓	During the construction period of the subproject, approximately 30-40 labours will be employed daily for about 5-6 months. Community members have expressed their willingness knowing that they will have short-term employment opportunities coming near their villages. Additionally, the developer is willing to hire labours/staff based on their interest and qualifications from nearby communities that ensure there will be no uncontrolled human migration into the subproject area. However few skilled workers who are not available locally will be hired from out the local area.
20.	Disproportionate impacts on the poor, children and other vulnerable groups		✓	As the subproject is carried out within the confined area of private land of developer. The impacts on livelihood and private assets of community people is not anticipated. However ESIA is recommended to carry out for the details impacts.
21.	Community health and safety risks due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards		✓	The subproject area has road access. Dust and noise related impacts are envisioned which can affect the villager of Jagadispur village, due to the increased traffic during the transportation of construction materials to the subproject site. However risk of Community health and safety to community due to the storage and disposal of material will not be as the all these activities will be with in private land of developer.
22.	Will the project potentially cause community-related impact due to temporary influx of labor?		✓	As per discussion with the developer, people form surrounding villages from the subproject site will be given priority for employment opportunities based on their skills, qualification, and availability of the preferred workforce in subproject area. It is expected that mostly the unskilled workforce will

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				be employed from the local area as far as available which also ensure negligible impact to community due to temporary labor influx. ESIA will assess the impact in detail.
23.	Are there Vulnerable Groups (Adibasi/Janajati/Dalit/Women headed households residing within or adjacent to project site?	✓		The subproject site is located about 300 m away from the nearest village, Jagadisapur. People from different caste and ethnicities reside in the village. The majority of the residents belong to Muslim, Tharu, Yadav, Kurimi, Magar, Kori, Chhetri, Dhobi, Paswan/Pasi, and Brahmin hill caste.
24.	Community Perception toward project			During the consultation with community people of Jagadisapur village, people were found positive towards the subproject development. Additionally they have few expectations from the subproject; <ul style="list-style-type: none"> <li>• Employment opportunity during construction and operation phase</li> <li>• Subsidies fertilizer for the farmers</li> <li>• Regular maintenance of road that used by subproject</li> </ul>

**(C) Environmental setting of the project locality**

Is the project located in forest area or close to forest		Yes	No <input checked="" type="checkbox"/>
If Yes,			
Name of forest			
Management regime			
Does vegetation need to be Removed for the project? Give estimate?			
Permission to operate in the forest?			
Is the project located in the protected area or any protected area in		Yes	No <input checked="" type="checkbox"/>
Vicinity			
Is yes, please provide details on			

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(a)name of PA			
(b)area to be acquired			
(c)distance to PA from the Project site			
(d)access from the project tothe PA			
<b>1. Water sources/water bodies</b>			
Area there any water sources/water bodies in and around the Project site	Yes	No <input checked="" type="checkbox"/>	
If yes provide details on			
Location/Type			
Use of water			
Potential impact by the project			
<b>2. Air pollution</b>			
Number and type of vehicles to be usedper day	3, mostly for transporting substrate from various locations		
Capacity of vehicles	10 – 15 tons		
Condition of the road (asphalted, earthen)	Good. Madya pahadi highway		
<b>3. Land use</b>			
Land required for the project and type of land use: 12.43 Bighas; currently owned by one of the developers			
Facilities	Required Area	Land use type	Location
(1) Biogas Plant	Approx. 14.64 Kattha (53,374 sq. ft)	Private	Bijayanagar Rural Municipality-3, Kapilvastu

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<b>4. Impact due to land use change</b>			
a) Loss of private land: Yes			
b) Loss of agricultural product: Seasonal Crop (Paddy, wheat, Sugarcane, Red lentils etc)			
c) Loss of private structures/community structures: No			
d) Loss of Forest and vegetation: No			
e) others: No			
<b>5. Waste input for the project</b>			
Define waste (type)	Press mud, Napier Grass and Cattle Manure		
Quantity of waste	60 tons per day		
Location of collection	Bijayanagar Rural Municipality-3, Kapilvastu		
Workers involved	14 (1 plant manager, 1 electrical engineer, 1 mechanical engineer, 1 marketing manager, 1 admin manager, 2 operators and 7 skilled workers)		
Legal clearance required	No		
<b>6. Technology</b>			
Type	CSTR		
Capacity	Digester Volume: Total 5,500 cu.m		
Gas production	Gas Production: 2,400 m <sup>3</sup> per day		
Slurry production	Slurry Production: 109.2 tonnes per day		
<b>7. Waste from the project implementation</b>		<b>Yes</b>	<b>No</b>
Generation of solid waste? If yes,.....			<input checked="" type="checkbox"/>
Are any wastes required to be stored on-site either for reuse or off-site disposal? If yes,			<input checked="" type="checkbox"/>
Are effluents required to be discharged to a sewer or combined drainage system? If yes,.....			<input checked="" type="checkbox"/>
<b>8. Health and Safety Issues</b>		<b>Yes</b>	<b>No</b>
a. Does project intervention affect health and safety condition?		<input checked="" type="checkbox"/>	

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<p>b. List out likely health and safety issues during construction period</p> <ul style="list-style-type: none"> <li>○ Construction related accidents</li> <li>○ Emissions of dust and noise pollution</li> </ul> <p>c. List out likely health and safety issues during implementation period</p> <ul style="list-style-type: none"> <li>○ Handling of slurry (with pathogens)</li> <li>○ Effluence from substrate store</li> <li>○ Vehicle emissions from transport of feedstock</li> <li>○ Accidents associated with firing and explosion</li> <li>○ Spreading of diseases due to increased disease vectors, flies, mosquitoes etc.</li> </ul>		
<b>9. Other observations</b>		
Can vector disease spread to the adjoining settlements?	No	
Can foul odor affect the adjoining settlement?	No	
Slurry use(proposed)	Organic fertilizer	
<b>Climate Benefits</b>		
Will project activities contribute in the reduction of GHG emissions? Description on the activities that		

## D) Conclusion

<p>E&amp;S Risk Category of the Subproject (High, Medium, Low):</p>	<p>Select one of the following based on the guidance provided below.</p> <p>( ) <b>High-risk:</b> Subprojects that is likely to have significant adverse environmental and/or social impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works. Any subproject that needs an EIA according to GoN regulations shall be classified as high risk.</p> <p>( <input checked="" type="checkbox"/> ) <b>Medium Risk:</b> Subprojects that involve potential adverse environmental or social impacts on human populations or environmentally important areas-including wetlands, forests, grasslands and other natural habitats-are less adverse than those of high risk projects. These impacts are site-specific, reversible; and in most cases mitigation measures can be designed more readily than for high risk projects. Moreover, a proposed subproject is classified as</p>
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	<p>medium risk, if it displaces less than 50 families in the mountain region, less than 75 families in the hills, and less than 100 families in the Terai plains due to involuntary land acquisition (unless such impacts are, in the judgement of AEPC, are exacerbated by other contributing factors). Similarly, a project can be classified as medium risk if it requires IEE as per GoN regulations.</p> <p>So, from the assessment conducted during field visit of the subproject indicates that its activities are expected to have minimal or no adverse environmental and social impacts. Moreover, the proposed subproject will not result in the displacement of any families, nor will community members lose their productive assets. However, in line with Government of Nepal (GoN) regulations, an Initial Environmental Examination (IEE) is required based on the subproject's capacity. Thus this subproject is categorized as <b>Medium Risk</b> Subproject</p> <p>( ) <b>Low Risk:</b> Subprojects that likely to have minimal or no adverse environmental and social impacts. Moreover, a proposed subproject does not displace any family and none of affected person loses more than 10% of their productive assets.</p>
<p>Main reasons/justification for the selection of E&amp;S risk category above</p>	<p>The preliminary assessment of the subproject indicates that its activities are expected to have minimal or no adverse environmental and social impacts. Moreover, the proposed subproject will not result in the displacement of any families, nor will community members lose their productive assets. However, in line with Government of Nepal (GoN) regulations, an Initial Environmental Examination (IEE) is required based on the subproject's capacity. Given its scale, the subproject has been classified as <b>Medium Risk</b>. As stipulated in the Environmental and Social Management Framework (ESMF) of MGEAP, subprojects categorized as Medium Risk must undertake an Environmental and Social Impact Assessment (ESIA). Accordingly, it is recommended that to carry out ESIA of subproject to further identify and assess potential risks associated with the subproject.</p>
<p>E&amp;S Instruments to be prepared for the Subproject (ESIA, ESMP, RAP, Biodiversity Management Plan, OHS plan, Cultural Heritage Management Plan etc)</p>	<p>Recommended to carry out ESIA</p>
<p>Beneficial impacts and augmentation opportunities for any issues? Etc.</p>	<ul style="list-style-type: none"> <li>• Cheap Availability of fertilizer</li> <li>• Creation of short term employment during the construction and operation phase of subproject</li> <li>• Increase the prospect of energy based enterprise</li> <li>• Project will replace the fossil fuel consumption, reducing the GHG emission</li> </ul>
<p>The outcome of screening summarizing entire table's information with assessor's candid</p>	<p>The subproject will be Continuous Stirred Tank Reactor (CSTR) based biogas plant for the efficient production of biogas through the</p>

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<p>opinion on way forward and future actions limiting in one paragraph.</p>	<p>continuous digestion of organic waste with an anaerobic digester. Organic material such as agricultural waste, animal waste (cow dung) and plants material (Napier Grass) etc. will be used as feedstock in the subproject.</p> <p>The subproject is accessible throughout the year and does not require to construct separate access road. Similarly, the project will be constructed on private land owned by subproject developer and does not require to obtaining land from community people. Furthermore, the subproject will not require to relocation people and any infrastructure.</p> <p>In addition, subproject is not located in ecologically sensitive area.</p> <p>Thus, based on the field observation the impact on environmental and social aspects due to the implementation of the subproject seems negligible. However, as per the subproject categorized as <b>Medium Risk</b>. Thus the study team recommends to conduct ESIA to identify the potential risk and its mitigations measures in detail.</p>
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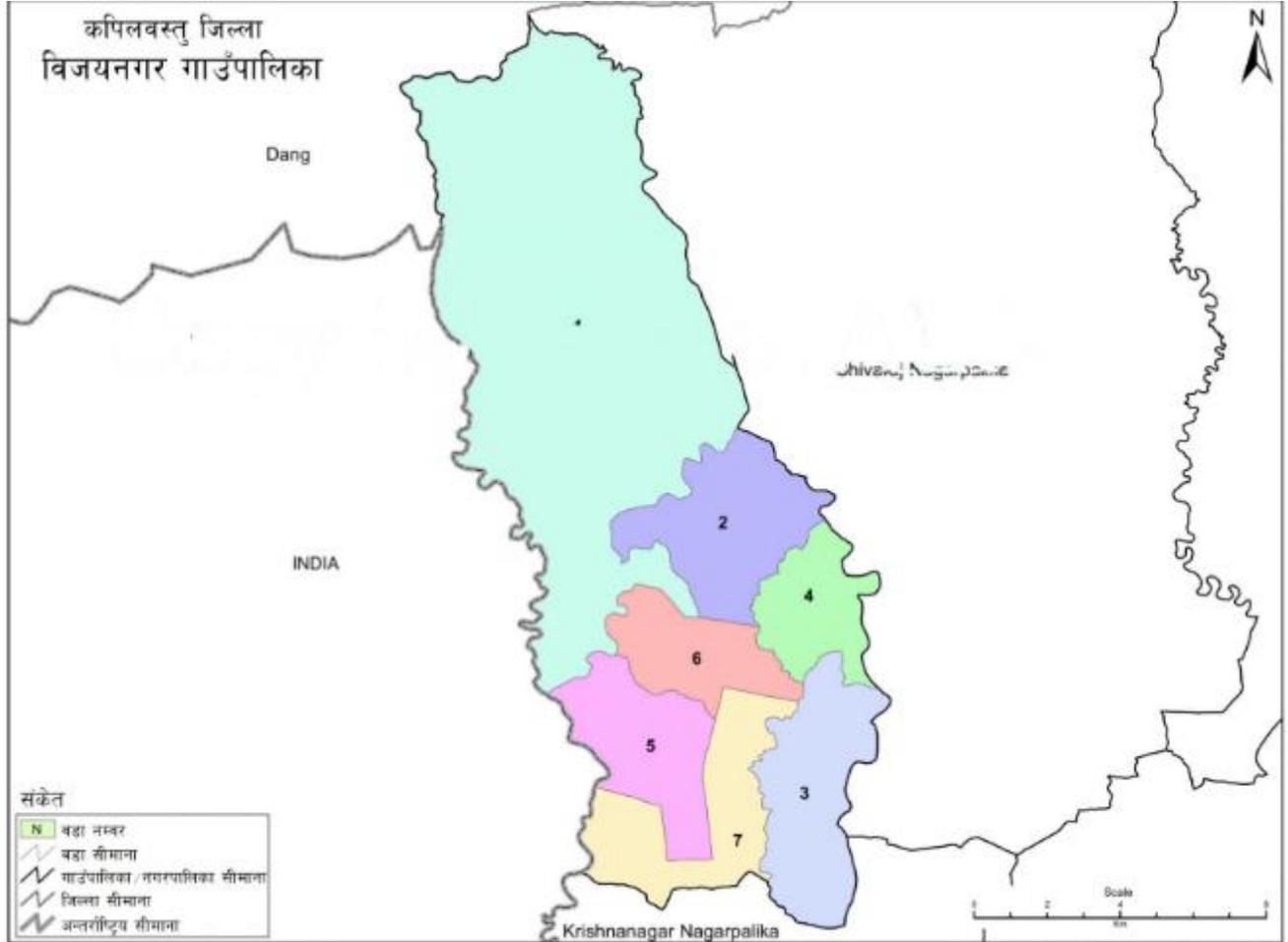
## **E&S Screening Team**

1. Shreejan Ram Shrestha,  
Environmental Expert  
AEPC/MGEAP  
*November, 2025*
2. Shiva Hari Budhathoki  
Social Safeguard Expert  
AEPC/MGEAP  
*November, 2025*

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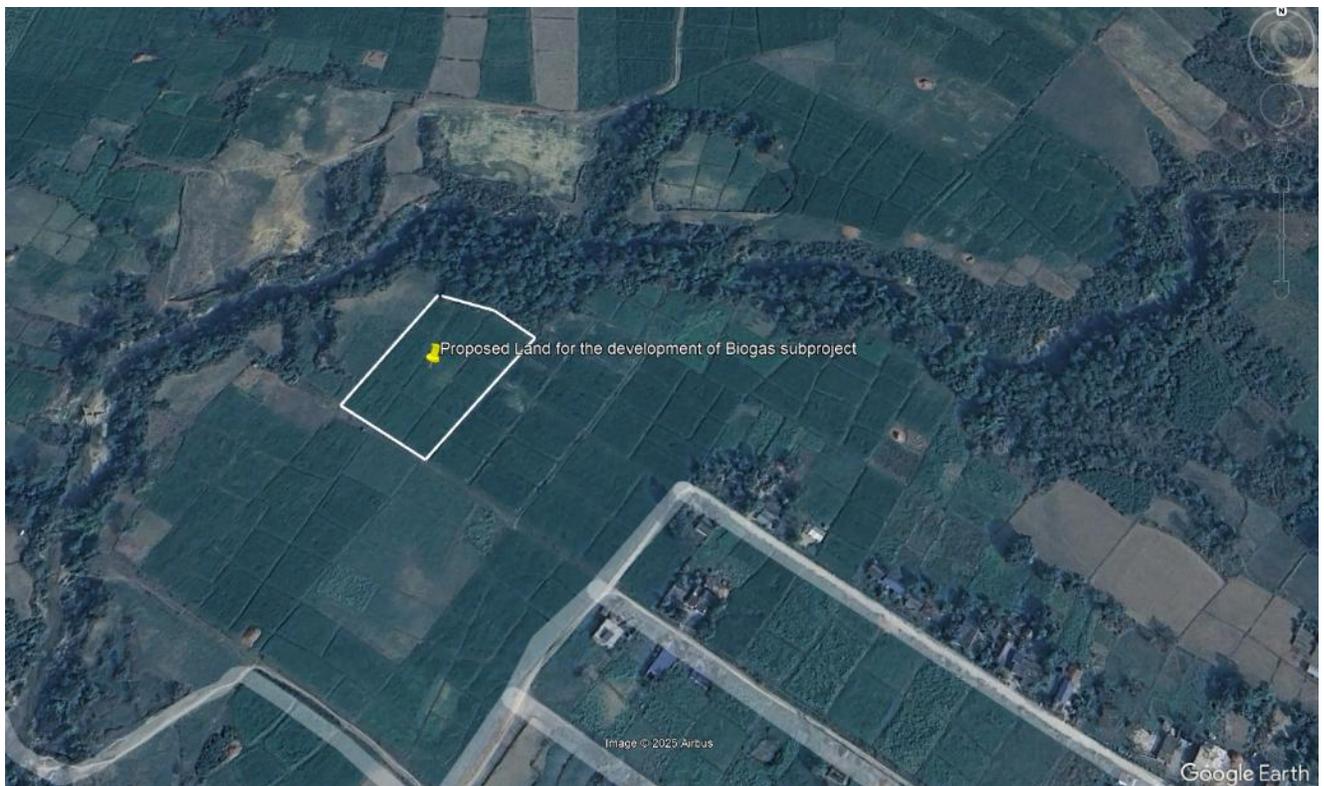
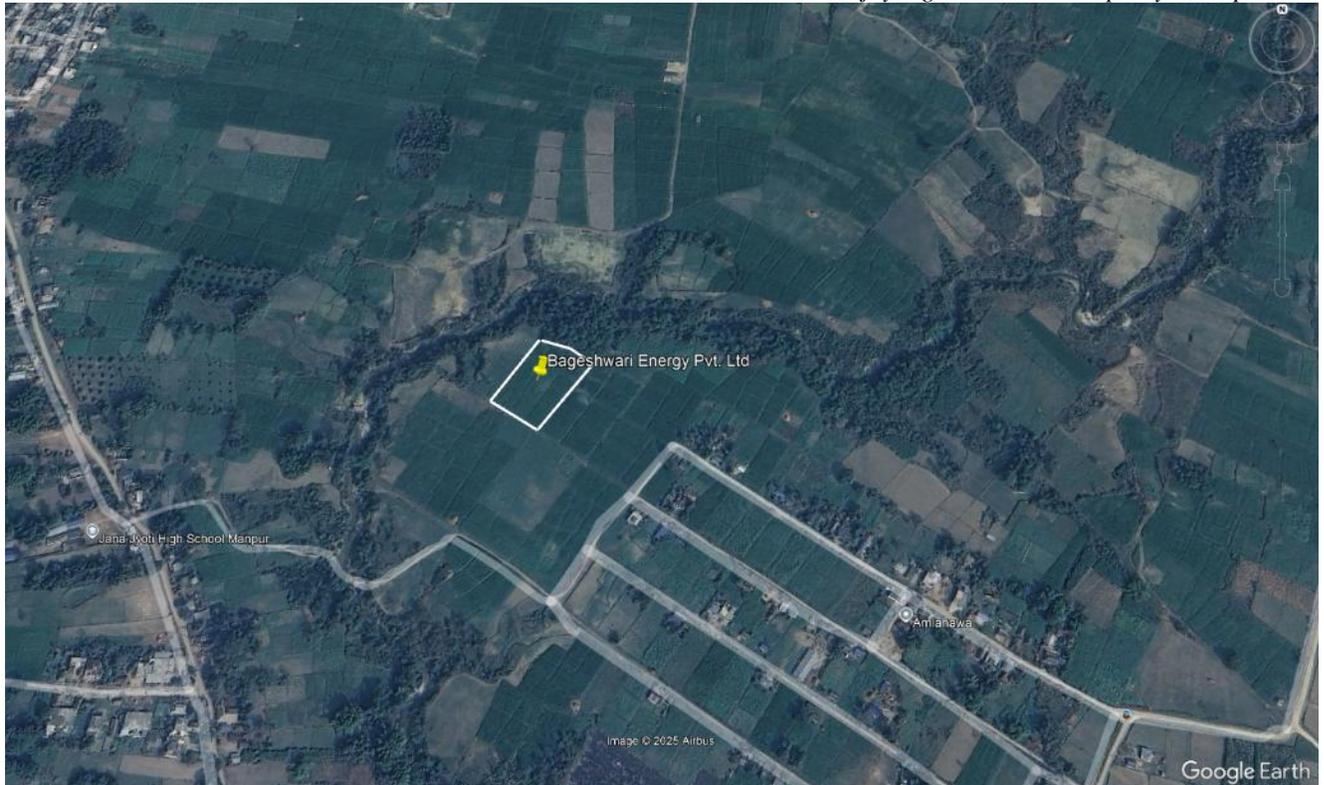
## Annex 1: Bijaynagar Rural Municipality's map



## Annex 2: Proposed Subproject area in Google map

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## Annex: II Photographs



Proposed land for the development of biogas Subproject



Earthen access road to reach the subproject site

Road that passes through Jaganathpur village to reach the subproject site and Village is approx. 300 meters from proposed subproject site