

Guidelines for Landscape-Based Selection of Villages



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Acronyms

DST	Department of Science and Technology
HDI	Human Development Index
JFMC	Joint Forest Management Committee
MoM	Minutes of Meeting
NTFP	Non Timber Forest Product
SA	Separate Agreement
SWC	Soil and Water Conservation
TFD	Tripura Forest Department
VI	Vulnerability Index
w.r.t	With respect to

Executive Summary

The Draft Guideline for Landscape Approach to Village Selection has been prepared and proposed for NO building on the spirit, instructions and scope provided by the para 1.1.9 & 1.1.10 of the Separate Agreement. Accordingly, as project starts, it is expected to make realistic assessment on how much area and in how many villages it can operate. Moreover, also the MoM (Section 16) of KfW Progress Review Mission in January 2023 signed between CEO & PD of CREFLAT PMA and KfW on the issues of selection of villages. It may be called that both the Feasibility Study and Separate Agreement categorically stated the need to refer to the Climate Vulnerability Assessment Report of DST, Govt of Tripura for the final list of villages to be selected based on a higher level of climate vulnerability prioritization and also adopting the landscape approaches which is watershed/micro watershed with at least 300 ha of degraded/open forest area for plantations, etc. The early experience from the first three VDP in-preparation also revealed that the real-time participatory processes on the ground will be much complex and time consuming for project investments to be effective, efficient and aiming sustainable impacts. Finally, the green investment scenario in Tripura is gaining momentum, as apart from JICA project also WB will soon start its project that has similar aim as CREFLAT (i.e., increase forest cover and its canopy density). This provided scope for discussion and thinking between TFD/CREFLAT and PMC to revise the original targeted number of villages (191) to a lower one, that is realistic, manageable and provides the basis for a focused engagement of the project.

The Methodology and Criteria for selection of landscape and villages has been adequately described under Section 3 of this Guideline, while Section 5 of the same Guideline reflects the rationale for exclusion of some villages (62). Hence the current suggestion is to invest in 129 villages (about 68% of the villages) through CREFLAT KfW funding. For the remaining villages (62 villages), TFD could seek funding from other Govt sources including convergence with other actively operating donor/public scheme-oriented project. It is underlined That no terrestrial survey has been done to select the proposed landscapes/villages. The landscape (usually watershed/micro-watershed) had been identified or demarcated based on available secondary sources, mainly the toposheets combined with remote sensing data. The pre-selected villages (as per Feasibility Study) were demarcated within each of these landscapes (watershed/micro watershed). While doing so, it was also kept in mind to include **92 villages** where the CREFLAT has already made some interventions (Plantations and/or SWC activities) during 2021-22 / 2022-23 (to be included in the VDP so as to be eligible for reimbursement).

1 Background

The Feasibility Study of CREFLAT had suggested 191 villages to be pre-selected under 11 Blocks in the two project districts of Dhalai and North Tripura. The Separate Agreement (SA) of the Project between GoT/TFD and KfW persisted with this number. However, SA mentioned about the re-visit of the pre-selected 191 villages for adjusting the updated number of villages once project starts. On the other hand, the recent Progress Review Mission of KfW in January 2023 in its Minutes of Meeting (MoM) outlined the need for developing Guidelines for Selection of Villages. Both the above reflections are drawn hereunder as background to the basis for developing the present guidelines.

1. **Separate Agreement:** The Paragraph 1.1.9 of the Separate Agreement states: “In the two selected districts in Dhalai and North Tripura, the Feasibility Study has preselected 191 villages in Eleven Blocks. *Villages in these districts and blocks will be further screened based on the results of the ongoing vulnerability assessment carried out by the Department of Science and Technology and possibly further criteria to be elaborated in the initial phase of the Project.* Thus, only these villages will participate in the programme where the need for climate adaptation measures is evident. The Project will start in those villages having the highest priority for climate change adaptation measures”.
2. **Minutes of Meeting: Section 16 of the MoM of the KfW Progress Review Mission, 10-16 January 2023** briefly outlined the Village Selection Criteria and Landscape Approach. The section reflected on the essence of the Separate Agreement (ref. para 1.1.9) besides emphasizing on the GIS methodology for landscape determination together with socio-economic data and land availability for interventions that will meet the objectives of the project. The guidelines and approaches to landscape treatment for selection of villages were to have been developed by March 2023.

2 Basic Guiding Principles in the Selection Processes of Villages

2.1 General guiding principles

Sustainably managed landscapes are key to confronting and overcoming the challenges posed by ever increasing human population driving the demand for increased food, water, energy and livelihoods requirements. Climate change impacts are expected to intensify further these threats and factors like unclear land tenure rights, unsustainable land management practices and overall multi-sectoral investments that can further contribute to conflict over the diminishing land resources. Sustainably managed landscapes are key to confronting and overcoming the basic needs as well as climate change challenges meeting the socio-environmental sustainability emerging from the needs of ever-increasing human population. Additionally, conservation of biodiversity remains a priority, as most of livelihoods are dependent on forest rich landscapes and a wide range of ecosystems services these provide.

A sustainably managed multi-functional landscape simultaneously meets a full range of local needs: ensuring water availability for households, farms, businesses and wildlife; biodiversity for crop pollination and wildlife or eco-tourism; producing nutritious and profitable crops for local communities, markets and industry; and enhancing human health through clean water and air apart from fuel energy requirements. At the farm level, there are numerous opportunities to increase sustainability and multi-functionality. However, simply adopting sustainable field practices and new technologies is usually insufficient to provide the full complement of societal benefits required from rural landscapes. A broader, spatially explicit landscape perspective is needed so as to address the dynamics, linkages, synergies, and trade-offs among multiple objectives, lands units, and stakeholder interests, as well as to manage or overcome conflicts.

The forested landscapes provide multiple ecosystem services and have complex interrelations with forest dependent communities. To sustain these services, these landscapes need to be managed as a mosaic of integrated socio-ecological systems, linking upstream and downstream conservation actions with local level adaptation strategies.¹ The above stated perspective in addition to the guidelines laid down for the purpose has guided the selection of landscapes for project intervention.

2.2 Specific Guiding Principles for CREFLAT

2.2.1 Landscape Approach

The village selection will build on the basic principles and pathways outlined in the document entitled **“Pathway to Landscape Based Village Development Planning in CREFLAT”**, which has already received “No Objection” from KfW. The landscape perspectives of CREFLAT project consists of primarily two interacting landscapes, viz. (i) the forest landscapes (with associated ecosystems) that are increasingly becoming vulnerable to climate change due to increasing degradation, and (ii) the forest-dependent mainly tribal communities as the target groups with vulnerable socio-economic livelihoods due to increasing degradation of forest landscapes. The landscapes/cluster of villages would be prioritized and ranked based on the biophysical parameters such as the intensity of forest degradation, existing institutional and infrastructure indicators, and overall socio-economic poverty and human development index.

2.3 Climate Vulnerability Assessment Report.

The Separate Agreement (para 1.1.9) refers to the Climate Vulnerability Assessment Report as a reference for selection of villages.² The Assessment had been carried out and completed by the Department of Science & Technology in 2022. The Vulnerability Assessment used eight (8) indicators for ranking the Blocks as per their respective Vulnerability Index (VI) scores. All indicators were quantified using secondary sources, and information provided by the Block Development Officers and/or Nodal Officer from each Block. Assigning weightage to indicators had been done in consultation with Nodal Officers of each Block and State Expert Committee, Tripura Climate Change Cell, Agartala. However, the weightage scores under each of the eight indicators have not been indicated in the Report. The limitation of this Report is that it is confined to Block level vulnerability assessment whereas CREFLAT requires village-level assessment and indicators for selection of the villages. The indicators used for Climate Vulnerability Assessment are given in Table 1.

¹ Xu, J. et al. (2019). *Sustaining Biodiversity and Ecosystem Services in the Hindu Kush Himalaya*. In: Wester, P., Mishra, A., Mukherji, A., Shrestha, A. (eds.): *The Hindu Kush Himalaya Assessment*. Springer, Cham. <https://doi.org/10.1007/978-3-319-92288-1-5>

² *Climate Vulnerability Assessment at Block Level using a Common Framework, 2021-2022*. Tripura Climate Change Cell, DSTE, Tripura, Agartala, 2022.

Table 1. Indicators and rationale used in the Climate Vulnerability Assessment³.

SI No	Indicators	Rationale
1	% area without dense forest cover	Higher the area without dense forest cover more sensitive to the environment.
2	% of BPL & Antyodaya families	Higher percentage of BPL indicates lesser adaptive capacity.
3	Cropping intensity	Ratio between net sown area and gross cropped area; the higher the index, the greater is the efficiency of land use.
4	Yield variability	High variability in crop yields indicates fluctuations in agro-climatic conditions / climate change.
5	Number of marginal land holders (<1 ha)	Low social and economic capital; lower adaptive capacities.
6	Road density	Higher accessibility and connectivity indicate higher adaptive capacity with access to markets and essential services.
7	Number of Self-Help Groups	The higher the number, the better is the income sources for livelihoods.
8	Number of ASHA workers	Increased awareness on health and better utilization of health services.

The ranking of the CREFLAT Project Blocks as per the Climate Vulnerability Assessment Report has been compiled below with their respective Vulnerability Index values or scores (Table 2).

Table 2. Ranking of CREFLAT Project Blocks as per the Climate Vulnerability Assessment Report.

SI No	Rank (of all the 58 Blocks)	Blocks	Vulnerability Index	District
1	2	Damcherra	0.100	North
2	4	Raishyabari	0.095	Dhalai
3	9	Salema	0.092	Dhalai
4	18	Manu	0.086	Dhalai
5	25	Ambassa	0.083	Dhalai
6	27	Jampui Hills	0.081	North
7	29	Dasda	0.081	North
8	31	Ganganagar	0.080	Dhalai
9	43	Chowmanu	0.075	Dhalai
10	51	Dumburnagar	0.070	Dhalai
11	55	Durga Chowmuhan	0.064	Dhalai

3 Methodology and Criteria for Selection of Villages

3.1 Methodological Approach to Identification of Landscapes and Villages

Multiple methodologies and criteria would be used for selection of villages. This will be combination of technology (such as **remote sensing data**) and conventional **socio-economic parameters** (such as poverty, human development index, institutions and economic infrastructures and others). The methodological approach will have three inter-related steps, and each step will focus on specific criteria as described below.

³ It may be kept in mind that these indicators are as per the Climate Vulnerability Assessment Report of the Department of Science & Technology, Govt of Tripura.

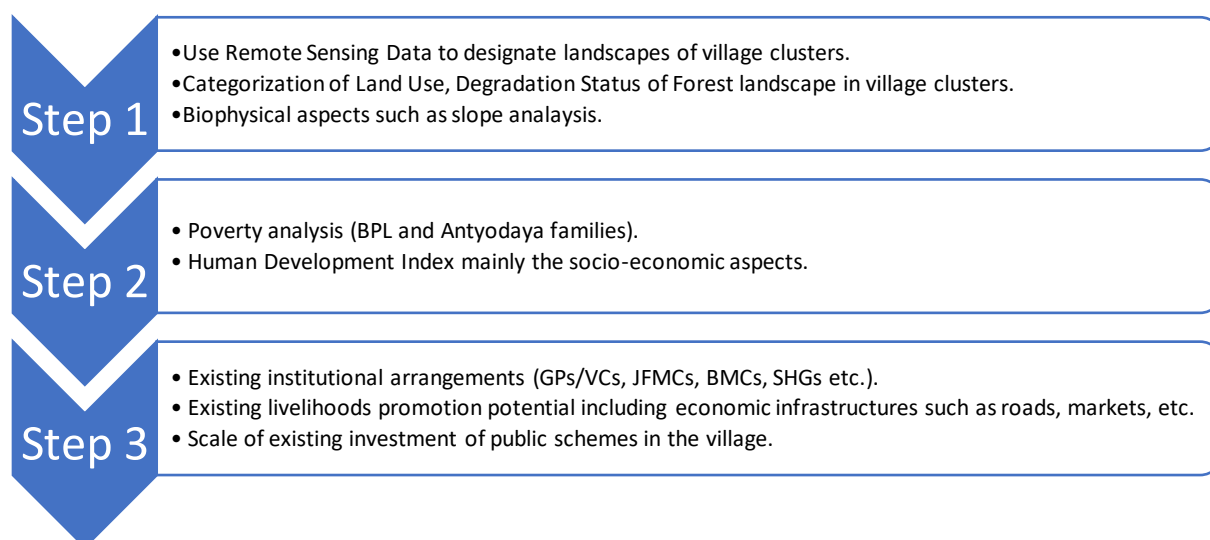


Figure 1. Steps for Identification of Landscapes and Villages.

The step-by-step approaches to the methodology of identification of landscape and villages would be as described in the “Pathway to Landscape Based Village Development Planning in CREFLAT”. Its application in the selection of the landscapes and villages are detailed under the following sections.

3.2 Criteria for Selection of Villages

The Separate Agreement at para 1.1.10 suggested criteria for selecting suitable micro-watershed as landscape and the villages therein. The villages would be weighted for selection based on combinations of data from the secondary literature mainly the government documents, and experiences of the project staff, and any other relevant information as available in public domain. In general, the following standards or criteria would be applied in the selection of villages.

- 1) **Vulnerability Index:** All the 11 blocks will be covered (for achieving the project objectives with scale), but highly vulnerable Blocks as given in Table 2 will have a greater number of villages than the low vulnerable Blocks (Climate vulnerability is the focus of the project – Separate Agreement). This would help the Project to cover maximum vulnerable population. (**Indicator 1: Vulnerability Index value of DST Report very low, low, medium and high – Scale 1, 2, 3 & 4**).
- 2) **Villages/landscapes with opportunities for climate change adaptation measures:** The following criteria would be considered:
 - a. **Availability of open forest land/regenerating forest areas⁴ (Indicator 2: Minimum available area 300 ha per landscape, as per Separate Agreement very low, low, medium and high availability – Scale 1, 2, 3 & 4).**
 - b. **Part of a watershed/micro-watershed⁵** (defined as a landscape) to ensure that (i) the project interventions cover sufficiently large geographical areas in the upstream regions to provide various ecosystems services to downstream villages e.g., treatment of degraded catchment areas/origin of rivers for water ecosystem services, or biodiversity corridor for climate-resilient biodiversity conservation including dispersal-pollination ecosystem services. These measures will reduce climate vulnerability of the people through enhanced flow of ecosystem services, and (ii) generation of similar

⁴ Data source: Forest Survey of India.

⁵ Data source: Forest Survey of India.

forest products for value chain establishment under Output 4. (**Indicator 3: Watershed/micro-watershed coverage/availability for plantations as very low, low, medium/moderate, and high availability– Scale 1, 2, 3 & 4).**

- c. **Presence of biodiversity-rich areas⁶:** Biodiversity-rich areas provide human and wildlife populations enhanced climate resiliency and the areas itself are climate resistant. No scientific assessment data available but oral information of Forest Range Officers and Beat Officers of respective areas who are well-aware of the general biodiversity conditions of the forest landscapes (**Indicator 4: Biodiversity-rich area with very low, low, medium, and high biodiversity – Scale 1, 2, 3 & 4)**
 - d. **Opportunities for livelihood diversification to reduce poverty** as the poor are the most climate vulnerable, and assuming that all villages will readily participate in the project activities. (**Indicator 5: Livelihood diversification opportunities with very low, low, medium and high – Scale 1, 2, 3 & 4).**
- 3) **Accessibility⁷:** Road and communication facilities are essential for the success of any project. Thus, villages with better road connectivity and communication network will be preferred over those, which do not have or poorly developed connectivity. (**Indicator 6: Accessibility very low, low, medium and high – Scale 1, 2, 3 & 4).**
 - 4) **Congenial environment for project implementation:** People's interest and attitude towards project (based on the inputs from field officials and experiences from the first phase), having minimum possibility of dispute or disagreement among the villagers, and homogeneous communities. (**Indicator 7: Congenial environment for project implementation low, medium and high – Scale 1, 2, 3).**
 - 5) **Human Development Index (HDI):** Based on Census of India 2011 data, the HDI in project areas will be assessed (**Indicator 8: Human Development Index very low, low, medium and high – Scale of 1,2,3 & 4).**
 - 6) All indicators will have equal weight and arithmetic sum. Hence, no complexity.

3.3 Selection of Landscapes for Project Intervention

As per Climate Vulnerability Assessment Report, which is taken as one of the major references, the CREFLAT Project Blocks can be qualified as High, Moderate, Low and Very Low vulnerability (Table 3 & Figure 2). Accordingly, there are 3 Blocks, which are classified as *High vulnerability*; 5 Blocks as *Moderate vulnerability*; 2 Blocks as *Low vulnerability*; and 1 Block as *Very Low vulnerability*.

Table 3. Ranking of CREFLAT Project Blocks (Climate Vulnerability Assessment Report) and qualification of the Vulnerability.

SI No	Rank	Blocks	District	Vulnerability Index	Vulnerability
1	2	Damcherra	North	0.100	High
2	4	Raishyabari	Dhalai	0.095	High
3	9	Salema	Dhalai	0.092	High
4	18	Manu	Dhalai	0.086	Moderate
5	25	Ambassa	Dhalai	0.083	Moderate
6	27	Jampui Hills	North	0.081	Moderate
7	29	Dasda	North	0.081	Moderate
8	31	Ganganagar	Dhalai	0.080	Moderate
9	43	Chowmanu	Dhalai	0.075	Low
10	51	Dumburnagar	Dhalai	0.070	Low
11	55	Durga Chowmuhani	Dhalai	0.064	Very Low

⁶ Data source: Assumption based on discussion with Range Forest Officers and Beat Officers.

⁷ Data source: District Transport Office & Block Development Office of the districts.

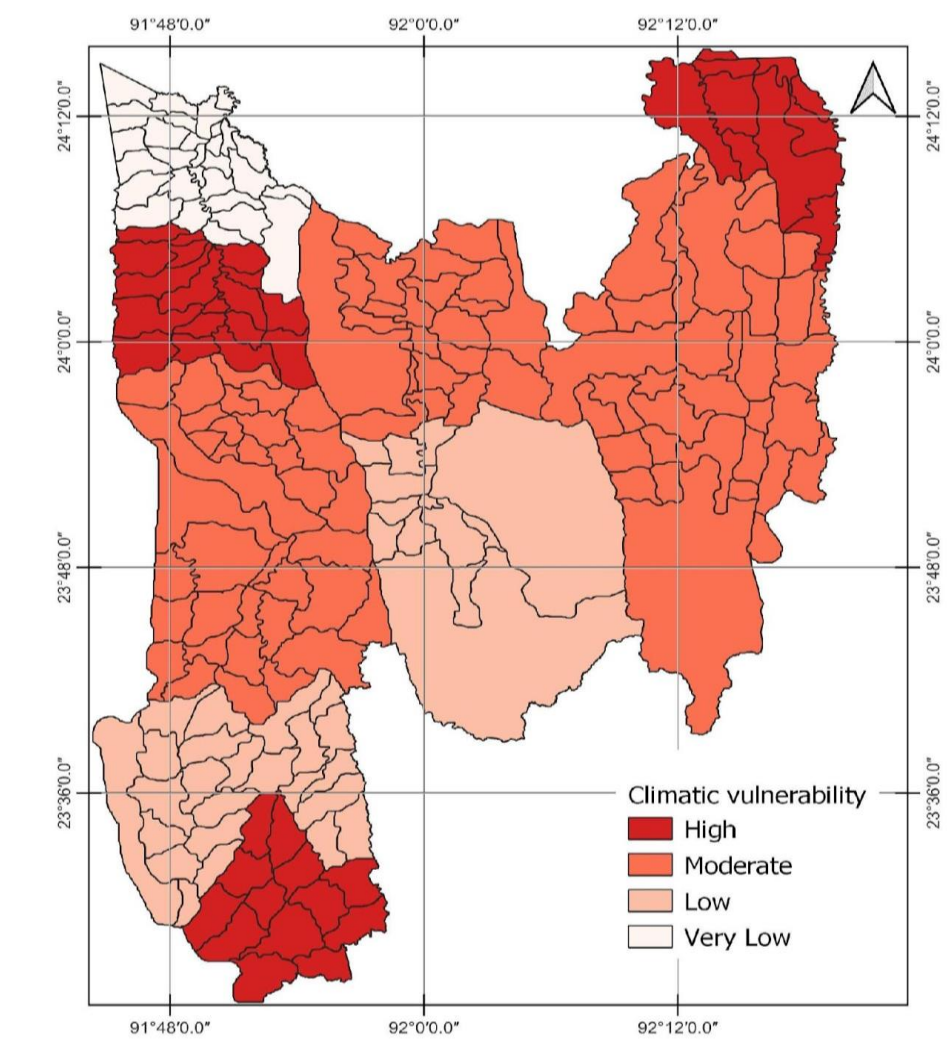


Figure 2. Block wise Climatic Vulnerability (DST report 2021-2022) of CREFLAT Project Blocks (as reflected in Table 3). (Source: Source of Map is the PMA, CREFLAT; climate vulnerability of Blocks based on the Vulnerability Index of the DST Study, Govt of Tripura).

Applying the criteria for landscape selection (as per para 3.2 above) as well as the indicators and rationale used in the Climate Vulnerability Assessment Report, the selection of landscapes further followed criterion which use opportunities for climate change adaptation measures. The four criteria adopted to consider as the next layers of key indicators were (a) forest canopy density with open forest availability; (b) part of watershed / micro-watershed; (c) Human Development Index; and (d) Accessibility. In terms of weightage of each of these criteria, the Human Development Index was given low weightage but all other indicators have equal weightages (Given the fact that majority of the population in project area is tribal community and these generally fall under below poverty groups as common denominator).

3.3.1 Availability of open forest land/regenerating forest areas

As shown in Figure 3 & Figure 4 (Indicator 2: very low, low, medium and high availability in the Scale 1, 2, 3 & 4 respectively).

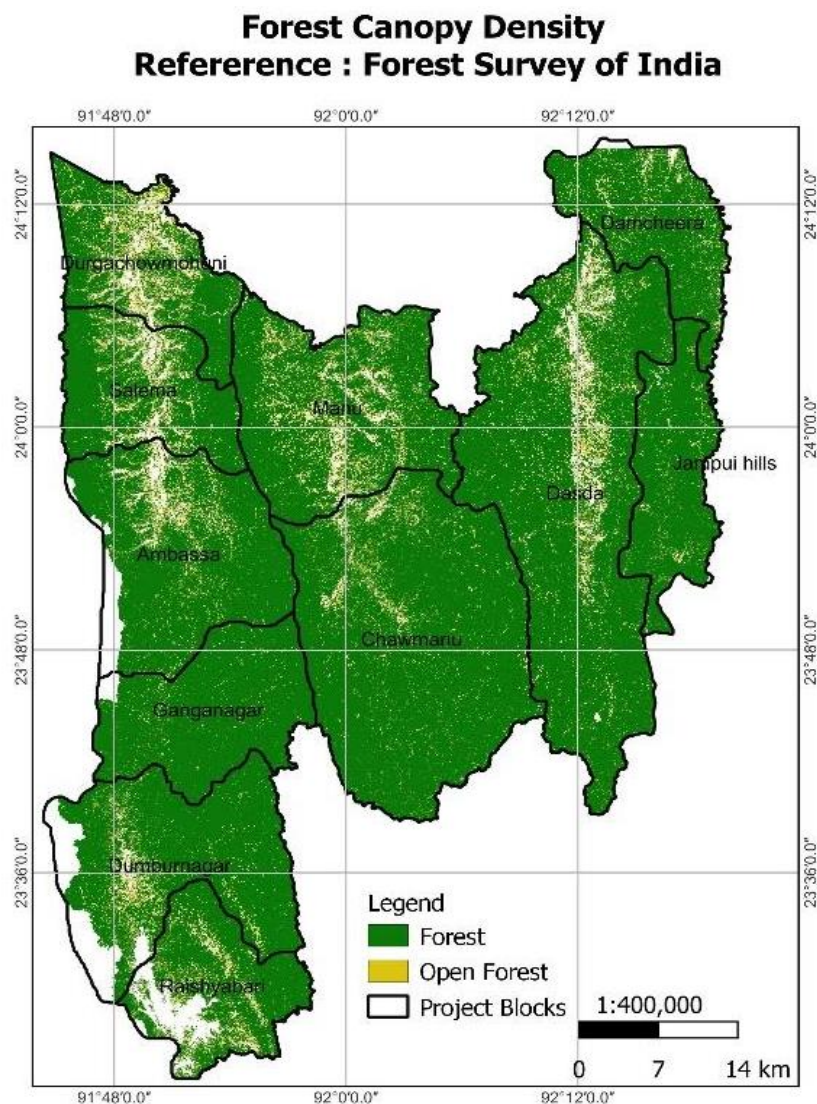


Figure 3. Forest Canopy Density of the CREFLAT Project Area as per Forest Survey of India.

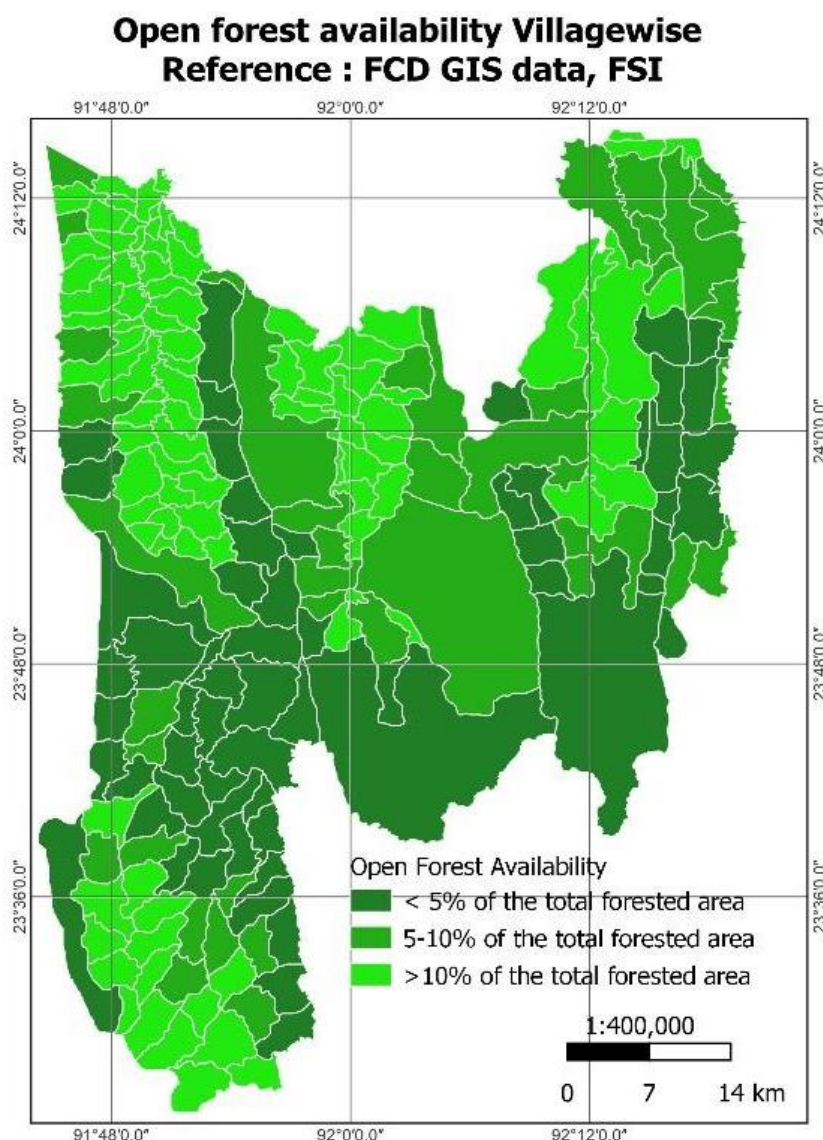


Figure 4. Open forest of the CREFLAT Project area indicating the availability of open forest land for project interventions (Source: Forest Survey of India).

3.3.2 Part of a watershed/micro-watershed

Part of a watershed/micro-watershed to ensure that (i) the project interventions cover sufficiently large but consolidated geographical areas in the upstream regions to provide various ecosystems services to downstream villages (Figure 5). The watersheds considered for this study were in proximity to the sites where Tripura Forest Department (TFD) has already started project interventions in 92 villages. (**Indicator 3: Containment in watershed/micro-watershed**).

Watersheds Considered for the study

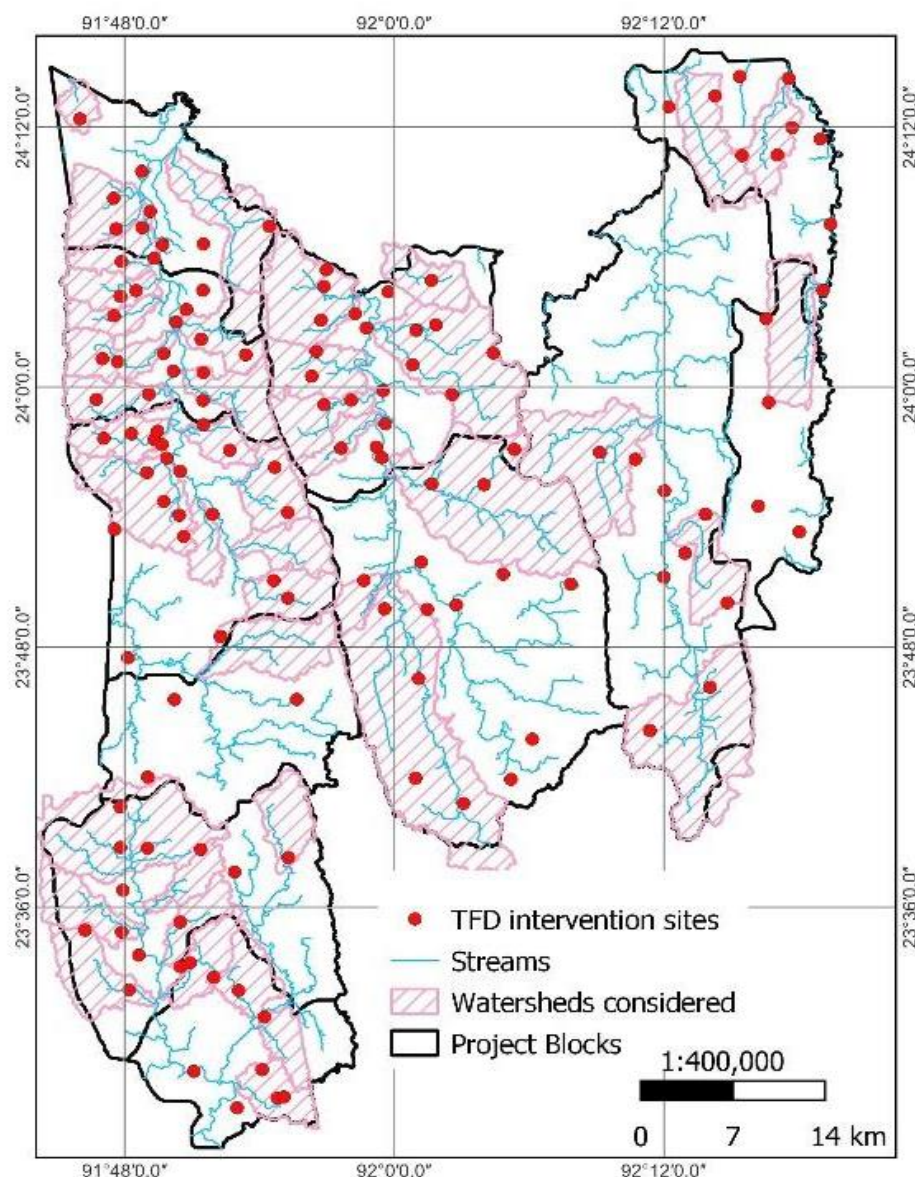


Figure 5. Watershed consideration of the CREFLAT Project area with villages/sites (in red dots) where TFD has already made some kinds of interventions.

3.3.3 Human Development Index (HDI)

In context of this project, this index was modified (Census of India; 2011) to include literacy rate (Knowledge), employment rate and employment type (per capita income), access to public amenities (standard of living) and land condition (quality of living). (**Indicator 8: Human Development Index with very low, low, medium and high in Scale 1, 2, 3, 4**). Accordingly, based on the HDI scores, the Project area had been categorized as High, Moderate, Low, and Very Low (Figure 6).

Human Development Index Reference : Census Data 2011

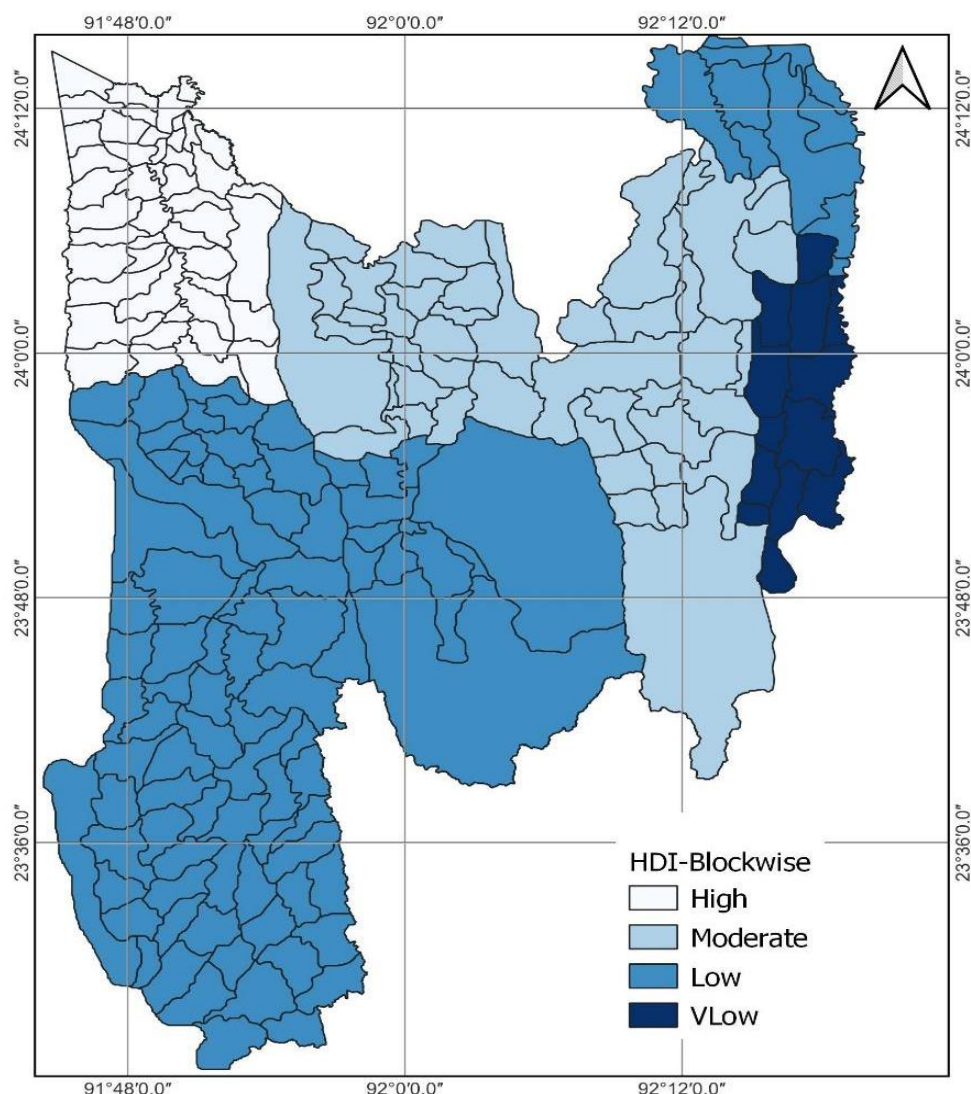


Figure 6. CREFLAT Project area based on HDI scores categorized as High, Moderate, Low, and Very Low.

3.4 Prioritization of Landscapes and Selection of Villages for Project Interventions

Selected Landscapes are a group of villages, which satisfy the above-mentioned criterion and thus are particularly vulnerable to climate change and have highest priority for climate change adaptation measures. GIS-based site suitability analysis was performed to determine spatially the landscapes suitable for project intervention. The identified landscapes were categorised in four classes w.r.t the level which they fulfilled the above laid criterion. The classes are Priority 1, Priority 2, Priority 3 and Priority 4 (Table 4); each of these four categorizations has contained villages that can be taken up for implementation in a phased manner.

Table 4. Criteria for prioritisation of selected landscapes.

SI No	Priority landscape	Criteria	Corresponding Blocks
1	Priority 1	High Climate Vulnerability	Damcherra Raishyabari Salema
		Open forest $\geq 5\%$	
		HDI ≥ 3	
		Inside Road Buffer	
		Contained by adjacent watershed	
2	Priority 2	Moderate Climate Vulnerability	Manu Dasda Jampui Hills Ganganagar
		Open forest $\geq 5\%$	
		HDI ≥ 2	
		Inside Road Buffer	
		Contained by adjacent watershed	
3	Priority 3	Low Climate Vulnerability	Ambassa Chawmanu Dumburnagar
		Open forest $\geq 5\%$	
		HDI ≥ 1	
		Inside Road Buffer	
		Contained by adjacent watershed	
4	Priority 4	Moderate Climate Vulnerability	Durga Chowmahani
		Open forest $\geq 5\%$	
		HDI ≥ 1	
		Inside Road Buffer	
		Contained by adjacent watershed	

3.4.1 Overall landscapes for project interventions

Applying the above criteria (Table 4), the entire CREFLAT project area has been divided into four priority areas, designated as Priority 1, Priority 2, Priority 3, and Priority 4 (Figure 7). The high vulnerable Blocks of Damcherra, Salema, and Raishyabari correspond with the Priority 1 areas of the landscapes.

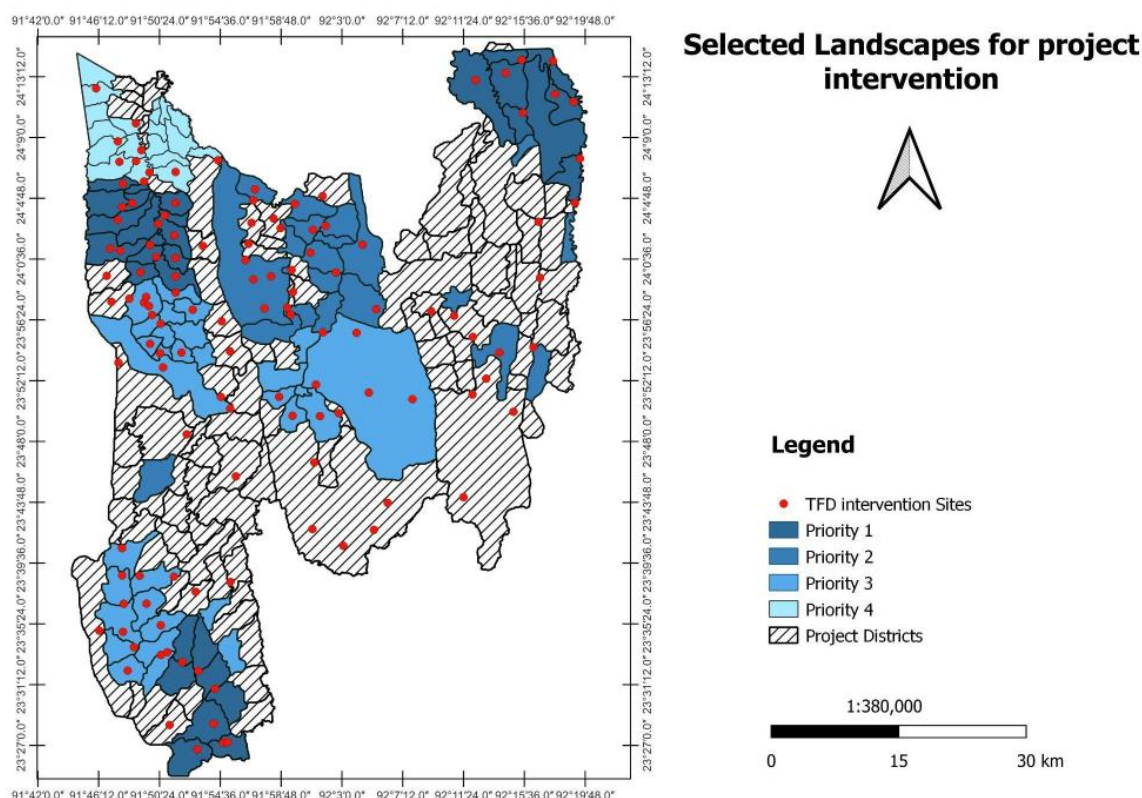


Figure 7. CREFLAT Project area with four priority landscapes designated as Priority 1, Priority 2, Priority 3, and Priority 4.

3.4.2 PRIORITY 1 Landscapes for Project Interventions and selection of villages

Priority 1 landscapes fall under three different Blocks. These are Damcherra Block with 8 villages (Figure 8) and Raishyabari Block with 8 villages (Figure 9), and Salema Block with 18 villages (Figure 10). Thus, the **Priority 1** landscapes cover **34 villages** (approximately 25% of the proposed project villages) located in the three Blocks having **High Vulnerability** to climate change thus justifiably covering landscapes, which deserve green investments and value addition of local livelihoods on sustainable basis. It may be noted that although Damcherra is the most vulnerable block and hence Priority 1 landscape but with only 8 villages, the landscape adjoining the Dasda block (Priority 2) is contiguous with higher number of villages. Interventions in the Dasda landscape will positively affect the downstream Damcherra landscape.

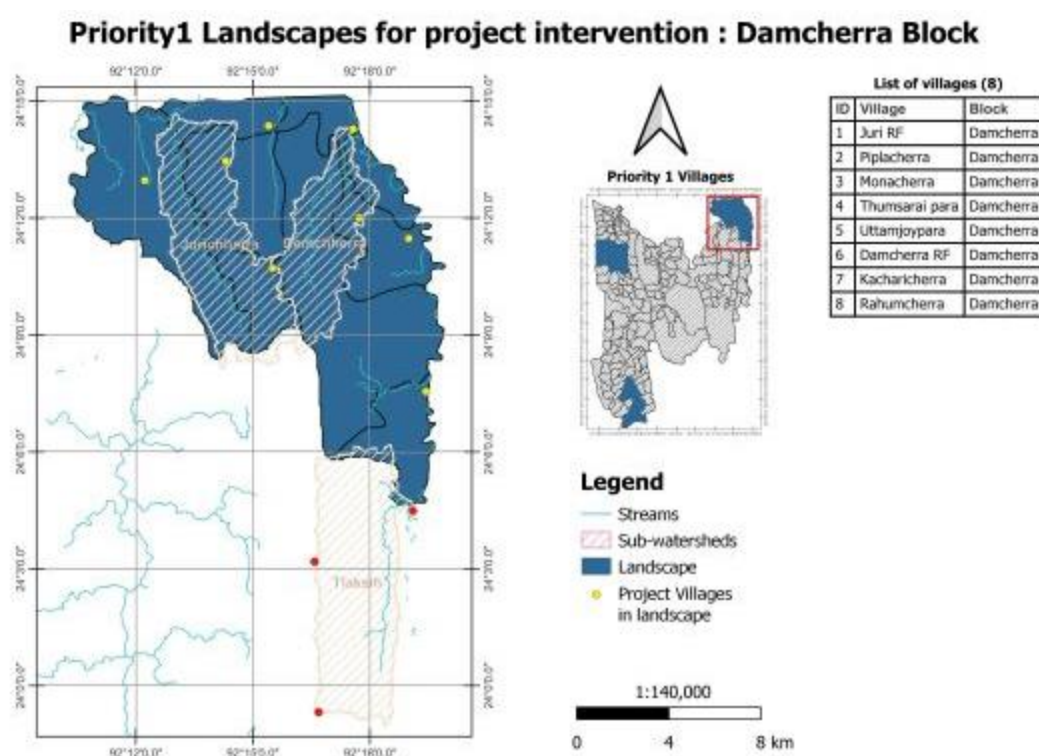


Figure 8. Priority 1 Landscapes of Damcherra Block with 8 villages for project interventions.

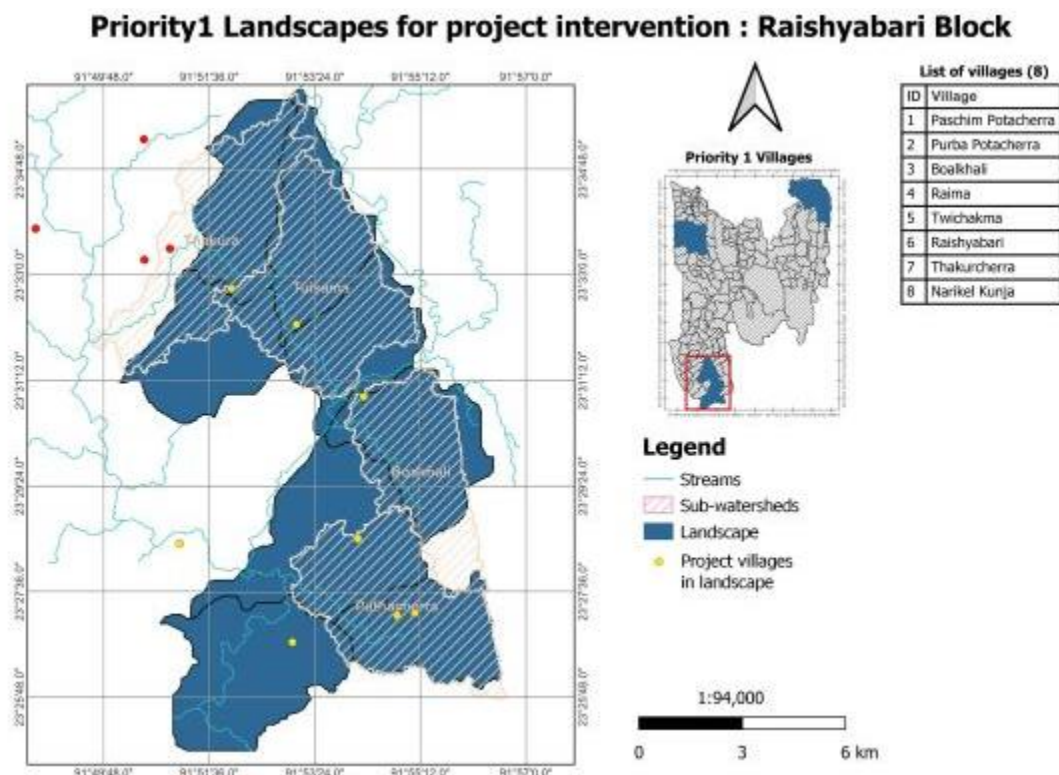


Figure 9. Priority 1 Landscape of Raishyabari Block with 8 villages for project intervention.

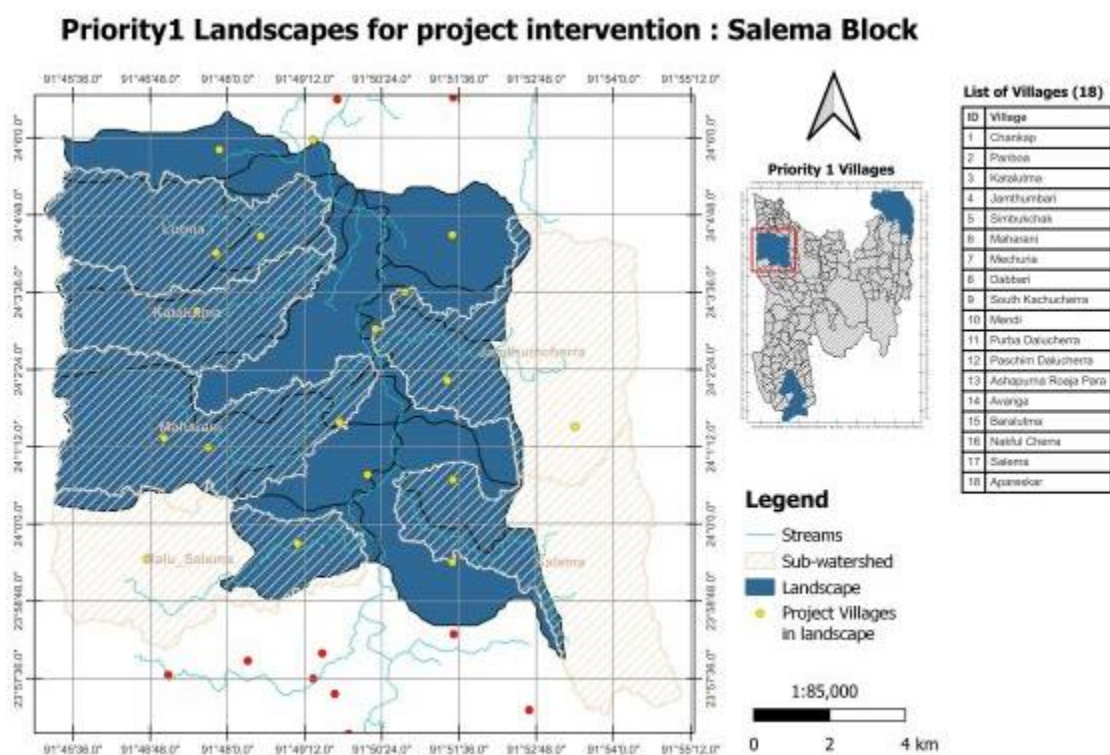


Figure 10. Priority 1 landscape with 18 villages under Salema Block.

3.4.3 Priority 2 Landscapes for Project Interventions and Selection of Villages

Priority 2 landscapes are those that have Moderate Climate Vulnerability. The Priority 2 landscapes are spread over 4 Blocks. These are Dasda Block with 10 villages & Jampui Block with 4 villages (Map 10); Ganganagar Block with 3 villages (Figure 12); and Manu Block with 25 villages (Figure 13). Thus, Priority 2 landscapes cover 42 villages, again which is about one-third of the total villages for project intervention.

Priority2 Landscapes for project intervention : Dasda & Jampui Hills Block

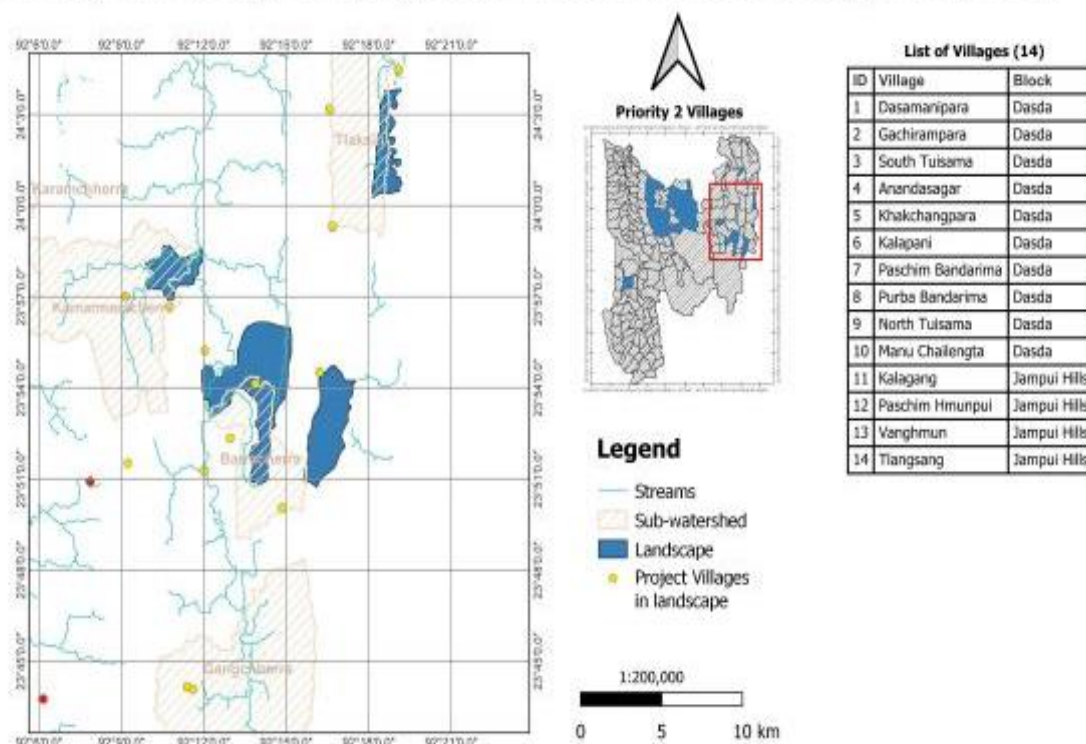


Figure 11. Priority 2 landscapes under Dasda Block with 10 villages and Jampui Hills Block with 4 villages for project intervention.

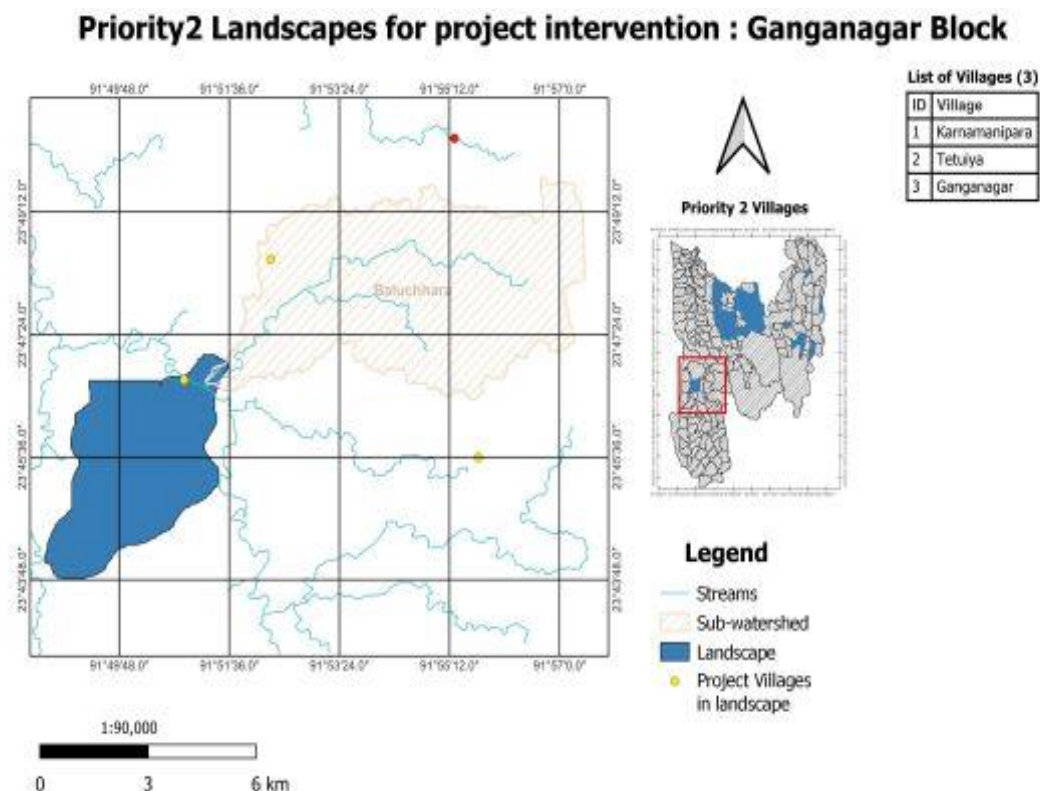


Figure 12. Priority 2 Landscape under Ganganagar Block with 3 selected villages for project intervention.

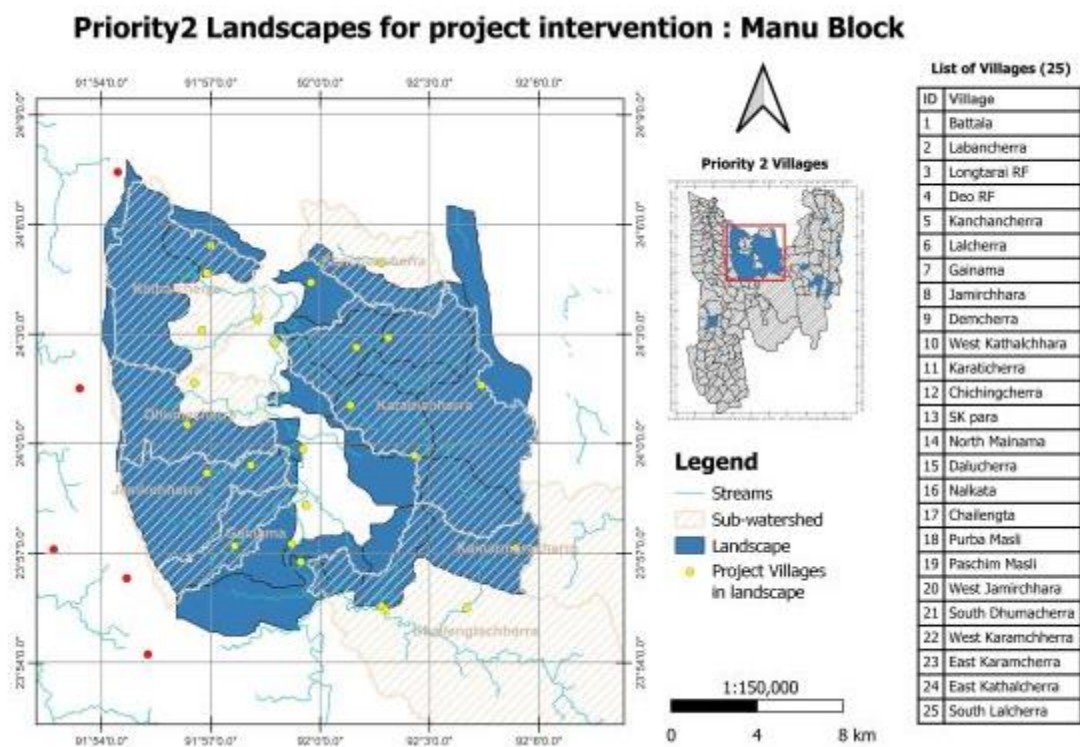


Figure 13. Priority 2 landscapes under Manu Block with 25 villages for project interventions.

3.4.4 Priority 3 Landscapes and Selection of Villages for Project Interventions

Priority 3 landscapes are located in relatively Low Climate Vulnerability Blocks as per the Climate Vulnerability Assessment Report of DST, Govt. of Tripura. These landscapes are in Ambassa Block with 18 villages (Figure 14); Chawmanu Block with 11 villages (Figure 15); and Dumburnagar Block with 15 villages (Figure 16). The landscape covers 44 villages, over one-third of the total villages. It may be noted that although Ambassa Block falls within the Moderate Climate Vulnerability, however, in terms of Priority landscapes, Ambassa falls within the Priority 3 of project interventions. This is so, as the criteria for prioritisation of landscapes utilises four distinct parameters other than climatic vulnerability viz. availability of open forest, Human Development Index, distance from the major roads and containment within a sub-watershed/watershed. Thus, climatic vulnerability remaining the same, landscapes may fall in different prioritisation categories if other parameters like availability of open forest or Human development index are different.

Priority 3 Landscapes for project intervention : Ambassa Block

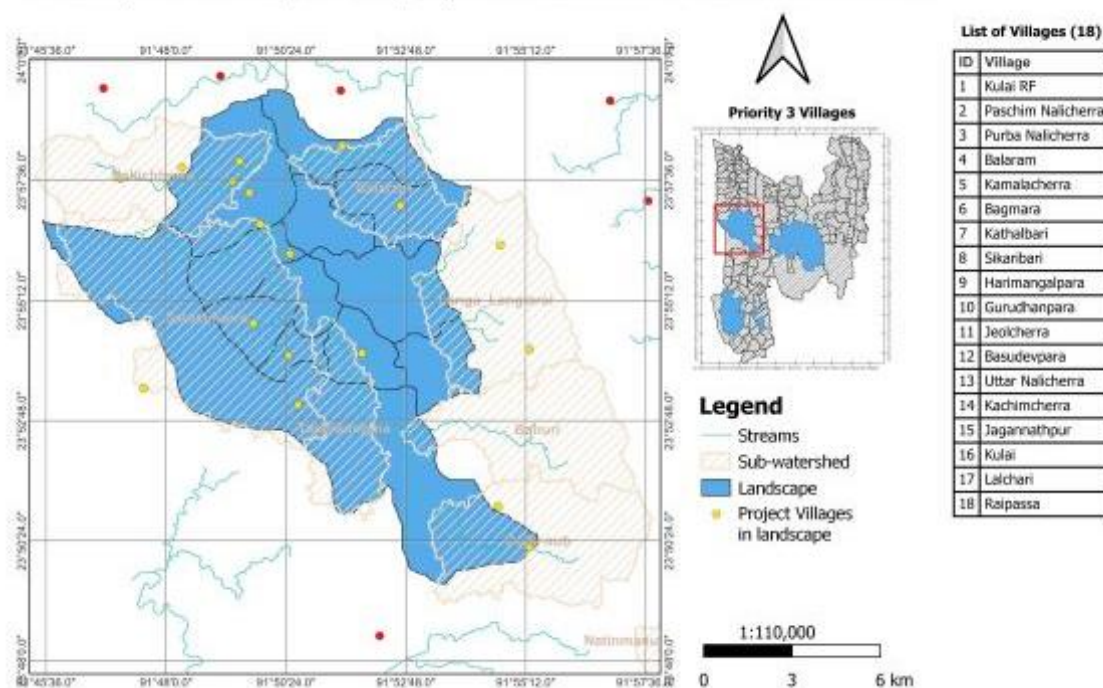


Figure 14. Priority 3 landscape with 18 selected villages for project interventions in Ambassa Block.

Priority 3 Landscapes for project intervention : Chawmanu Block

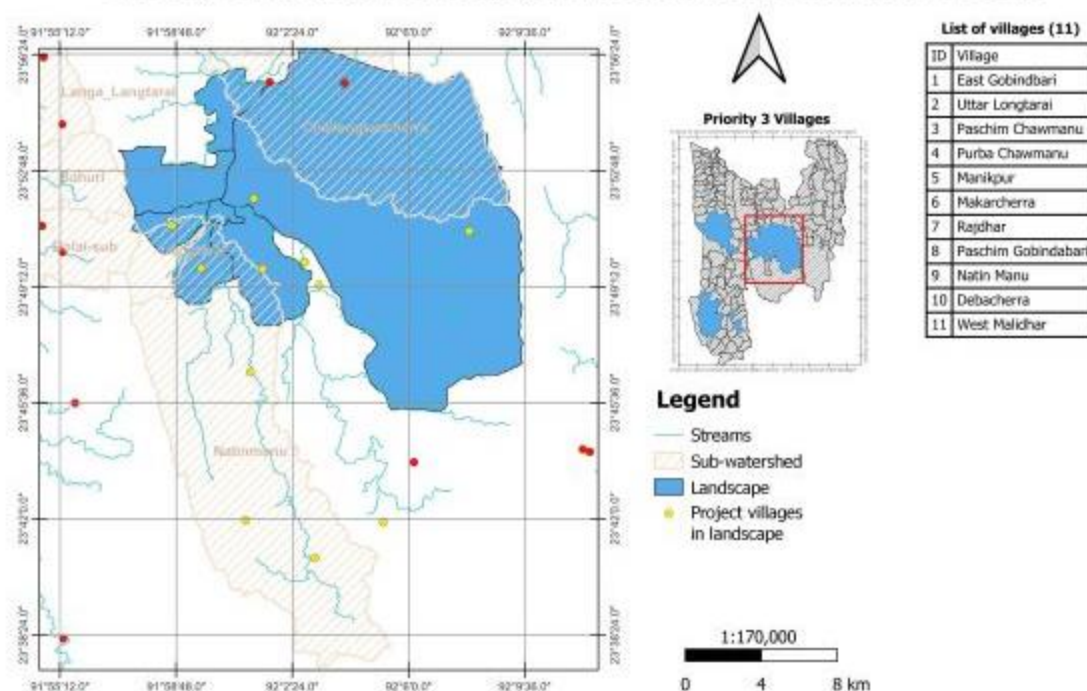


Figure 15. Priority 3 landscapes with 11 selected villages for project interventions under Chawmanu Block.

Priority 3 Landscapes for project intervention : Dumburnagar Block

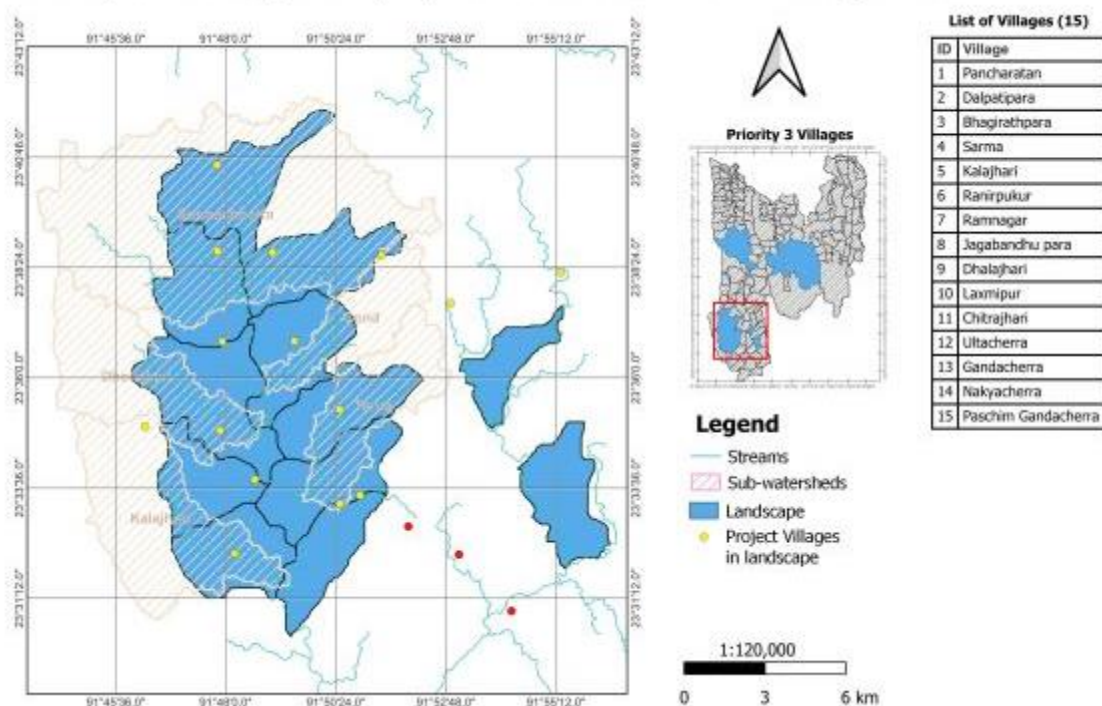


Figure 16. Priority 3 landscapes with 15 selected villages for project interventions under Dumburnagar Block.

3.4.5 Priority 4 Landscape and Selection of Villages for Project Interventions

Priority 4 landscape is located in the Block identified with Very Low Climate Vulnerability. Only one such block, viz. Durga Chowmuhani Block in CREFLAT project has been ranked as Low Climate Vulnerable as per the Climate Vulnerability Assessment Report. Although this is low climate vulnerable area, 9 villages have been selected for project interventions (Figure 17). The selected villages are in a landscape that could demonstrate the project results, besides having high potential to become climate vulnerable if interventions are not done to stabilise the landscape. It may also be mentioned that the target groups in this landscape also experience high poverty, limited rural income opportunities, and other climate-risks in terms of water scarcity and reducing availability of forest NTFPs.

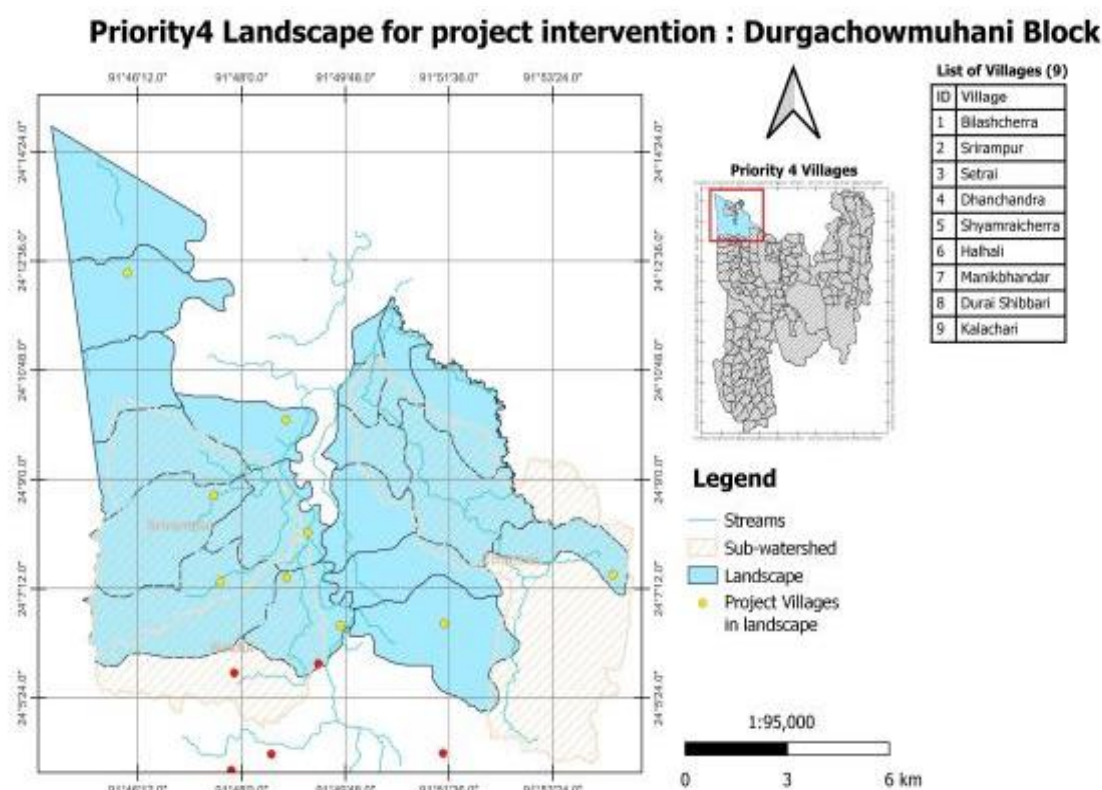


Figure 17. Priority 4 landscape with 9 selected villages for project interventions under Durga Chowmuhani Block.

4 Selection of Villages Not Directly Covered Under the Priority Landscapes but Where Interventions Had Already Been Done By the Project during 2021-2022 / 2022-2023

There are 8 villages, 6 in Dhalai district and 2 in North Tripura district (Table 5) which are not part of any of the Priority landscapes but where Project interventions had taken place in terms of plantations and/or SWC activities during 2021-2022 / 2022-2023, when project started implementation on the ground due to limited reference of the Separate Agreement. However, these villages have been included in the final list of selected villages for Project interventions following the following criteria. These villages have also been included under respective block-wise priority-wise maps.

1. These villages geographically form part of sub-watershed of any of the Priority landscapes.
2. High climate vulnerability due to forest depended population with high poverty and low HDI.
3. Plantations were carried out close to highly eroding streams / streamlets with potential to have negative environmental impacts if plantations were not carried out.
4. Following the above criteria, there had been high demand by the local people / JFMC members to undertake plantations in these villages with the assurances of protecting the plantations.

5. All the villages are accessible and keen to partner with the CREFLAT project in the post plantation assessment done in 2022/23.

Table 5. List of villages that are not under any of the Priority landscapes but where interventions had already been done by the Project.

District	Range	Block	Beat	Village
Dhalai	Dumburnagar	Dumburnagar	Dalapati	Dalapati
	Dumburnagar	Dumburnagar	Ranirpukur	Pancharatan
	Dumburnagar	Dumburnagar	Bhagirath	Bhagirath
	Raishyabari	Raishyabari	Purba Raima	Narikel Kunja
	Manu	Manu	Kathalcherra	West Kathalcherra
	Chawmanu	Chawmanu	Manikpur	West Malidar
North Tripura	Laxmipur	Dasda	Anandabazar	Kalapani
	Laxmipur	Dasda	Banda	West Bandarima

5 Reasons for Exclusion of Villages

The spatial reference for selection of villages was taken from the Survey of India toposheets available in digital copies with Survey of India. The 1:50,000 or better scale toposheets, which can be used to map villages accurately, are not available for most of the areas in Tripura.⁸ As such, it was preferred to select villages where the spatial information viz. accurate geographic location and expanse was available to some extent.

Moreover, based on the Separate Agreement, it was imperative that the project interventions would be on landscape basis to have meaningful impacts, and accordingly green investments be done in those villages where the project objectives would be meaningfully realised. Hence, the final list of villages has been limited to 129 villages with 62 villages excluded for any project interventions under CREFLAT project.

Considering the climate vulnerability across the project areas as well as the needs of all the target groups, due to high poverty, low HDI, minimal opportunities for income, subsistence livelihoods, and degrading forest resources, it is reiterated that all the 191 villages require targeted interventions. It is urged that the TFD should address the issues through its own departmental resources or in convergence with other externally aided projects in the 62 left-out villages under CREFLAT project. Ideally, climate vulnerability could only be reduced or meaningfully addressed if all the villages across both the districts are covered for planned interventions as envisaged under CREFLAT project.

6 Final List of Selected Villages for Project Interventions

6.1 Summary of Priority-wise landscapes and selected villages for project interventions

Table 6 gives the summary of Priority landscapes and number of villages under each landscape. A landscape is equivalent to each Block as there are multiple watersheds or micro-watersheds under each Block. It may be noted that the Prioritization of Landscapes with selected villages for project interventions also super-imposes the Climate Vulnerability of the Blocks or landscapes as per the Climate Vulnerability Assessment Report of the Department of Science & Technology, Govt. of Tripura along with the poverty, HDI, accessibility, and open forests criteria. Thus, there are **34 villages under Priority 1, 60 villages under Priority 2, 26 villages under Priority 3, and 9 villages under Priority 4 proposed for Project interventions.**

⁸ All states having international borders are covered under certain norms of the Govt. of India with restrictive availability of toposheets in public domain.

Table 6. Summary of Priority landscapes and number of villages under each landscape.

District	Block/Landscape	Priority Level	Vulnerability	No of villages
North	Damcherra	Priority 1	High	8
Dhalai	Raishyabari	Priority 1	High	8
Dhalai	Salema	Priority 1	High	18
			Sub-total	34
Dhalai	Manu	Priority 2	Moderate	25
North	Jampui Hills	Priority 2	Moderate	4
North	Dasda	Priority 2	Moderate	10
Dhalai	Ganganagar	Priority 2	Moderate	3
Dhalai	Ambassa ⁹	Priority 3	Moderate	18
			Sub-total	60
Dhalai	Chowmanu	Priority 3	Low	11
Dhalai	Dumburnagar	Priority 3	Low	15
			Sub-total	26
Dhalai	Durga Chowmuhani	Priority 4	Very Low	9
			Sub-total	9
			Total	129

6.2 Final list of Selected Landscapes and Villages for Project Interventions

The final list of priority-wise selected landscapes and villages is given in Annex 1. The list includes 129 villages out of 191 villages as per the Feasibility Study Report of CREFLAT. Of the 129 villages, 107 villages fall within the watershed/sub-watershed of the selected landscapes in Dhalai district. Remaining 22 villages are in the watersheds/sub-watersheds of the selected landscapes in North Tripura. The summary of district-wise and block-wise number of villages to be covered under CREFLAT is given in Table 7. The list in Annex 1 also includes the list of all the 92 villages where CREFLAT has made some interventions, mainly any of the various models of plantations and soil and water conservation (SWC) activities during 2021-2022 and 2022-2023 through the Joint Forest Management Committees (JFMCs).

Table 7. The district- and block-wise villages under CREFLAT project.

District	SI No	Block	Number of Villages
Dhalai	1	Ambassa	18
	2	Salema	18
	3	Manu	25
	4	Raishyabari	8
	5	Ganganagar	3
	6	Chowmanu	11
	7	Dumburnagar	15
	8	Durga Chowmuhani	9
		Sub-total	107
North Tripura	1	Damcherra	8
	2	Dasda	10
	3	Jampui Hills	4
		Sub-total	22
	11	Total	129

⁹ Moderate In terms of vulnerability, but kept under Priority 3 due to higher variable scores of the various criteria of landscapes.

7 Conclusion

Based on the systematically elaborated methodology to identify potential landscapes and villages therein as the targeted sites for project interventions, this guideline has used the options given in the Separate Agreement to narrow down the potential villages, where project interventions are not only relevant but also have very high probability to make the changes happen that the CREFLAT intends to achieve. With the reduction in the number of villages, project is now on a focused track but has sufficient financial package to ensure that project village investments are substantial and create genuine interest of local communities to participate. This is also realistic from the viewpoint that several other ongoing or planned investments are equally relevant and may even fill the lacuna of holistic landscape/village development that might be left open by CREFLAT due to its major mandate to operate on forest lands to restore these degraded landscapes. The first set of 55 Villages that are part of Planning and Piloting phase, will also demonstrate that each selected landscape can be treated keeping in view upstream-downstream context and thus rely on the argument with local communities that security of livelihoods needs sustained flow of ecosystem services. Finally, the above methodology allows project to devote enough time to participatory processes, which ensures that environmental and social safeguards are given due attention and application, and the pressure of reaching 191 villages as piece-meal approach is subsided.

Annexes

Annex 1 – Final list of Villages (Priority-wise) covered by the selected landscapes under each Block/Range and Beat

District	Range	Block	Beat	SI No	Village ¹⁰	SI no. of intervention village ¹¹
(1)	(2)	(3)	(4)	(5)	(6)	(7) ¹²
PRIORITY 1 LANDSCAPES AND VILLAGES						
North Tripura	Damcherra	Damcherra	Thumsaraipara	1	<i>Thumsaraipara</i>	1
			Bangsul	2	<i>Juri RF</i>	2
			Damcherra	3	<i>Uttamjoypara</i>	3
				4	<i>Damcherra RF</i>	4
				5	<i>Monacherra</i>	5
				6	<i>Piplacherra</i>	6
			Khedacherra	7	<i>Kacharicherra</i>	
			Rahumcherra	8	<i>Rahumcherra</i>	
Dhalai	Raishyabari	Raishyabari	Raima	9	<i>Raima</i>	7
				10	<i>Purba Potacherra</i>	8
			Twichakma	11	<i>Boalkhali</i>	9
				12	<i>Paschim Potacherra</i>	10
				13	<i>Twichakma</i>	11
				14	<i>Thakurcherra</i>	
			Purba Raima	15	<i>Narikel Kunja</i>	12
			Raishyabari	16	<i>Raishyabari</i>	13
	Salema	Salema	Salema	17	<i>Simbukchak</i>	14
				18	<i>Maharanipur</i>	15
			Jadurambari	19	<i>Katalutma</i>	16
				20	<i>Panboa</i>	17
				21	<i>Jamthumbari</i>	18
			Kachucherra	22	<i>South Kachucherra</i>	19

¹⁰ Villages in italics under Column (6) are the intervention villages where plantations/SWC activities were taken up during 2021-2022/2022-2023.

¹¹ "Intervention village" means either Plantations or SWC activities, or both had been undertaken by CREFLAT during 2021-2022 & 2022-2023. The activities undertaken must be reflected in the respective VDP when the same would be prepared.

¹² The SI No under Column (7) are the 92 villages where project interventions took place during 2021-2022/2022-2023.

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District	Range	Block	Beat	SI No	Village ¹⁰	SI no. of intervention village ¹¹	
(1)	(2)	(3)	(4)	(5)	(6)	(7) ¹²	
			Mendi	23	Ashapura Roaja para	20	
				24	Mendi	21	
			Jadurambari	25	Avanga		
				26	Baralutma		
				27	Nakfulcherra		
			Chankap	28	Chankap	22	
			Kachucherra	29	Dabbari	23	
			Mendi	30	East Dalucherra	24	
				31	West Dalucherra	25	
			Salema	32	Salema		
				33	Mechuria	26	
				34	Apareskar		
PRIORITY 2 LANDSCAPES AND VILLAGES							
North Tripura	Laxmipur	Dasda	Dasda	35	South Tuisama	27	
				36	Dasamanipara	28	
			Gachirampara	37	Gachirampara	29	
					38	Purba Bandarima	30
			Anandabazaar	39	Kalapani	31	
				40	Khakchangpara	32	
				41	Anandasagar	33	
			Banda	42	Paschim Bandarima	34	
	Jampui Hill	Jampui Hill	Hmunpui	43	Manu Chailengta		
				Vanghmun	44	Tuisama	
					45	Paschim Hmunpui	35
					46	Kalagang	
Dhalai	Manu	Manu	Madhya Chailengta	47	Vanghmun		
				48	Tlangsang		
			Lalcherra	49	Gainama	36	
				50	Lalcherra	37	
				51	Labancherra	38	
				52	Dalucherra	39	
Dhumacherra	53	West Jamircherra	40				
	Longtharai	54	S.K. Para	41			

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District	Range	Block	Beat	SI No	Village ¹⁰	SI no. of intervention village ¹¹
(1)	(2)	(3)	(4)	(5)	(6)	(7) ¹²
			Shibbari	55	Chichingcherra	42
			Karamcherra	56	Kanchancherra	43
			Kathalcherra	57	West Kathalcherra	44
				58	East Kathalcherra	45
				59	Demcherra	46
			Deo RF	60	Deo RF	47
			Karamcherra	61	Nalkata	
				62	West Karamcherra	
			Dhumacherra	63	South Dhumacherra	
				64	West Masli	
				65	Jamircherra	48
				66	Battala	49
			Shibbari	67	East Masli	
				68	Chailengta	
				69	North Mainama	50
			Lalcherra	70	South Lalcherra	51
			Longthorai	71	Longtharai RF	52
			Karamcherra	72	East Karamcherra	
				73	Karaticherra	
	Ganganagar	Ganganagar	Karnamani	74	Karnamanipara	
			Ganganagar	75	Tetuiya	
76				Ganganagar		
PRIORITY 3 LANDSCAPES AND VILLAGES						
Dhalai	Ambassa	Ambassa	Balaram	77	Balaram	53
				78	Bagmara	54
			Kulai	79	Paschim Nalicherra	55
			Harincherra	80	Gurudhan Para	56
			Jaharnagar	81	Kathalbari	57
				82	Sikaribari	58
			Ambassa	83	Kamalacherra	59
				84	Jagannathpur	60
			Kulai	85	Purba Nalicherra	
86	Uttar Nalicherra					

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District	Range	Block	Beat	SI No	Village ¹⁰	SI no. of intervention village ¹¹
(1)	(2)	(3)	(4)	(5)	(6)	(7) ¹²
				87	Basudevpara	
				88	Kulai	
				89	Kachimcherra	61
				90	Lalchari	
			Harincherra	91	Harimangal	62
			Jeolcherra	92	Kulai RF	63
				93	Raipassa.	
				94	Jeolcherra	64
				95	Makarcherra	65
				96	North Longtharai	66
	Chawmanu	Chawmanu	Chawmanu	97	East Chawmanu	67
				98	West Gobindabari	68
				99	Natin Manu	69
				100	East Gobindabari	70
				101	West Chawmanu	71
				102	Debacherra	
			Manikpur	103	Rajdhar	72
				104	West Malidhar	73
				105	Manikpur	74
	Dumburnagar	Dumburnagar	Dhalajhari	106	Ramnagar	75
			J.B. para	107	J.B. para	76
			Barabari	108	Ultacherra	77
			Dalapati	109	Dalapati	78
			Gandacherra	110	Laxmipur	79
				111	Gandacherra	
				112	Sarma	80
				113	Paschim Gandacherra	
			Ranirpukur	114	Pancharatan	81
				115	Ranirpukur	82
			Dhalajhari	116	Kalajhari	83
				117	Nakyacharra	84
			Bhagirath	118	Bhagirath	85
			J.B. para	119	Chitrajhari	86

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District	Range	Block	Beat	SI No	Village ¹⁰	SI no. of intervention village ¹¹
(1)	(2)	(3)	(4)	(5)	(6)	(7) ¹²
	Durga Chowmuhani	Durga Chowmuhani	Dhalajhari	120	<i>Dhalajhari</i>	87
			Sri Rampur	121	<i>Shyamrai cherra</i>	88
				122	<i>Sri Rampur</i>	89
				123	<i>Setrai</i>	90
			Halhali	124	<i>Dhanchandra</i>	91
				125	Halhali	
				126	<i>Bilashcherra</i>	92
			Sri Rampur	127	Durai Shibbari	
				128	Kalachari	
				129	Manik Bhandar	