Capacity Building Plan Report (Revised version)

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1. Background

This Capacity Building Plan Report sets out a comprehensive and adaptive approach to strengthening the enabling environment for green road practices in Tajikistan. It builds directly on the findings of the Enabling Framework Report prepared under the Green Roads Design Advisory, which concluded that the enabling environment for green roads in Tajikistan is currently at an **"In Development"** stage. While the national policy context is supportive and several pilot or project-based initiatives exist, green road practices are not yet systematically embedded in road-sector planning, design, procurement, construction, supervision, maintenance, financing and monitoring. The proposed approach therefore moves beyond conventional training and emphasizes participatory learning, learning-by-doing, peer exchange and institutionalization, ensuring that capacity development is not a one-off event but a continuous process supporting long-term mainstreaming and sustainability.

To help stakeholders visualize the logic and intended impact of this approach, the report includes a Results Chain / Theory of Change diagram, mapping the pathway from capacity development activities to improved institutional performance and, ultimately, to more resilient and sustainable roads and landscapes.

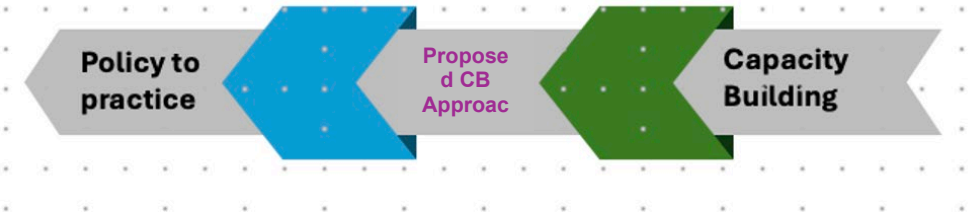

Figure 1: Overall integration of capacity building and learning programme.

This revised version strengthens the Capacity Building Plan Report by making the proposed capacity development plan more practical and implementation-oriented. It includes clearer identification of target groups, an updated three-level training structure, indicative training modules and topics, proposed training schedules, sample training materials, an on-the-job training and practical application plan, an indicative activity matrix, a monitoring and evaluation framework, and an indicative cost framework linked to future financing and institutionalization. The annexes provide examples of training materials, knowledge products and detailed proposed training schedules that can be adapted during implementation.

The capacity building programme is structured around three complementary training levels:

Level 1: Policy and leadership training – for senior decision-makers and institutional leaders. This level will provide short strategic orientation, such as one-day policy workshops, focused on the value of green roads, climate resilience, financing, institutional coordination and the role of the Green Corridor Guideline. The policy leaders are expected to drive the policy process and endorse the changes in the enabling framework, as identified in Enabling Framework document that is part of the Green Roads Advisory,

Level 2: Technical and mid-level training targets engineering and technical staff at the Ministry of Transport of the Republic of Tajikistan (MoT) and other organisations managing roads. Its objective is to enable staff to **plan, introduce, implement, supervise and maintain green road measures**. The proposed modality is a three-day technical short course, extendable to five days where field visits and design clinics are included. The programme should train approximately **5–10% of the relevant MoT technical cadre**, based on the MoT staffing information, and an equivalent number of staff from other road-managing organisations. In addition, a half-day or one-day green roads module should be integrated into the regular certified in-house training of the State Institution “Center for Advanced Training of Road and Transportation Workers,” established in 2025 under the MoT.

Level 3: Field and practical training targets field workers, district road staff, maintenance teams, contractors, site supervisors, local administrations, jamoats and other field-level actors. Its objective is to develop a cadre of practical specialists in **roadside tree planting, bio-engineering and Green Roads for Water**. The programme should aim to have at least **two trained specialist field workers in each district/city**. The proposed modality is a three-week practical on-site course, covering tree species selection, nursery development, tree transport, tree planting, watering, maintenance, protection from livestock, business models, monitoring, bio-engineering techniques, drainage inspection and road-water management.

The Green Corridor Guideline developed under the project should serve as the main technical reference for preparing future training materials. These may include presentations, trainer notes, participant handouts, design exercises, field checklists, supervision forms, maintenance templates, instruction folders and pre-/post-training tests. Training materials should also make use of relevant knowledge products from the Roads for Water platform, including the project page on green roads in Tajikistan. Detailed curricula and full training packages should be developed during the implementation phase, once participants, training locations, delivery language, trainers and budget are confirmed.

At the same time, this deliverable remains a capacity development plan prepared under Task 2 of the assignment. Some elements — such as full curricula, complete training materials for all modules, confirmed implementation budgets, formal establishment of

professional education programmes and preparation of climate finance applications — depend on future implementation decisions, confirmed participant lists, institutional approvals, training locations and available financing. These elements are therefore presented in this report at an indicative or proposal level, where appropriate.

The report also sets out indicative implementation modalities, including the study tour and policy design workshop, technical short courses, field demonstrations, design clinics, peer learning, on-the-job coaching and training-of-trainers. The proposed implementation matrix links these activities to the three training levels and identifies expected outputs and indicative performance indicators.

A detailed proposed training schedule for each of the three training levels is provided in **Annex B**. Annex B builds on the three-level structure presented in **Table 4** and shows how MoT/PIURR, the State Institution “Center for Advanced Training of Road and Transportation Workers,” and partner institutions can organize the policy, technical and field-level trainings in practice. The report also includes an indicative cost framework for implementing the proposed capacity building programme, including training delivery, Training-of-Trainers, preparation of training materials, promotion materials, instruction folders, banners, field demonstration materials, Roads for Water knowledge-sharing materials, monitoring and documentation.

2. Introduction

This Capacity Building Plan is the second core deliverable under Task 2 of the **Green Roads Design Advisory Project** and is directly informed by the findings of the *Enabling Environment Report*. The Enabling Environment Report provided a comprehensive assessment of Tajikistan's current policy, institutional, and capacity landscape for green road practices, using the ADB Enabling Factors Maturity Assessment Tool. It identified strengths, gaps, and barriers across key enabling factors – such as policy frameworks, institutional mandates, financing, technical standards, and stakeholder coordination – that determine the readiness of the road sector to mainstream green road solutions.

The maturity assessment highlighted several key gaps that currently limit the adoption of green roads in the country. These include fragmented responsibilities, gaps in technical and environmental standards, and unclear legal frameworks. Green criteria are not yet consistently integrated into procurement, and funding mechanisms remain limited. Capacity also varies across government and community levels. In addition, coordination between agencies and with local communities can be improved, and there are still limited mechanisms for learning and adaptation.

The capacity building priorities proposed in this report are therefore directly derived from the institutional, technical and operational gaps identified in the Enabling Environment Report. In particular, the capacity development plan responds to gaps related to fragmented institutional responsibilities, limited integration of green road criteria into planning and procurement, insufficient practical experience with nature-based and green road measures, current maintenance arrangements, limited institutionalized training opportunities and the need for more systematic monitoring of capacity development outcomes.

Table 1: Link between Enabling Environment Findings and Capacity Building Responses.

Key finding from the Enabling Environment Report	Capacity implication	Response in this Capacity Building Plan Report
Institutional responsibilities for green road planning, implementation and maintenance are fragmented.	Staff require clearer understanding of roles, coordination needs and implementation responsibilities.	The revised report adds a target group matrix, activity matrix and institutional capacity building actions.
Green road criteria are not yet systematically integrated into planning, design, procurement, supervision and maintenance.	Technical, procurement and supervision staff need practical tools and skills to apply green criteria across the road project cycle.	The report proposes training modules on green road design, procurement, construction supervision, maintenance and monitoring. The Green Corridor Guideline can be used for developing such modules.

Practical experience with bio-engineering, roadside planting, drainage improvement and other nature-based measures remains limited.	Regional and provincial/provincial staff, contractors and supervisors require hands-on and field-based training.	The report includes an on-the-job training plan, field coaching and demonstration-based learning. The Green Corridor Guideline can be used for developing such modules.
Maintenance arrangements for green road measures are not yet sufficiently defined.	Regional and provincial/departments, district maintenance units and local authorities require practical maintenance guidance.	The programme includes maintenance training, community maintenance elements and monitoring indicators.
Professional training on green roads is not yet institutionalized in Tajikistan.	A longer-term mechanism is needed to sustain skills beyond the project.	The report proposes an indicative professional education / continuing professional development programme.
Monitoring of capacity development outcomes is limited.	The programme requires clearer indicators, baselines, targets and verification sources.	The revised report adds an indicative M&E matrix with baseline and target indicators.
Future climate finance may be needed to support implementation.	Capacity building activities need to be presented in a format that can support future financing proposals.	The report includes an indicative cost framework and explains how it can support future climate finance applications.

Overall, the enabling environment in Tajikistan is at an “in development” stage. While awareness of green road approaches is growing and pilot initiatives are underway, their integration into planning, design, procurement, and maintenance remains still limited. These findings point to the need for a structured and practical capacity building approach that supports a shift from isolated interventions to more systematic and scaled implementation.

Linking to the Green Roads Toolkit

To guide this transition, the Capacity Building Plan is aligned with the Green Roads Toolkit, which provides a structured framework of themes and practices for planning, designing, and implementing green roads. The Toolkit brings together key dimensions – such as climate resilience, water management, decarbonization, biodiversity, and inclusive growth – into an integrated approach to sustainable road development.

The table below translates these themes into the Tajikistan context by indicating their relative priority and highlighting the practices most relevant for capacity development and implementation. This creates a clear bridge between the diagnostic findings of the maturity assessment and the practical actions proposed in this plan. The Toolkit therefore

serves not only as a technical reference, but also as a guiding framework for structuring training, stakeholder engagement, and on-the-ground application.

Table 2: Green Roads Themes, Priorities, and Practices.

Green roads theme	Priority	Specific practice
Decarbonization	Moderate	• Roadside tree planting • Introduction of EVs and EV charging station • Low-carbon material and construction methods
Climate resilience	High	• Bio-engineering in critical unstable slope areas and high impact areas (i.e. Roghun Reservoir Catchment)
Water and land management	High	• Water retention and water harvesting in drought prone areas • Safe disposal/ drainage (especially in vulnerable catchments), beneficial use • Integration with local water management
Pollution control	Moderate	• Improved pollution monitoring and mitigation measures
Quality of life	High	• Overall tree planting and management strategy • Optimizing multiple functions and sustainable management • Create attractive places
Biodiversity	Moderate/high	• Design of underpasses/ culverts • Low-cost biodiversity measures
Disaster risk reduction	Moderate/high	• Bio-engineering for slope stabilization
Safe sourcing	Moderate	• Sustainable sourcing of construction and planting materials
Inclusive growth	Moderate/ high	• Creating local labor opportunities and business prospects for local construction industry

To ensure that capacity building goes beyond awareness and leads to practical implementation, each Green Roads theme is translated into a set of core technical and operational skills that stakeholders are expected to develop. These skills will be systematically integrated across all training modules, field activities, and institutional processes.

Key skill areas include:

- **Bio-engineering and slope stabilization**: selection of plant species, design of vegetative structures, supervision of implementation and maintenance in steep and erosion-prone areas.
- **Water management**: design of roadside drainage systems, selection, implementation and maintenance of water harvesting techniques, and integration with local irrigation systems in drought-prone areas.
- **Green procurement**: development of tender documents including environmental criteria, lifecycle costing, and supervision of contractor compliance.

- **Community engagement**: facilitation of participatory planning at jamoat level, establishment of community-based maintenance groups.
- **Sustainable materials sourcing**: identification and use of locally available, environmentally sustainable construction and planting materials.

These skills form the backbone of the capacity development programme and will be applied through hands-on training, demonstration sites, and on-the-job coaching.

Purpose of the Capacity Building Plan

Building on the identified gaps and priorities, this Capacity Building Plan sets out a practical roadmap for strengthening institutional, technical, and community capacities across the road sector. It is designed to support stakeholders at national, policy, technical and field implementation levels in planning, implementing, and maintaining green road solutions.

The plan places strong emphasis on participatory and iterative learning processes, including co-design with stakeholders, hands-on application, and continuous feedback and adaptation. In doing so, it connects directly to the capacity development approach and methodology presented in the following chapters.

By combining context-specific insights with the structured framework of the Green Roads Toolkit, this plan supports the gradual mainstreaming of green road practices and contributes to more resilient infrastructure and sustainable development outcomes in Tajikistan.

Since 2025, Tajikistan has had a dedicated State Institution “Center for Advanced Training of Road and Transportation Workers” under the MoT. This institution is responsible for advanced training and certification of road and transportation workers. As all road and transportation workers are required to complete a one-week training course every four years and receive a certificate, the Center provides an important national platform for institutionalizing green road capacity building. The Capacity Building Plan therefore proposes that the Center should play a leading role in organizing and delivering green road training, in coordination with MoT, PIURR, technical agencies, universities and development partners.

3. Capacity Development Approach

To avoid an overly fragmented training programme, the capacity development approach is organized around three levels of training: policy level, technical/mid-level and field/practical level. Policy-level training will focus on awareness, decision-making, financing and institutional coordination. Technical and mid-level training will focus on planning, design, procurement, supervision and maintenance. Field-level training will focus on practical implementation, inspection, operation and maintenance of green road measures. This three-level structure provides the overall framework for the capacity building programme and helps ensure that the “big picture” remains clear.

The capacity building approach outlined in this plan is based on the principle that sustainable change is achieved when individuals and institutions are empowered to learn, adapt, and lead the process themselves. The capacity development should be participatory and demand-driven, with all activities designed in close collaboration with stakeholders to address real needs and priorities. This ensures that capacity development is relevant, owned, and motivating for those involved.

A key feature of the approach is the emphasis on learning-by-doing. Training will not be limited to classroom sessions but will integrate practical, field-based exercises, demonstration projects, and on-the-job coaching. This experiential learning connects new concepts to real-world challenges, building practical skills and confidence.

Peer-to-peer learning is another central element. Structured opportunities for knowledge exchange – such as exchange visits, joint problem-solving sessions, and communities of practice – should be built into the programme. This enables knowledge to flow horizontally across institutions and regions, fostering innovation and shared responsibility.

The approach is also designed to be continuous and adaptive. Regular feedback, reflection, and review sessions will be held, allowing the programme to evolve in response to changing needs and lessons learned. Capacity building will be embedded within organizational processes, job descriptions, induction and refresher programmes, and performance reviews, ensuring that knowledge and skills are retained and renewed over time.

Inclusivity and equity are prioritized throughout, with a commitment to ensuring that women, youth, and underrepresented groups are enabled and encouraged to participate, both as learners and as leaders.

To illustrate this process, a Capacity Development Cycle diagram (Figure 2) is presented below outlining the iterative stages of assessment, planning, implementation, reflection, and adaptation.

To ensure that the approach leads to practical application, each training activity will be linked to a concrete output. These outputs may include completed field checklists, draft design notes, sample procurement clauses, maintenance plans, monitoring forms, field inspection reports or short action plans prepared by participants. This output-oriented approach will help ensure that capacity building goes beyond awareness raising and supports measurable improvements in day-to-day institutional and technical practice.

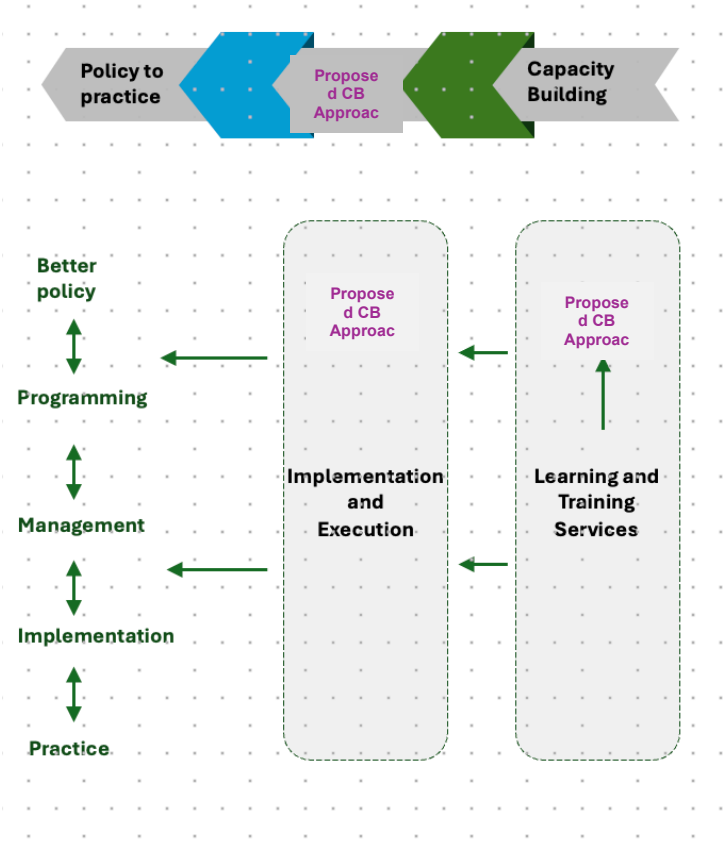

Figure 2: Capacity Development Cycle diagram.

4. Methodology

The methodology for this Capacity Building Plan is grounded in the comprehensive stakeholder analysis and maturity assessment already conducted as part of the Green Roads Design Advisory. These two key assessments provide an evidence-based starting point for all further capacity development activities.

The stakeholder analysis systematically mapped the main actors in Tajikistan's road sector, clarifying their roles, responsibilities, and relationships at national, regional, provincial and district, and community levels. The maturity assessment, carried out using the ADB Enabling Factors Maturity Assessment Tool, evaluated the current status of enabling factors essential for mainstreaming green road practices. Together, these assessments have identified both the strengths and the critical gaps that must be addressed for green road adoption to become systematic and sustainable.

Building on these foundations, the design and roll-out of the Capacity Building Plan will begin with stakeholder co-design workshops at the national, regional, provincial, and district and community levels. The results of the stakeholder analysis and maturity assessment will serve as the starting point for discussion in these workshops. By presenting the mapped institutional landscape and the maturity assessment findings, participants will be able to validate, refine, and prioritize the capacity gaps and opportunities most relevant to their context. This collaborative process ensures that the plan responds directly to the needs and realities of all key actors.

Following these workshops, institutional mapping will be further refined to clarify roles, responsibilities, and identify potential champions for green roads within and across organizations. Participatory needs assessments will also be conducted, ensuring that the voices of local authorities, technical staff, and community members are reflected in the design of training and support activities.

The methodology is iterative: after each cycle of training and practice, structured reflection and feedback sessions will be held to assess progress and adapt the approach as needed. This ensures that capacity development remains relevant, effective, and responsive to emerging challenges.

The finalization of the training programme will require validation of target groups, training priorities, delivery formats and implementation arrangements with MoT/PIURR and relevant technical partners. This is particularly important for confirming the participation of regional, provincial and district road departments, identifying suitable field locations for practical training, agreeing on the scale of training delivery and confirming the institutions that would lead or support future implementation. Accordingly, several elements in this report are presented as indicative planning proposals to be refined during the implementation phase.

5. Overview of the Green Roads Context in Tajikistan

Green road approaches are well aligned with Tajikistan's broader policy framework on climate resilience, sustainable development, and environmental protection. National strategies and plans – such as the **National Strategy for Adaptation to Climate Change (NSACC) until 2030**, the **National Development Strategy (NDS 2030)**, and the **Green Tajikistan Policy** – consistently identify the transport sector as a priority for adaptation and sustainable growth. These policies highlight the importance of integrating ecosystem protection, disaster risk reduction, and long-term planning into road infrastructure development, providing a strong foundation for advancing green roads in the country.

The **NSACC** explicitly recognizes transport as a critical sector for climate adaptation. Its intersectoral themes—such as environment, health, gender, and disaster risk reduction—further reinforce the need for resilient and sustainable road development. Similarly, the **NDS 2030** envisions improved connectivity and a modernized transport network as key drivers of national development. The **Medium-Term Development Program (MTDP) 2021–2025** also emphasizes inclusive, gender-sensitive, and community-based adaptation measures in the sector. In addition, Tajikistan's **Nationally Determined Contribution (NDC)** and its Implementation Plan highlight transport as a priority area for both climate mitigation and adaptation, encouraging investment in cost-effective and nature-based solutions.

Despite this strong policy alignment, practical implementation remains challenging. Tajikistan's road network, comprising more than 14,000 km of public roads and thousands of kilometers of departmental roads, is vital for connectivity and economic growth but highly vulnerable to climate risks. The country's mountainous geography, characterized by steep valleys and fragile landscapes, exposes roads to frequent floods, landslides, and erosion. Many roads have already exceeded their design life and are in poor condition, while rural access remains limited for millions of people.

Beyond the condition of the road network itself, the surrounding environment is also increasingly under pressure. Land degradation, erosion, and poorly managed drainage systems affect nearby farmland, communities, and ecosystems. These challenges also threaten major investments in the region, including critical infrastructure such as the **Roghun reservoir**.

Climate change is expected to further intensify these risks. Rising temperatures, glacial retreat, and more frequent extreme weather events are already affecting road infrastructure and increasing maintenance needs. At the same time, road transport remains an important source of CO_2 emissions and air pollution, highlighting the need for greener, more efficient, and more resilient transport solutions.

The key challenge now is translating Tajikistan's strong policy framework into coordinated action and institutional readiness. Addressing fragmented mandates, strengthening technical standards, and building practical experience with green and nature-based solutions will be essential. In this context, the **Capacity Building Plan** is designed to support national policy objectives while developing the skills, partnerships, and systems needed to gradually mainstream green road approaches across Tajikistan.

These contextual challenges confirm the need for a capacity development programme that combines policy-level awareness, technical training, field-based application, maintenance planning and community engagement, while also recognizing the central role of regional, provincial and district road departments in implementation and long-term maintenance.

6. Key Gaps and Challenges

Despite a supportive policy environment, several key barriers continue to hinder the mainstreaming of green roads in Tajikistan. Institutional responsibilities remain fragmented, with overlapping mandates and weak coordination across ministries and agencies, making it difficult to implement green road practices effectively.

A major gap has been the absence of an adopted and institutionalised **Green Corridor Guideline**. The Green Corridor Guideline developed under this project is therefore an important step toward establishing a consistent technical reference for green road planning, design, implementation and maintenance. Without clear, unified guidance, technical and environmental standards are inconsistently applied, leading to uncertainty and varied practices. The development of a National Green Corridor Guideline – one of the main outputs of this project – will be a critical step toward establishing a consistent and enabling framework.

Other challenges include the limited integration of green criteria in procurement processes, insufficient dedicated funding for green measures, and underdeveloped supply chains for key materials such as seedlings and bio-engineering products. Capacity building has so far focused mainly on engineers, with less attention paid to local authorities, contractors, and communities, resulting in missed opportunities for practical training and peer learning.

Addressing these gaps through targeted capacity development, improved coordination, and the introduction of a national guideline will be essential for supporting the widespread adoption of green roads in Tajikistan.

The capacity building programme presented in the following chapters is structured around these gaps. It focuses on strengthening institutional coordination, technical capacity, green procurement, field implementation, maintenance planning, monitoring and longer-term professional training. Particular attention is given to regional, provincial and district road departments, as they are expected to play a key role in translating green road principles into practical implementation and maintenance at field level.

7. Capacity Building Objectives

The overarching objective of this plan is to strengthen the capacity of individuals, organizations, and systems to plan, design, implement, and sustain green road practices. This includes equipping the MoT, partner agencies, and local authorities with the knowledge, skills, and tools needed for effective action. The plan seeks to institutionalize green road principles in policies, standards, and operational procedures, foster a culture of learning, adaptation, and peer exchange, and promote inclusivity and ownership by ensuring that all relevant stakeholders are actively involved in and benefit from the capacity development process.

In addition, the plan aims to develop **practical, job-specific skills** across stakeholder groups. This includes enabling engineers to apply bio-engineering designs, procurement officers to integrate green criteria into tender documents, local authorities to plan and monitor green road interventions, and communities to participate in maintenance and landscape management. These skills will be continuously reinforced through field application and institutional embedding.

The specific operational objectives of the capacity development plan are to:

- strengthen the ability of national and regional, provincial and district staff to plan, coordinate and supervise green road measures;
- improve the technical capacity of engineers, designers, contractors and supervisors to apply bio-engineering, drainage, roadside planting, biodiversity-sensitive and other green road measures;
- support procurement and contract management staff in integrating green requirements into tender documents, specifications and contracts;
- strengthen the capacity of regional, provincial and district departments and district maintenance units to maintain green road assets after construction;
- promote practical participation of local authorities and communities in maintenance, monitoring and awareness raising;
- provide indicative training modules and sample training tools that can be further developed during implementation; and
- support the gradual institutionalization of green road knowledge through professional training, training-of-trainers and possible cooperation with national education or training institutions.

8. Key Capacity Building Themes, Actions, Expected Outcomes and Core Skills Developed

8.1. Capacity Building Themes

This chapter sets out the main capacity building themes for greening the road sector in Tajikistan, directly aligned with national priorities from the State Programme for Regreening and relevant policy frameworks. Each theme is accompanied by targeted actions and clear expected outcomes to guide implementation and monitoring.

Table 3: Capacity Building Framework for Green Roads – Themes, Gaps, Actions, and Outcomes.

Enabling Factor / Theme	Key Gaps Identified	Targeted Capacity Building Actions (Concrete Examples)	Expected Outcomes	Core Skills Developed
Policy Development	Green road practices not fully integrated; unclear mandates for implementation and maintenance.	• Conduct policy dialogue workshops with MoT, Committee for Environmental Protection, and partners. • Update sector policies to require green roads, referencing the new Green Corridor Guideline. • Clarify mandates and responsibilities via legal review sessions. • Integrate green road principles in MoT's strategic documents.	Green road practices formally embedded in sector policy; clear mandates for implementation and maintenance.	• Drafting **policy notes and amendments** to integrate green road requirements • Translating policy into **clear implementation instructions for MoT departments** • Mapping and formalizing **who is responsible for design, planting, and maintenance** • Running **structured policy dialogue sessions** between MoT and environmental agencies
Strategic Roadmaps & Planning	No comprehensive national/district roadmaps; lack of targets and monitoring.	• Support development of national and district-level green roadmaps, using the Green Corridor Guideline as a reference. • Set clear targets, timelines, and monitoring frameworks. • Facilitate participatory	Actionable roadmaps with targets and monitoring; improved planning and accountability for greening activities.	• Preparing **district-level green road plans** using real road sections • Defining **annual targets (e.g. km of roadside planting, number of slopes treated)** • Using simple tools to **prioritize high-risk sections (erosion, flooding)**

		planning workshops with local authorities and communities.		• Facilitating **planning sessions with oblast engineers and jamoats**
Technical & Environmental Standards	Incomplete/inconsistent standards; lack of Green Corridor Guideline.	• Disseminate, and institutionalize the Green Corridor Guideline. • Organize training sessions for all stakeholders on guideline application. • Create practical checklists and manuals for roadside greening. • Pilot guideline implementation on demonstration sites.	Consistent standards applied; stakeholders trained; improved quality and uniformity in green road design and maintenance.	• Applying the **Green Corridor Guideline to actual design drawings** • Designing **basic bio-engineering measures (e.g. vegetative check dams, slope planting)** • Using **site checklists during construction supervision**
Regulatory Frameworks	Overlapping/unclear legal responsibilities; delays in permitting and enforcement.	• Legal review and clarification of agency roles and responsibilities. • Establish clear accountability through MoUs and inter-agency agreements. • Host workshops on regulatory compliance for contractors and staff.	Clear roles and accountability; reduced delays and improved enforcement.	• Identifying **which permits are needed for roadside planting and slope works** • Coordinating approvals between **MoT, Forestry Agency, and environmental authorities** • Applying **environmental compliance checks during construction** • Documenting and reporting **non-compliance issues on-site**
Sustainable Procurement & Financing	Green criteria rarely in procurement; no dedicated funding or incentives.	• Train procurement staff on integrating green criteria into tenders and contracts. • Develop and institutionalize dedicated funding mechanisms and incentives for	Green criteria mainstreamed in procurement; funding mechanisms established; increased access to green financing.	• Revising **existing tender documents** to include planting requirements and slope stabilization measures among others • Preparing **evaluation criteria that include environmental performance**

		green maintenance. • Use the current project experience on developing a concept note for mobilize funding for sector-wide greening. • Host donor engagement and resource mobilization workshops.		• Reviewing contractor bids for **technical feasibility of green measures** • Preparing **short concept notes for funding (2–3 pages, practical format)**
Capacity Building & Partnerships	Limited training beyond engineers; weak collaboration with NGOs, research institutions, and communities.	• Expand training to all staff levels, local authorities, and communities. • Formalize partnerships with NGOs, universities, and research institutions. • Establish learning networks, peer-to-peer exchanges, and joint demonstration projects. • Organize annual knowledge fairs and exchange visits.	Broad-based capacity across sector; strong partnerships; ongoing learning and innovation.	• Organizing and running **training sessions using real project examples** • Facilitating **peer exchange between oblast engineers (sharing designs and lessons)** • Coordinating with **universities for technical input (e.g. slope design support)** • Documenting lessons from pilots into **simple training materials (manuals, checklists)**
Community Engagement & Awareness	Minimal community awareness/involvement; lack of community-based maintenance and ownership.	• Conduct awareness campaigns (radio, posters, community events) on green roads. • Provide community training on maintenance and monitoring. • Support participatory planning and maintenance pilots. • Develop outreach materials in local languages.	Increased community awareness and ownership; community-based maintenance established; greater social inclusion.	• Organizing **jamoat-level meetings on roadside planting and maintenance** • Setting up **community groups responsible for watering and protection of trees** • Explaining road measures in **simple, non-technical language** • Managing **small community contracts (e.g. planting or maintenance work)**

		• Facilitate community tree planting days and maintenance teams.		
Supply Systems & Materials	Unreliable supply chains for planting/bio-engineering materials; underdeveloped supplier networks.	• Develop supplier networks for eco-friendly materials and seedlings. • Provide training on sourcing and using sustainable materials. • Facilitate linkages between MoT, nurseries, and local suppliers. • Pilot supply chain improvements on demonstration sites.	Reliable supply systems; improved access to quality planting materials;	• Identifying **local nurseries and suppliers for seedlings and materials** • Selecting **suitable plant species for different terrains (dry vs erosion-prone areas)** • Planning **quantities and timing for planting materials per road section** • Coordinating delivery and storage of materials **at site level**

Building on the capacity building themes presented above, the following indicative training module catalogue translates the main capacity gaps into practical training topics. The catalogue is intended to guide future training delivery and to show how different stakeholder groups, including regional, provincial and district road departments, can be supported through targeted training. The modules are presented at planning level, consistent with the scope of this Capacity Building Plan Report. Detailed curricula, trainer manuals, presentations and participant workbooks would need to be developed during the implementation phase, once training dates, participants, delivery language, field locations and available resources are confirmed.

8.2. Training module catalogue

This report identifies the main training levels, target groups and priority curriculum areas for the green roads capacity building programme. The proposed curriculum areas include green road principles, climate resilience, bio-engineering, drainage and water management, roadside vegetation, biodiversity, green procurement, construction supervision, maintenance, monitoring and community engagement. These topics are structured to support the three training levels: policy and leadership training, technical and mid-level training, and field/practical training.

The Green Corridor Guideline will serve as the main technical reference for developing training materials. The Annex provides exemplary training materials and knowledge products that can support this process, including the project knowledge repository, sample

case study boxes based on field learning in Tajikistan, and an indicative PowerPoint training module outline. These materials provide practical examples that can be adapted for future training delivery by MoT/PIURR, the Center for Advanced Training of Road and Transportation Workers and other technical partners. The detailed proposed training schedules are presented in Annex B. These schedules expand the three-level training structure summarized in Table 4 and provide practical guidance on the sequence of topics, learning focus, exercises and outputs for each training level.

9. Implementation Modalities

9.1. Training Delivery Structure

Capacity building will be delivered through a simple three-level training structure. This structure is intended to keep the programme practical and to ensure that each stakeholder group receives the type of training most relevant to its role. Rather than offering the same training to all participants, the programme will differentiate between:

(i) policy and leadership training;
(ii) technical and mid-level training; and
(iii) field and practical training.

This approach ensures that senior decision-makers receive concise strategic orientation, engineers and technical staff receive applied training on design, planning and supervision, and field-level actors receive task-oriented, hands-on training linked to implementation and maintenance.

The three training levels are summarized in Table 4.

Table 4: Proposed Three-Level Training Structure for Green Roads Capacity Building.

Training level	Main target participants	Modality and indicative duration	Main capacity needs	Main content focus	Expected practical outputs
Level 1: Policy and leadership training	Senior policy makers and institutional leaders from MoT, PIURR, Ministry of Finance / Road Fund where relevant, Committee for Environmental Protection, Forestry Agency, Committee for Emergency Situations, Ministry of Land Reclamation and Water Resources, design institutes and regional administrations.	**Study tour and policy design workshop. Indicative** duration: **5–7 day study tour plus 1 day policy design workshop**. The study tour can build on the earlier India study tour programme, adapted to Tajikistan.	Senior decision-makers need to be able to **steer and manage the transition to green roads**, including the policy, institutional, financing and maintenance changes required for scaling up.	Topics should be drawn from the **Enabling Framework Report**, including: national policy alignment; green roads focal function within MoT/PIURR; Green Roads Working Group; roadmaps for roadside tree planting, bio-engineering and Green Roads for Water; integration of green criteria into planning, design, procurement, construction, supervision and maintenance; financing; asset management; and monitoring.	Shared understanding among decision-makers; draft Green Roads Policy Action Note; agreed next steps on institutional coordination, roadmaps, procurement, financing, maintenance and monitoring; senior-level support for institutionalizing the Green Corridor Guideline.
Level 2: Technical and mid-level training	Engineering and technical staff at MoT and other organisations managing roads, including engineers, planners, design institutes, procurement staff, supervision consultants, environmental specialists, forestry specialists, asset management staff and maintenance planners.	**Short technical course of 3 days, extendable to 5 days if field visits and design clinics are included**. In addition, a **half-day or one-day green roads module** should be included in the regular certified training of the State Institution “Center for Advanced Training of Road and Transportation Workers”.	Technical staff need to be able to **plan, introduce, implement, supervise and maintain green road measures** as part of normal road-sector procedures. The programme should train **5–10% of the relevant MoT** technical cadre, plus an equivalent number of staff from other road-managing organisations. As reference, the MoT staff table lists **10,928 actual employees across the sector; 5–10% of the full workforce would equal approximately 550–1,090 staff**, but the final number should be based on the relevant technical/engineering cadre.	Introduction to green roads and global practice; use of the Green Corridor Guideline; basics of **roadside tree** and shrub planting; basics of **bio-engineering**; basics of Green Roads for Water / **road-water management**; use of checklists from the Guideline; identifying opportunities for retrofitting; preparing priority plans; and integrating green measures into drawings, BoQs, specifications, procurement, supervision, taking-over, maintenance and asset management.	Completed site screening checklists; draft roadside planting plans; bio-engineering concept notes; Green Roads for Water opportunity notes; marked-up drawings; sample procurement clauses; supervision checklists; maintenance templates; and priority plans for retrofitting and asset management.

Level 3: Field and practical training	Field workers, district road staff, maintenance teams, contractors, site supervisors, forestry field staff, local administrations, jamoats, community groups and other actors directly involved in implementation and routine maintenance.	**Three-week practical on-site course**, delivered at demonstration road sections and field training locations. Indicative duration: **3 weeks / approximately 15 training days.**	Field workers need practical skills to implement, inspect, maintain and report on green road measures. The programme should develop a cadre of field specialists in **roadside tree planting, bio-engineering and Green Roads for Water**, aiming for at least **two trained specialist field workers in each district**, drawn from MoT and other road-managing organisations.	Practical training on: tree species selection; nursery development; tree transport; tree planting; watering; protection from livestock; maintenance; business models; survival monitoring; bio-engineering techniques; slope stabilization; drainage inspection; safe runoff disposal; water harvesting; sediment traps; swales; infiltration trenches; and routine maintenance of Green Roads for Water measures.	Trained district-level field specialists; completed field checklists; demonstration tree planting; demonstration bio-engineering works; drainage inspection forms; simple maintenance schedules; photo documentation; and district-level field action plans.

Table 4 provides the overall training structure for the three target levels. The detailed proposed schedules for each level are provided in Annex B. Annex B is intended as a practical planning tool for MoT/PIURR, the Center for Advanced Training of Road and Transportation Workers and partner institutions when organizing the study tour, policy design workshop, technical short course and field-level practical training.

Specialist topics, such as green procurement, sustainable financing, contract management and monitoring, should be incorporated mainly into Level 2 as targeted modules or add-on sessions. These topics are particularly relevant for procurement staff, financial divisions, contract managers, engineers and supervision consultants. Where needed, selected elements may also be introduced at Level 1 for strategic decision-making or at Level 3 for practical implementation

The State Institution **"Center for Advanced Training of Road and Transportation Workers"** should be considered the main national platform for organizing and institutionalizing these trainings. Green road modules can be integrated into the Center's regular one-week certified training courses for road and transportation workers, which are required every four years. The Center can also support the preparation of training materials, certification arrangements and future training-of-trainers activities, in coordination with MoT, PIURR, technical agencies, universities and development partners.

9.2. Organizing the capacity building programme

On-the-job training will be used mainly for the field/practical level. It will target maintenance teams, contractors, site supervisors, district engineers and local implementation staff who are directly involved in construction, inspection and maintenance of green road measures.

The purpose of on-the-job training is to translate classroom learning into practical field application. It may include site walks, field demonstrations, inspection exercises, drainage checks, tree planting supervision, slope stabilization demonstrations and preparation of simple maintenance checklists.

Table 5: On-the-Job Training and Practical Application Plan.

Practical training package	Main participants	Main field tasks	Evidence of completion
Design and supervision application	Engineers, design institutes, supervision consultants	Apply green road principles to selected road sections; review drawings; use supervision checklists	Design note, marked-up drawing or completed checklist

Field implementation coaching	Contractors, site supervisors, regional/district engineers, maintenance teams	Demonstrate bio-engineering, drainage improvement, tree planting and erosion control	Site photos, field checklist, short site report
Maintenance and community follow-up	Maintenance teams, local authorities, jamoats, community groups	Prepare simple maintenance schedules for drainage, vegetation and slope protection	Maintenance plan or reporting form

9.3. Roles and Responsibilities

The MoT will provide overall policy direction and coordination for the capacity building programme. PIURR will support implementation within the framework of the Green Corridor Demonstration Project and related project activities.

The State Institution “Center for Advanced Training of Road and Transportation Workers” should take the lead in organizing and institutionalizing green road training. As the national body responsible for advanced training and certification of road and transportation workers, the Center is well placed to integrate green road modules into its regular one-week training programme, which workers are required to complete every four years.

Regional, provincial and district road departments will be the main participants in technical and field-level training and will be responsible for applying the training in planning, supervision, maintenance and reporting.

The Forestry Agency and the Committee for Environmental Protection will provide technical inputs on tree planting, species selection, biodiversity, environmental compliance and ecosystem-based measures.

Universities, technical institutes, consultants and NGOs may support the preparation of training materials, technical sessions, training-of-trainers, field demonstrations and community-level activities.

9.4. Indicative Activity and Implementation Matrix

Implementation will be phased over four main periods:

- **Phase 1**: Preparation and institutional alignment, including confirmation of training needs, institutional roles and training materials.
- **Phase 2**: Initial policy and technical training, including the Level 1 policy orientation/study tour and Level 2 technical courses.
- **Phase 3**: Field application and practical training, including demonstrations, site coaching, maintenance exercises and community-level activities.

- **Phase 4**: Institutionalisation and scaling up, including integration into certified training, training-of-trainers, updating of materials and links to future financing.

Implementation will be phased, but the timing should remain flexible and depend on available financing, confirmed participants, training locations and agreement between MoT, PIURR and the Center for Advanced Training. The phased timeline is further detailed in the indicative activity matrix below. The matrix identifies the main capacity building activities, target groups, indicative timing, proposed lead and supporting organisations, expected results and performance indicators. The matrix is intended to guide future implementation planning and does not constitute a binding implementation schedule

Table 6: Phased timeline.

Phase	Indicative timing / duration after financing and institutional approval	Main activities	Main target group	Lead/support
Phase 1: Preparation and institutional alignment	Months 1–2; approximately 4–8 weeks	Confirm training needs, agree institutional roles, adapt Green Corridor Guideline into training materials	MoT, PIURR, Center for Advanced Training, technical partners	MoT/PIURR and Center
Phase 2: Initial policy and technical training	Months 3–6; Level 1 study tour 5–7 days plus 1-day policy workshop; Level 2 courses 3 days per cohort, extendable to 5 days	Deliver policy orientation and technical courses	Policy-makers, engineers, planners, procurement staff	Center, MoT/PIURR, consultants
Phase 3: Field application and practical training	Months 5–12; Level 3 training approximately 3 weeks per cohort; field coaching 1–3 days per site	Conduct demonstrations, site coaching, maintenance exercises and community training	Field staff, contractors, maintenance teams, local authorities	Regional road departments, Center, consultants
Phase 4: Institutionalization and scaling up	Months 10–18; continuing through regular training cycles	Integrate modules into certified training, train trainers, update materials, link to future financing	Center, MoT, universities, technical agencies	Center and MoT

The plan employs a blend of learning modalities, including workshops, field visits, digital modules, peer exchange, and on-the-job coaching. All training includes practical, hands-on components, with an emphasis on learning-by-doing. Peer-to-peer approaches such as exchange visits, study tours, and joint problem-solving sessions are prioritized. Training modules will be embedded in induction, refresher, and promotion processes to ensure institutionalization and sustainability. Gender and social inclusion criteria will be applied to all activities to promote equity and diversity.

The State Institution “Center for Advanced Training of Road and Transportation Workers” should play a central role in organizing and institutionalizing the training programme in close collaboration with MoT, ensuring alignment with national policy and strategic objectives. The MoT should convene and chair a Green Roads Working Group, which would meet periodically to review progress, resolve bottlenecks and facilitate cross-ministerial coordination. Key partners – including the Forestry Agency, Committee for Environmental Protection, Ministry of Finance, district and local authorities, ADB, project consultants NGOs, and universities – will each have clearly defined roles in leading, supporting, or delivering specific training activities, peer exchanges, or demonstration pilots. This shared leadership model will help institutionalize capacity development and ensure broad ownership and sustainability.

The table below provides a summarized implementation framework. More detailed activity planning, including dates, training locations, participant numbers, budgets and responsibilities, should be confirmed during the implementation phase by MoT/PIURR, the Center for Advanced Training and relevant partner institutions. The three-level structure allows the programme to remain focused while still covering policy, technical and field-level capacity needs.

Table 7: Indicative Capacity Building Activity and Implementation Matrix.

Phase / activity	Indicative timing / duration	Training level	Main target participants	Proposed lead / support	Expected output	Indicative performance indicator
1. Preparation and institutional alignment	Months 1–2; 4–8 weeks	All levels	MoT, PIURR, Center for Advanced Training, technical agencies, universities, consultants	MoT/PIURR with Center for Advanced Training	Training priorities, roles and delivery approach confirmed	Training needs validated; target groups and institutional roles agreed
2. Development of training materials based on the Green Corridor Guideline	Months 1–3; 4–8 weeks preparation, followed by updates during implementation	All levels	Future trainers, Center for Advanced Training, MoT/PIURR technical staff, consultants	Center for Advanced Training with MoT/PIURR and consultants	Draft training materials prepared	Training outline, presentations, handouts, checklists or exercises prepared
3. Policy and leadership orientation	Months 3–4; 5–7 day study tour plus 1-day policy design workshop, or shorter national orientation if budget is limited	**Level 1: Policy and leadership training**	Senior decision-makers from MoT, PIURR, Ministry of Finance, CEP and other relevant institutions	MoT/PIURR with Center for Advanced Training and consultants	Shared understanding of green road principles, financing needs and institutional coordination. Delivered according to the indicative Level 1 schedule in Annex B.	One-day orientation or policy dialogue delivered; attendance list and short workshop note prepared
4. Technical and mid-level training	Months 4–12; 3 days per cohort, extendable to 5 days with field visit/design clinic	**Level 2: Technical and mid-level training**	Engineers, planners, procurement staff, design institutes, supervision consultants, environmental and forestry specialists	Center for Advanced Training with MoT technical departments, PIURR, Forestry Agency, CEP and consultants	Technical staff able to apply green road principles in planning, design, procurement, supervision and maintenance planning. Delivered according to the indicative Level 2 schedule in Annex B.	Technical course delivered; practical exercises, design notes, checklists or pre-/post-test results completed
5. Design clinics and application to real road sections	Months 5–12; 1–2 days per clinic or attached to optional Days 4–5 of Level 2 training	**Level 2: Technical and mid-level training**	Engineers, planners, design institutes and supervision consultants	MoT/PIURR with Center for Advanced Training and consultants	Green road concepts applied to selected road sections	Design note, technical checklist, marked-up drawing or draft improvement proposal prepared

6. Field demonstrations and on-the-job training	Months 5–15; approximately 3 weeks per Level 3 cohort plus follow-up site coaching	**Level 3: Field and practical training**	Maintenance teams, contractors, site supervisors, district engineers and field-level personnel	Center for Advanced Training with MoT/PIURR, road departments, supervision consultants and contractors	Field staff able to implement and maintain green road measures correctly. Delivered according to the indicative Level 3 schedule in Annex B.	Field demonstration or site coaching completed; photos, attendance list and inspection/maintenance checklist prepared
7. Community-related maintenance and awareness	Months 6–15; half-day to 1-day sessions, linked to Level 3 field training	**Level 3: Field and practical training**	Local authorities, jamoats, community groups and local maintenance actors	Local authorities with support from Center for Advanced Training, NGOs and road departments	Improved local understanding of roadside planting, watering, protection and maintenance	Community session delivered; basic maintenance responsibilities discussed or agreed
8. Training-of-trainers and certification preparation	Months 8–12; 5-day ToT course plus preparation of certification materials	All levels, with focus on sustainability	Center for Advanced Training, selected MoT staff, technical specialists and universities	Center for Advanced Training with MoT/PIURR and consultants	National trainer capacity strengthened and green road modules prepared for certification	Trainers identified; draft training-of-trainers package and certification approach prepared
9. Integration into the regular certified training cycle	Months 10–18; integration into the next available regular training cycle	All levels, with focus on institutionalization	Center for Advanced Training, MoT, PIURR and training partners	Center for Advanced Training with MoT	Green road modules integrated into the one-week certified training course for road and transportation workers	Green road module included in training programme; certification system reflects green road content
10. Monitoring, learning and updating of materials	Quarterly during implementation; annual learning review	All levels	MoT, PIURR, Center for Advanced Training, trainees, trainers and development partners	MoT/PIURR with Center for Advanced Training	Training effectiveness monitored and materials updated based on lessons learned	Attendance records, test results, field reports, learning notes and revised training materials prepared

10. Monitoring & Evaluation Framework

The monitoring and evaluation framework will track both participation in capacity building activities and the extent to which training leads to practical application and institutional change. The framework includes baseline values where these can be defined at planning stage. Where baseline values depend on future implementation decisions, the baseline will be established during the initial training needs validation stage, before the start of training delivery. The framework also defines indicative target values, monitoring frequency, responsible parties and verification sources. The targets remain indicative and should be confirmed once the final scale of the programme, financing, participant lists, training locations and implementation calendar are agreed by MoT/PIURR and the State Institution “Center for Advanced Training of Road and Transportation Workers.”

Table 8: Monitoring and Evaluation Framework for the Capacity Building Programme.

Monitoring area	Indicator	Baseline / methodology for establishing baseline	Indicative target	Monitoring frequency	Responsible party	Verification source
Training needs validation	Training needs, target groups and institutional roles confirmed	Baseline: no final validated training programme at start of implementation. Baseline to be confirmed through training needs validation workshop and review of MoT/PIURR staffing information.	Training needs validation completed; target groups, training levels, delivery approach and institutional roles confirmed.	Once, during preparation phase	MoT/PIURR with Center for Advanced Training	Workshop minutes, validated training plan, participant lists
Participation	Number of people trained, disaggregated by gender, region, institution and role	Baseline: 0 participants trained under this capacity building programme before implementation.	Level 1: approx. 15–25 senior participants; Level 2: 5–10% of relevant MoT technical cadre plus equivalent number from other road-managing organisations; Level 3: at least two trained field specialists per district/city, subject to confirmation; ToT: approx. 15–20 trainers.	After each training event and quarterly summary	Center for Advanced Training with MoT/PIURR	Attendance sheets, training reports, participant database
Knowledge improvement	Improvement between pre-training and post-training test results	Baseline: pre-training test score for each participant or cohort.	At least 20% average improvement between pre- and post-test results, or minimum post-test pass score to be defined by the Center.	Before and after each training course	Trainers / Center for Advanced Training	Pre-/post-test results, course reports
Practical training outputs	Number of practical outputs prepared by participants, such as checklists, design notes, planting plans, maintenance forms or action plans	Baseline: 0 outputs prepared under this programme.	Each Level 2 cohort prepares at least one practical technical output; each Level 3 cohort prepares field checklists and district-level field action plans.	After each training course or field exercise	Trainers, Center for Advanced Training, regional/district road departments	Completed exercises, design notes, checklists, field reports

Technical application	Number of road designs, supervision tools, maintenance plans or field reports applying green road principles	Baseline to be established through review of sample existing designs, supervision checklists and maintenance forms during preparation phase.	Green road principles reflected in selected sample designs, supervision checklists, maintenance templates or retrofit proposals prepared during the programme.	Semi-annually during implementation	MoT/PIURR, technical departments, supervision consultants	Design notes, marked-up drawings, checklists, site reports
Procurement integration	Green criteria included in sample tender documents, specifications, BoQs or contract clauses	Baseline: green criteria are not yet systematically integrated into procurement documents; baseline to be confirmed through sample procurement document review.	Sample procurement clauses and/or BoQ items for roadside planting, bio-engineering, drainage protection and maintenance prepared and tested through training exercises.	During Level 2 training and annual review	MoT/PIURR procurement staff, Center for Advanced Training, consultants	Sample tender clauses, BoQ examples, procurement training outputs
Field implementation	Number of field demonstrations or on-the-job coaching sessions completed	Baseline: 0 demonstrations completed under this programme.	Field demonstrations completed for roadside planting, bio-engineering and road-water management, with number to be confirmed according to final training budget and sites.	After each field event and quarterly summary	Regional/district road departments with Center for Advanced Training	Site reports, photographs, field checklists, attendance lists
Maintenance capacity	Number of maintenance schedules, survival monitoring forms or drainage inspection forms prepared and used	Baseline: no standardized green road maintenance tools in regular use; baseline to be confirmed through review of existing maintenance forms.	Maintenance templates prepared and used during Level 3 training; selected districts prepare simple maintenance or monitoring plans.	After Level 3 training and during follow-up visits	District road departments, maintenance teams, local authorities	Maintenance plans, inspection forms, survival monitoring records
Community engagement	Number of local authorities, jamoats or community groups involved in awareness or maintenance activities	Baseline to be established through stakeholder validation and participant registration.	Community/local authority sessions conducted in selected training locations; basic maintenance responsibilities discussed or agreed where relevant.	After each community session and annual summary	Local authorities, district road departments, NGOs where relevant	Attendance lists, meeting notes, maintenance responsibility matrix

Institutionalization	Green road modules integrated into the regular certified training programme of the Center for Advanced Training	Baseline: green road module not yet formally integrated into regular certified training.	Half-day or one-day green road module included in the Center's regular one-week certified training course; ToT package prepared.	Annual review	Center for Advanced Training with MoT	Training curriculum, course programme, certificate records, ToT materials
Climate finance readiness	Capacity building component reflected in the Model Concept Note and/or Climate Finance Guidance Annex	Baseline: costed capacity building component not yet fully cross-referenced in Task 4 outputs.	Costed capacity building activities and budget from this report cross-referenced in the Model Concept Note and Climate Finance Guidance Annex.	Once during finalization of Task 4 outputs	Consultant with MoT/PIURR	Model Concept Note, Climate Finance Guidance Annex, cross-reference table
Learning and adaptation	Review meetings, learning events or updates to training materials conducted	Baseline: no systematic review process established for this programme.	Quarterly progress review during implementation and annual learning review; training materials updated based on lessons learned.	Quarterly and annually	MoT/PIURR with Center for Advanced Training	Meeting minutes, learning notes, updated training materials

11. Sustainability and Next Steps

The long-term sustainability of the capacity building programme will depend on its integration into Tajikistan's existing professional training system for road and transportation workers. The most important institutional opportunity is the State Institution "Center for Advanced Training of Road and Transportation Workers," established in 2025 under the MoT.

The three-level training structure presented in Table 4 provides the basis for institutionalizing the green roads capacity building programme. Annex B further develops this structure into indicative training schedules for each level: senior policy makers, engineering and technical staff, and field workers. Annex B is therefore intended as a practical planning tool for MoT/PIURR, the State Institution "Center for Advanced Training of Road and Transportation Workers," and partner institutions when organizing the study tour, policy design workshop, technical short courses and field-level practical training.

As part of long-term institutionalization, the capacity building programme should support the gradual development of a professional education or continuing professional development programme on green roads in Tajikistan. This would help ensure that knowledge on roadside tree planting, bio-engineering and Green Roads for Water is retained and expanded beyond individual project activities. The training structure in Table 4 and the detailed schedules in Annex B provide a practical starting point for developing repeatable training packages, including presentations, trainer notes, participant handouts, instruction folders, field checklists, supervision forms, maintenance templates and pre-/post-training tests. The proposal below is indicative and would require further discussion and approval by relevant national institutions, universities and/or professional training bodies.

Table 9: Indicative Proposal for a Professional Education Programme on Green Roads in Tajikistan.

Component	Proposed approach
Institutional host	Use the State Institution "Center for Advanced Training of Road and Transportation Workers" as the main national platform for green road training.
Training cycle	Integrate green road modules into the mandatory one-week course required every four years for road and transportation workers.
Link with Table 4 and Annex B	Use Table 4 as the overall three-level structure and Annex B as the basis for detailed training schedules.
Technical reference	Use the Green Corridor Guideline as the main technical reference for training materials.
Training content	Cover the three priority practices identified in the Enabling Framework Report: roadside tree and shrub planting, bio-engineering for slope stabilization, and improved land and water management along roads / Green Roads for Water.
Training-of-trainers	Train selected staff from the Center, MoT, regional road departments, universities and technical agencies to deliver future modules.

Certification	Include green road modules in the certificate-based training system.
Updating mechanism	Update modules based on field experience, monitoring results, lessons from Roghun and Vose, the Roads for Water knowledge platform and future project lessons.

The establishment of a formal professional education programme is beyond the direct scope of this Capacity Building Report, as it would require institutional decisions by relevant national authorities, universities and/or professional training institutions. However, this report provides an indicative structure that can be used as the basis for future curriculum development and institutional discussions. The overall three-level structure is presented in Table 4, while detailed indicative training schedules are provided in Annex B.

The Costed Capacity Building Plan presented in this report has been linked to the Model GCF Concept Note and the Climate Guidance Annex. The Concept Note already includes capacity building as a dedicated project activity under Section C.2, Programme Activity 3: Institutional Capacity Building and Community Engagement. This activity proposes to strengthen the capacity of local governments, district road authorities and maintenance teams through training on green road planning, implementation and maintenance, while also promoting coordination among transport, environment, forestry and water institutions and supporting local employment opportunities during implementation.

This Capacity Building Plan provides the detailed technical and operational basis for that component. In particular, the three-level training structure in Table 4, the implementation matrix in Table 7, the Monitoring and Evaluation Framework in Section 10, the professional education proposal in Section 11, the indicative cost framework in Table 10, and the detailed training schedules in Annex B together define how the capacity building component of the Concept Note can be implemented in practice.

The linkage is also reflected in the financing structure of the Concept Note. Section D.1 of the Concept Note identifies capacity building as one of the uses of GCF resources, alongside climate risk assessments, technical designs, implementation of green road measures, monitoring and project management. The indicative cost framework in Table 10 of this report therefore provides the costed basis for further specifying the capacity building budget during preparation of the full GCF Funding Proposal.

The capacity building activities proposed in this report also respond directly to the institutional and technical barriers identified during this project and reflected in the Concept Note. These include limited institutional capacity and coordination, limited technical experience with green road measures, and the need to ensure long-term maintenance and sustainability after project completion. The proposed training programme, Training-of-Trainers, integration into the State Institution “Center for Advanced Training of Road and Transportation Workers”, and field-level practical training

are intended to reduce these risks and support the long-term sustainability of the proposed GCF investment.

During the next stage of project preparation, the capacity building component in the Concept Note should be further detailed using this report as a reference. In particular, the final GCF Funding Proposal may use this report to define the training activities, implementation schedule, institutional responsibilities, budget lines, indicators, targets and verification sources for the capacity building component.

Indicative Training Budget

The indicative cost framework below has been updated to reflect the three-level training structure in Table 4 and the proposed schedules in Annex B. The estimates remain preliminary planning figures and should be refined once the final participant lists, training locations, trainers, interpretation needs, travel arrangements and demonstration sites are confirmed.

The indicative cost framework below has been updated to reflect the three-level training structure presented in Table 4 and the proposed training schedules in Annex B. The estimates remain preliminary planning figures and should be refined once the final participant lists, training locations, trainers, interpretation needs, travel arrangements and demonstration sites are confirmed.

For planning purposes, the budget takes into account the current staffing scale of the road and transport sector under MoT. The sector includes **11,488 approved positions**, of which **10,928 are currently filled** and **560 are vacant**. The Level 2 technical training is proposed for **5–10% of the relevant technical, engineering, planning, procurement, supervision and maintenance cadre** within this wider workforce. If this percentage were applied to the full number of current MoT employees, it would correspond to approximately **550–1,090 MoT staff**. The final number should be confirmed by MoT/PIURR based on the staff categories most directly involved in planning, designing, implementing, supervising and maintaining roads.

The Level 2 programme should also include technical staff from other organisations managing roads, including agencies and institutions responsible for departmental, local or non-state roads. For budgeting purposes, an equivalent number of participants from these organisations has been assumed.

Table 10 therefore presents two indicative scenarios:

- **Scenario A: 5% training target** — approximately **550 MoT staff** plus an equivalent number from other road-managing organisations, or around **1,100 Level 2 participants** in total.

- **Scenario B: 10% training target** — approximately **1,090 MoT staff** plus an equivalent number from other road-managing organisations, or around **2,180 Level 2 participants** in total.

For Level 3, the budget assumes the development of a practical cadre of field specialists, with a target of at least **two trained field specialists per district/city**. Assuming approximately **68 districts/cities**, this would correspond to around **136 field specialists**, to be confirmed during detailed implementation planning.

Table 10: Indicative Cost Framework for Capacity Building Activities.

Cost item	Indicative assumption	Indicative unit cost	Indicative total cost, USD
Training needs validation and detailed programme design	Confirmation of target groups, participant numbers, training calendar, training locations and adaptation of Annex B schedules into detailed agendas	Lump sum	15,000–20,000
Preparation of training materials	Adaptation of the Green Corridor Guideline into presentations, trainer notes, handouts, checklists, instruction folders, exercises, maintenance forms and pre-/post-tests	Lump sum	25,000–40,000
Level 1 study tour and policy design workshop	Around 10–15 senior participants; 5–7 day study tour plus 1 day policy design workshop	Lump sum	70,000–110,000
Level 2 technical short courses — Scenario A: 5% target	Approx. 1,100 participants in total: 550 MoT staff plus equivalent number from other road-managing organisations; around 44 cohorts of 25 participants; 3 days per cohort	8,000–12,000 per cohort	352,000–528,000
Level 2 technical short courses — Scenario B: 10% target	Approx. 2,180 participants in total: 1,090 MoT staff plus equivalent number from other road-managing organisations; around 88 cohorts of 25 participants; 3 days per cohort	8,000–12,000 per cohort	704,000–1,056,000
Integration into regular certified training course	Preparation and initial delivery of a half-day or one-day green roads module within the regular one-week certified training of the Center for Advanced Training	Lump sum	10,000–15,000
Level 3 practical field-worker training	Around 136 field specialists, based on two trained workers per district/city; around five regional cohorts; three-week / 15-day practical on-site course	35,000–55,000 per cohort	175,000–275,000
Training-of-Trainers	One 5-day ToT course for 15–20 selected trainers from the Center, MoT, regional departments, universities and technical agencies	Lump sum	25,000–40,000
Promotion and outreach materials	Leaflets, short awareness notes, community information materials and visual explainers on roadside tree planting, bio-engineering and Green Roads for Water	Lump sum	15,000–30,000
Instruction folders and participant packs	Practical folders for participants, including checklists, simple drawings, maintenance forms and monitoring templates	Approx. 20–30 per pack	25,000–70,000 depending on final participant numbers

Banners and visual aids	Training banners, laminated field checklists, demonstration boards, posters and site-based visual aids	Lump sum	8,000–15,000
Field demonstration materials	Seedlings, shrubs, grasses, live cuttings, fencing/guards, mulch, basic tools, small water harvesting materials, sediment traps and erosion-control materials	Lump sum	40,000–75,000
Roads for Water knowledge-sharing materials	Adaptation of materials from Roads for Water and the Tajikistan project page; preparation of field notes, photos, case studies and learning products	Lump sum	8,000–15,000
Monitoring, documentation and learning	Attendance records, pre-/post-tests, training reports, field documentation, photos, learning notes, review meetings and updates to training materials	Lump sum	25,000–45,000
Programme coordination and contingency	Coordination, scheduling, communication with institutions and participants, and contingency for logistical adjustments	Lump sum	80,000–120,000 for Scenario A; 120,000–200,000 for Scenario B
Indicative total — Scenario A: 5% Level 2 target	Approx. 1,100 Level 2 participants plus Level 1, Level 3 and ToT		approximately 0.9–1.4 million USD
Indicative total — Scenario B: 10% Level 2 target	Approx. 2,180 Level 2 participants plus Level 1, Level 3 and ToT		approximately 1.25–1.95 million USD

The Level 2 training is the main cost driver because the proposed target is to train 5–10% of the relevant MoT cadre and an equivalent number of staff from other road-managing organisations. If the relevant technical cadre is smaller than the full MoT workforce, the Level 2 budget should be reduced accordingly. The Level 3 training is also a significant cost item because it is practical, site-based and longer in duration. However, it is essential for developing the field capacity needed to implement and maintain roadside tree planting, bio-engineering and Green Roads for Water measures. Costs can be reduced by phasing the programme, using national trainers after the Training-of-Trainers, using government training facilities, and integrating part of the content into the regular certified training programme of the Center for Advanced Training.

The figures above provide an initial basis for discussion and for possible inclusion in future financing proposals. The budget should be refined during the next planning stage using confirmed participant lists, the final definition of the relevant MoT technical cadre, the number of staff to be included from other road-managing organisations, official district coverage, agreed training locations, national trainer availability, interpretation and translation needs, and the final scope of field demonstrations.

In addition, a rapid scan of funding opportunities has identified a range of potential sources – including the Green Climate Fund, Adaptation Fund, GEF, ADB, bilateral donors, and others – that can be pursued to finance ongoing capacity building and

implementation. The indicative budget in Table 10 can be used as a starting point for discussions with these financing sources, while Annex B provides the supporting explanation of the proposed training schedules and delivery approach. The MoT and partners will actively pursue these opportunities, drawing on the project's funding scan and concept note as practical tools for resource mobilization.

The funding sources listed below are potential channels through which the indicative capacity building activities could be further developed and financed. They should be read together with the indicative cost framework above. Identification of funding sources does not replace the preparation of a full funding application, which would require separate institutional decisions, detailed budgeting, formal endorsements and compliance with the procedures of the selected financing mechanism.

Table 11: Overview of Potential Funding Sources for Capacity Building and Green Road Implementation.

Donor / financing window	Possible type of support	Application route / implementing entity	Indicative grant size / modality	Indicative timing and feasibility considerations
Green Climate Fund (GCF) — Readiness & Preparatory Support Programme (RPSP)	**Readiness support** to NDAs/DAEs for institutional capacity, training, direct access strengthening, and project readiness. Ask for a Readiness grant focused on: (a) Ministry capacity building on bio-engineering; (b) training modules + national training Center; (c) mainstreaming green roads into policy and operational manuals. Use the **DAE window** if working through a Direct Access Entity.	Apply via the **National Designated Authority (NDA) / Focal Point** for Tajikistan or via an Accredited Entity/Delivery Partner. Guidance and templates: GCF Readiness pages and DAE Guide. (greenclimate.fund)	Typical RPSP grants vary — often **USD 200k–1.5M** depending on scope (smaller readiness grants are common). Modality = grant to NDA or accredited entity.	Time: **~4–12 months** from drafting to approval if NDA is responsive and you work through an accredited Delivery Partner. **Feasibility: Possible but tight.** (If NDA moves fast and you use an AE/DP, you can obtain readiness support within your 1-year project.) (Readiness Knowledge Bank)
Adaptation Fund — Project Formulation Grant (PFG) / Readiness grants / LLA	**Project Formulation Assistance (PFA/PFG)**: request PFG to prepare a full adaptation project that includes the capacity building component — or request **readiness grants** to a National Implementing Entity (NIE) to strengthen	Apply through the Adaptation Fund's **NIE** (or Accredited Entity) and follow the PFG/PFA templates on AF website. See PFG pages and guidance.	PFG/PFA sizes are modest: **~USD 30k–150k** for formulation; other readiness grants can be	Time: **~3–9 months** for PFG approval and initial funds if an accredited NIE is available and the submission is tied to a concept note. **Feasible within 1-**

	capacity and design. Target the PFG to cover training curricula, institutional strengthening and demonstration training sites.	(adaptation-fund.org)	larger. Modality = grant via NIE/AE.	**year** for capacity building design activities; PFG itself is explicitly for preparation. (adaptation-fund.org)
Global Environment Facility (GEF) — Enabling Activities / Project Preparation Grants (PPG)	**GEF Enabling Activities** (or GEF PPGs) to support national capacity, strategies, technical guidelines, and institutional strengthening. Ask for an enabling activity or a PPG to produce a national training programme, technical manuals on bio-engineering and a capacity-building rollout plan.	Apply through a GEF Implementing Agency (UNDP, UNEP, World Bank, etc.). Search GEF projects & Enabling Activities database; coordinate with UNDP/UNEP country office for Tajikistan. Example: GEF projects for capacity building in Tajikistan exist. (thegef.org)	PPGs / Enabling Activities: **USD 100k–500k** typical (depends on agency and project). Modality = grant via Implementing Agency.	Time: **~6–12 months** to approval for an Enabling Activity/PPG if an Implementing Agency leads the submission. **Possible but may be tight** — depends on agency pipeline and GEF council cycles. (UNFCCC)
Asian Development Bank (ADB) — Technical Assistance / Trust Funds (co-financing)	Since you already have an ADB loan, **request an associated TA/trust-fund** or donor TA (e.g., Spanish TAGF or other donor TA windows) to finance capacity building complementary to the loan: training, institutional strengthening, exchange visits, curriculum development.	Approach your ADB project officer and ask about **Project Preparation TA** or **Trust Fund** (TAGF-SPA / other donor trust funds like Japan/Spain). ADB manages multiple TA trust funds for project preparation and capacity building. (ADB)	TA grants via ADB vary: **USD 100k–2M** depending on scope and donor. Modality = grant, administered by ADB alongside the loan.	Time: **~3–9 months** if ADB agrees to attach a TA/trust fund to the existing loan/project (fastest route because the project is already in ADB). **Highly feasible and recommended** for one-year timeline. (ADB)
EBRD — Technical Cooperation (TC) & regional and provincial	EBRD provides TC grants (technical cooperation) and works with EU grant facilities for project preparation and capacity building in Central Asia. Request TC for institutional	Approach EBRD country office / TC programme for Tajikistan. EBRD often combines loans with TC grants funded by	Typical TC packages: **EUR 50k–500k** depending on donor support;	Time: **~4–12 months** to set up a TC if a donor partner matches funds. **Possible** within 1 year if you identify and align a

grant facilities	strengthening, training modules, or pilot demonstrations.	EU or donor partners. Check EBRD TC pages and Tajikistan country strategy. (EBRD)	modality = TC grant administered by EBRD.	donor co-financer quickly.

The next step would be for MoT/PIURR and relevant partner institutions to confirm the preferred scale of the capacity building programme, the final definition of the relevant MoT technical cadre, the number of staff to be included from other road-managing organisations, official district coverage, possible training locations, implementation responsibilities and financing route. In particular, MoT/PIURR should confirm the target number of Level 2 technical trainees based on the MoT staff table, and the number of Level 3 field trainees based on the objective of having at least two trained specialist field workers in each district. On this basis, the indicative training schedules in Annex B, the activity matrix, the monitoring framework and the cost framework presented in this report can be converted into a detailed implementation programme and budget.

Annex A: Exemplary Training Materials and Knowledge Products for the Capacity Building Programme

A. Purpose of this Annex

This annex provides exemplary training materials and knowledge products that can be used as a starting point for the future capacity building programme on green roads in Tajikistan. It responds to PIURR's request to include training materials or samples of training materials developed under this deliverable.

The materials presented in this annex are not intended to constitute a complete training curriculum. Rather, they provide examples of the type of practical content, case studies, training tools and learning resources that can be further developed during the implementation phase of the capacity building programme. Full training packages, including detailed presentations, trainer notes, participant handouts, exercises, field checklists and pre-/post-training tests, can be prepared once the training participants, delivery language, training locations, implementation schedule and budget are confirmed.

The annex includes three types of exemplary materials:

1. **Knowledge repository and learning platform** developed as part of the project;
2. **Case study boxes** based on project learning and field observations from Tajikistan; and
3. **Indicative PowerPoint training module outline** on the main opportunities and best practices for green roads in Tajikistan.

Together, these materials show how the knowledge generated under the Green Roads Design Advisory Project can be made accessible to PIURR, MoT and other stakeholders for future training, awareness raising and institutional learning.

B. Project Knowledge Repository and Learning Platform

As part of the Green Roads Design Advisory Project, the Consultant has made project-related learning materials, field observations and knowledge products accessible through an online project page:

Towards Green Roads in Tajikistan: https://roadsforwater.org/towards-green-roads-in-tajikistan/

This online page functions as a practical knowledge repository for the project. It is intended to support PIURR and other stakeholders by keeping relevant information,

learning materials and project outputs available beyond the immediate reporting process. The page can be used as a reference point for future training activities and awareness raising on green roads.

The repository may include or link to the following types of materials:

- Project background and objectives;
- Key concepts on green roads and roads for water;
- Learning notes from field visits and project activities;
- Examples of green road opportunities in Tajikistan;
- Relevant blogs and short knowledge articles;
- Visual materials, photographs and illustrations from field work;
- Links to guidelines, tools and related resources;
- Future training materials, presentations and practical checklists.

The online repository can support the proposed capacity building programme in several ways:

Table 12: Possible Uses of the Project Knowledge Repository in Capacity Building.

Use in capacity building	Possible application
Awareness raising	Introductory material for MoT, PIURR, regional/provincial departments and other stakeholders
Training preparation	Background reading for participants before training sessions
Technical training	Source of examples, photographs and case studies for training modules
Peer learning	Platform for sharing field experiences, lessons learned and good practices
Institutional memory	Repository where project learning remains available after project completion
Future training-of-trainers	Reference material for trainers preparing national or regional courses

The intention is that the materials developed under this project remain accessible and usable by PIURR for future training, replication and further development of green road practices in Tajikistan.

C. Use of Field Learning as Training Case Studies

Sample Case Study Box 1: Road-side Forest Belts as Green Road Infrastructure

Background

Road-side vegetation and forest belts are an important part of green road infrastructure. In Tajikistan, tree planting along roads can contribute to several objectives at the same time: improving the road environment, reducing dust and wind effects, stabilizing soils, improving the landscape, supporting biodiversity and creating more comfortable conditions for road users and nearby communities.

Relevance for Green Roads

Road-side forest belts can be considered a nature-based solution when they are properly planned, planted and maintained. They can support climate resilience by reducing erosion, improving microclimate conditions and protecting road embankments or adjacent land. In suitable locations, tree planting can also contribute to carbon sequestration and support national greening objectives.

Key Learning Points

- Road-side tree planting should be planned as part of the road design and maintenance system, not as an isolated landscaping activity.
- Species selection is critical and should consider climate, water availability, soil conditions, altitude, root systems, maintenance needs and safety requirements.
- Planting should be combined with protection measures, such as fencing or guards where livestock grazing or damage is likely.
- Maintenance arrangements are essential, especially watering, replacement of dead seedlings, pruning and protection during the early years.
- Road safety must be considered, including visibility, clear zones, distance from carriageway, and avoiding obstruction of drainage structures.
- Coordination between road authorities, forestry specialists, local authorities and communities is needed for long-term success.

Potential Training Use

This case study can be used in training modules on roadside planting, biodiversity, maintenance planning, community engagement and green road design.

Suggested Group Exercise

Participants are asked to select a road section and prepare a simple roadside planting plan, including:

- suitable planting locations;
- preferred species or species groups;
- water requirements;

- protection measures;
- maintenance responsibilities;
- possible community involvement;
- risks and mitigation measures.

Discussion Questions

1. Where along the road corridor can tree planting provide the greatest benefit?
2. What are the main risks for survival of planted trees?
3. Which institutions should be involved in planning and maintenance?
4. How can local communities benefit from and contribute to roadside forest belts?
5. What should be included in tender documents to ensure good planting quality?

Sample Case Study Box 2: Small Design and Construction Details Can Determine Green Road Performance

Background

Green road measures often depend on careful attention to practical details during design, construction and maintenance. Even when the overall concept is technically sound, poor detailing can reduce effectiveness. Examples include drainage outlets that cause erosion, tree planting without water access, culverts that do not connect properly to natural drainage lines, slope protection without follow-up maintenance, or bio-engineering measures applied without appropriate species selection.

Relevance for Green Roads

In Tajikistan's mountainous and climate-vulnerable road environment, small design and construction details can have major consequences. Roads are exposed to flooding, erosion, landslides, sediment movement, drought and temperature extremes. Green road approaches therefore require careful integration of engineering, hydrology, vegetation, maintenance and local land-use considerations.

Key Learning Points

- Good drainage design is central to road resilience. Water should be safely guided, slowed, spread or reused where possible.
- Culvert inlets and outlets require careful design to avoid erosion and downstream damage.
- Bio-engineering measures must be adapted to local slope conditions, soil type, moisture availability and vegetation growth.
- Tree planting requires adequate spacing, protection, watering and maintenance arrangements.
- Spoil disposal, borrow pits and construction access roads should be managed to avoid erosion and landscape degradation.

- Maintenance teams should be trained to recognize early signs of failure, such as blocked drains, eroding outlets, damaged seedlings or unstable slopes.
- Field checklists can help engineers, supervisors and contractors verify that green road details are properly implemented.

Potential Training Use

This case study can be used in modules on construction supervision, field inspection, drainage, bio-engineering, maintenance and contractor management.

Suggested Field Exercise

During a site visit, participants walk along a selected road section and identify at least five design or maintenance details that affect green road performance. For each issue, participants should note:

- the observed problem or opportunity;
- the likely cause;
- the potential consequence if not addressed;
- a simple corrective action;
- the responsible institution or actor.

Discussion Questions

1. Which small details most often affect road resilience in Tajikistan?
2. How can design drawings better reflect green road requirements?
3. What should supervisors check during construction?
4. Which issues can be solved through routine maintenance?
5. How can field observations be converted into training materials for others?

Exemplary PowerPoint Training Module on the Green Corridor Guideline

(See PDF attached to the email/ Green Corridor Guideline Presentation)

Annex B: Proposed Green Roads Training Programme by Target Group

Table 4 in Section 9.1 of the main report already presents the overall three-level training structure for the Capacity Building Programme. This Annex does not repeat that table. Instead, it provides the more detailed proposed training schedules for each level, so that MoT/PIURR, the State Institution “Center for Advanced Training of Road and Transportation Workers”, and partner institutions can see how each training can be organized in practice.

The schedules are based on the findings of the Enabling Framework Report, which concluded that the enabling environment for green roads in Tajikistan is at an “In Development” stage. The schedules therefore focus on the main changes required to move from pilot activities to systematic implementation: clearer institutional coordination, practical roadmaps, integration of green criteria into the road project cycle, improved procurement and maintenance arrangements, and practical skills in roadside tree planting, bio-engineering, and Green Roads for Water.

Table 13: Relationship with Table 4 in Section 9.1

Training level from Table 4	What Table 4 already explains	What this Annex adds
Level 1: Policy and leadership training	Target participants, general modality, main capacity needs, main content focus and expected practical outputs.	A proposed study tour and policy design workshop schedule for senior decision-makers.
Level 2: Technical and mid-level training	Target participants, indicative duration, main technical focus and expected outputs.	A proposed 3-day technical course schedule, with optional extension to 5 days and a short module for the regular certified training course.
Level 3: Field and practical training	Target participants, practical orientation and expected field outputs.	A proposed 3-week practical on-site training schedule for field workers and district-level implementation staff.

Level 1 training: Senior policy makers and institutional leaders

This level is intended for decision-makers who can authorize, coordinate and finance the transition to green roads. The focus is not technical design in detail, but the institutional and policy measures required to make roadside tree planting, bio-engineering and Green Roads for Water part of regular road-sector practice.

How to organize Level 1 training

- Confirm 15–25 senior participants from MoT/PIURR and key partner institutions.

- Agree whether the study tour will be international, regional or national, depending on budget.
- Prepare a short briefing package summarizing the Enabling Framework Report findings and the Green Corridor Guideline.
- Invite host institutions and field sites that can demonstrate institutional coordination, water-sensitive road management, roadside vegetation, bio-engineering, procurement and maintenance.
- End the programme with a policy design workshop producing a Tajikistan-specific action note.

Table 14: Level 1 training: Senior policy makers and institutional leaders.

Indicative schedule	Main topic	Purpose / learning focus	Expected output / decision point	How to organize
Day 1 – Strategic orientation	Green roads transition and national policy alignment	Introduce green roads as part of the National Strategy for Adaptation to Climate Change, NDS 2030, NDC, MTDP and Green Tajikistan Policy. Present the "In Development" maturity assessment finding.	Shared understanding of why green roads are needed and which enabling gaps must be addressed.	Opening session hosted by MoT/PIURR; use short presentations and discussion based on the Enabling Framework Report.
Day 2 – Institutional framework	Roles, responsibilities and coordination	Discuss the recommended green roads focal function within MoT/PIURR, the Green Roads Working Group, and coordination with forestry, environment, water, emergency, local government and design institutions.	Draft list of institutional decisions required, including focal function and working group arrangements.	Organize exchange with host road/water/environment authorities or national institutions; compare with Tajikistan's proposed coordination mechanism.
Day 3 – Project-cycle integration	From policy to planning, design, procurement and supervision	Show how green criteria can be integrated into planning, design TORs, feasibility studies, drawings, BoQs, specifications, contracts, supervision, taking-over and defects-liability arrangements.	Agreed priority entry points for integrating green criteria into MoT/PIURR procedures.	Use practical examples of project documents, design review checklists, BoQ items and supervision requirements.
Day 4 – Roadside tree planting and green corridors	Roadside tree/shrub planting as green road infrastructure	Discuss targets, species selection, nursery supply, survival rates, irrigation, protection from livestock, commercial models, community involvement and long-term maintenance.	Policy notes on targets, responsibilities, maintenance and nursery/supply arrangements.	Include site visit to roadside vegetation/green corridor example; link to Roghun and Vose lessons.

Day 5 – Bio-engineering and slope stabilization	Nature-based stabilization in sensitive areas	Explain why bio-engineering should become compulsory in sensitive areas, with particular attention to the Roghun Reservoir catchment and sediment control.	Priority action for bio-engineering roadmap and standards.	Include field or case-study session on vegetative slope stabilization and combined grey-green measures.
Day 6 – Green Roads for Water	Road-water management, safe disposal and beneficial use	Discuss roads as part of the hydrological system: hydrological design checks, safe drainage disposal, culvert outlet protection, water harvesting, recharge, erosion prevention and build-back-better maintenance.	Priority actions for compulsory water checks and road-water roadmap.	Use Roads for Water examples and the Tajikistan project page as reference material.
Day 7 – Policy design workshop	Tajikistan Green Roads Policy Action Note	Translate study tour lessons into a practical action note covering focal function, working group, roadmaps, standards, procurement, financing, maintenance and monitoring.	Draft Green Roads Policy Action Note with responsible institutions, next steps and timelines.	Facilitated workshop; participants work in groups and present agreed actions for endorsement/follow-up.

Level 2 training: Engineering and technical staff

This level is intended for technical staff who prepare, review, procure, supervise or maintain road works. The course should enable participants to convert the Green Corridor Guideline and Enabling Framework recommendations into practical designs, specifications, checklists and maintenance plans.

How to organize Level 2 training

- Use MoT staffing table to confirm the relevant MoT cadre and select 5–10% for initial training.
- Invite an equivalent number of technical staff from other organisations managing roads, including local administrations and agencies responsible for departmental/non-state roads.
- Organize the course through the Center for Advanced Training, with MoT/PIURR and technical partners.
- Use a 3-day course as the standard format; extend to 5 days where field exercises or design clinics are possible.
- Prepare participant packs with the Green Corridor Guideline, practical checklists, sample drawings, BoQ examples, procurement clauses and maintenance forms.

Table 15: Level 2 training: Engineering and technical staff.

Indicative schedule	Main topic	Purpose / learning focus	Practical exercise / output	How to organize
Day 1 – Morning	Introduction to green roads and the Tajikistan enabling framework	Present the Green Roads concept, the three priority practices, and the main findings of the Enabling Framework Report.	Participants identify the main green roads issues in their own work area.	Classroom session using Green Corridor Guideline, Enabling Framework findings and Roads for Water examples.
Day 1 – Afternoon	Site screening and prioritization	How to identify opportunities for roadside tree planting, bio-engineering and road-water management during planning and design.	Simple screening of selected road sections; initial priority list for retrofitting or improvement.	Use maps, photos, checklists and examples from Roghun and Vose.
Day 2 – Morning	Roadside tree and shrub planting	Species selection, planting design, spacing, soil preparation, irrigation, protection from livestock, nursery supply, maintenance and survival monitoring.	Draft roadside planting plan for a selected road section.	Joint session with Forestry Agency / nursery specialists; use field photographs and local species examples.
Day 2 – Afternoon	Bio-engineering for slope stabilization	Slope diagnosis, erosion control, live staking, brush layering, vegetative check dams, grasses/shrubs, erosion control blankets and combined grey-green solutions.	Prepare a concept sketch or method statement for a slope stabilization measure.	Technical session with design institute/environmental specialists; include good practice from Tajikistan and comparable mountain countries.
Day 3 – Morning	Green Roads for Water and drainage management	Hydrological design checks, safe disposal, culvert outlet protection, water spreading, swales, infiltration, sediment traps, roadside springs and build-back-better maintenance.	Complete road-water management checklist for a selected road section.	Use Roads for Water materials and practical examples from Roghun and Vose.
Day 3 – Afternoon	Procurement, supervision, maintenance and monitoring	Integration into drawings, BoQs, specifications, tender documents, contractor method statements, supervision checklists, taking-over and defects-liability requirements.	Prepare sample procurement clauses, supervision checklist or maintenance template.	Group work using sample documents; outputs reviewed by trainers.
Optional Day 4	Field exercise	Apply the training on a real road section: drainage, planting, erosion, slope stability and maintenance issues.	Completed field checklist, photos and short site note.	Organize site visit with district road department, local authorities and specialists.

Optional Day 5	Design clinic and action planning	Translate field findings into improved designs, retrofit plans and maintenance actions.	Marked-up drawings, priority plan for retrofitting and asset management, and short action plan.	Facilitated technical clinic; participants work on real cases from their institutions.

Level 3 training: Field workers and local implementation staff

This level is intended for the staff and local actors who will physically implement, inspect and maintain green road measures. The training should be practical, visual and site-based. The target is to develop at least two specialist field workers in each district.

How to organize Level 3 training

- Select demonstration sites where roadside planting, bio-engineering and road-water management can be practiced safely.
- Invite district road workers, maintenance teams, contractors, site supervisors, forestry field staff, local administrations/jamoats and selected community representatives.
- Keep classroom sessions short and use field demonstrations, practical exercises, posters, banners and instruction folders.
- Provide basic tools and materials for demonstrations: seedlings, grasses, live cuttings, mulch, fencing/guards, sediment trap materials, erosion protection materials and inspection forms.
- End each week with a simple field output and each participant should leave with a practical instruction folder.

Table 16: Level 3 training: Field workers and local implementation staff

Indicative schedule	Main topic	Practical training content	Practical output	How to organize
Week 1 – Day 1	Introduction and field safety	Green roads basics, role of field workers, safety on road worksites, use of simple checklists.	Trainees understand course objectives and field safety rules.	Short classroom session followed by site walk.
Week 1 – Day 2	Site selection for roadside planting	Assess soil, water availability, slope, road safety, visibility, drainage, livestock pressure and land-use constraints.	Completed roadside planting site checklist.	Practice on an actual road section.
Week 1 – Day 3	Species selection and nursery development	Selection of suitable trees, shrubs and grasses by altitude, soil, water	Draft species and nursery supply list.	Involve Forestry Agency/nursery staff; where possible visit a nursery.

		availability and function; local nursery planning.		
Week 1 – Day 4	Tree transport, planting and establishment	Seedling quality, transport, root protection, planting pits, soil improvement, mulching, watering and initial care.	Demonstration planting completed.	Hands-on work with seedlings, tools and planting materials.
Week 1 – Day 5	Protection, maintenance and survival monitoring	Fencing/guards, livestock protection, pruning, watering schedules, replacement planting and survival monitoring.	Simple maintenance and survival monitoring form.	Use practical instruction folders and field demonstrations.
Week 2 – Day 1	Understanding erosion and slope instability	Recognize erosion, gullies, unstable slopes, animal tracks, drainage-related failures and early warning signs.	Field diagnosis notes.	Field walk on erosion-prone slope/embankment.
Week 2 – Day 2	Basic bio-engineering techniques	Live staking, brush layering, vegetative check dams, grasses and shrubs, erosion control blankets and woody soil anchors.	Small demonstration plot or practice installation.	Hands-on field demonstration with live materials.
Week 2 – Day 3	Combining vegetation with hard measures	Use vegetation with stone pitching, check structures, drains, slope reshaping and protection of rock structures from undercutting.	Site-specific sketch of combined measure.	Trainer-led demonstration and group practice.
Week 2 – Day 4	Soil and moisture improvement	Demi-lunes, small water harvesting pits, sediment trapping, protection of natural regeneration and improvement of growing conditions.	Small soil/moisture conservation measure installed.	Use Roghun examples on rocky soils and water scarcity.
Week 2 – Day 5	Maintenance of bio-engineering works	Inspection, replacement of failed vegetation, repairing erosion, protecting from grazing and monitoring performance.	Bio-engineering maintenance checklist.	Practical inspection exercise.
Week 3 – Day 1	Drainage inspection	Check side drains, culverts, outlets, sediment accumulation, blockages and erosion risks.	Completed drainage inspection checklist.	Road walk with maintenance team.
Week 3 – Day 2	Safe disposal of road runoff	Avoid concentrated erosive flows; use chutes, spreaders, outlet protection, sediment traps and safe discharge points.	Simple correction plan for a drainage problem.	Hands-on exercise at culvert/outlet.
Week 3 – Day 3	Beneficial use of road water	Swales, infiltration trenches, ponds, borrow pits, recharge areas,	Small road-water opportunity note.	Use Roads for Water examples and Vose/Roghun cases.

		roadside springs and use of runoff for trees/agriculture where safe.		
Week 3 – Day 4	Business models and community maintenance	Nursery business models, community watering, local maintenance groups, responsibilities, reporting and incentives.	Draft local maintenance arrangement or responsibility matrix.	Session with jamoats/local authorities/community groups.
Week 3 – Day 5	Final field assessment and district action plan	Participants inspect a road section and prepare priority maintenance and improvement actions.	District field action plan; photos; completed checklists.	Final practical test and group presentation.