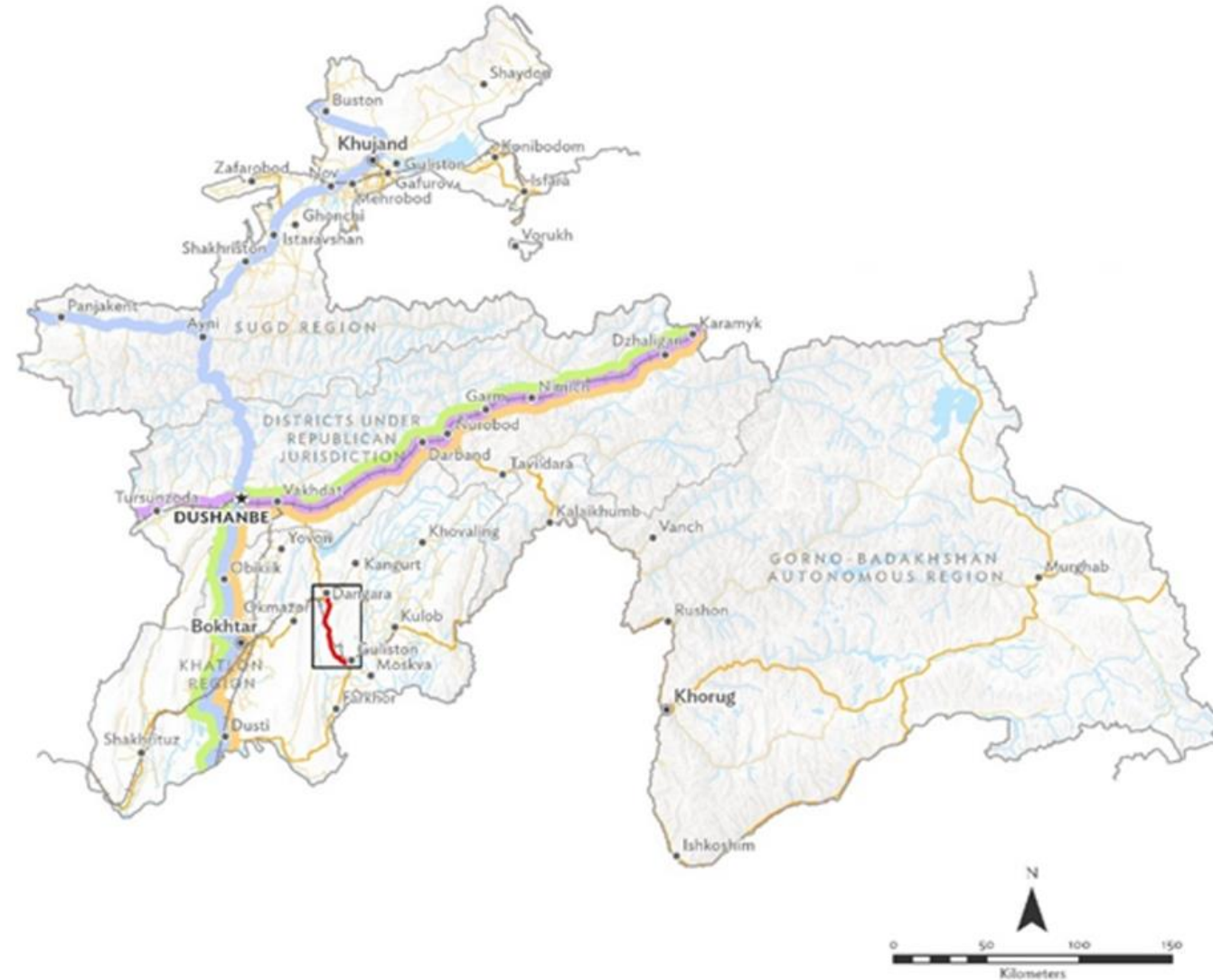


# Pursuing Green Road Opportunities in Tajikistan

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# Existing conditions





# Existing conditions



# Generating green road options

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## Project Level Application

**Step 1:** Select Green Road Theme(s) and project characteristics **(Note: Clear all checkboxes in both Step 1 and 2 before making selections)**

<b>Geography and Climate</b>	Mountainous <input checked="" type="checkbox"/>	Flat <input type="checkbox"/>	Arid <input type="checkbox"/>	Tropical <input type="checkbox"/>	Pacific Islands <input type="checkbox"/>
<b>Standard of road</b>	Low-Volumetral <input type="checkbox"/>	Paved highways <input checked="" type="checkbox"/>	Expressed highways <input type="checkbox"/>	Urban roads <input type="checkbox"/>	
<b>Road project stage</b>	Planning <input type="checkbox"/>	Design <input type="checkbox"/>	Construction/Implementation <input type="checkbox"/>	Maintenance <input type="checkbox"/>	
<b>Degree of impact</b>	Incremental <input type="checkbox"/>	Progressive <input type="checkbox"/>	Transformative <input type="checkbox"/>		

## Step 2:

Select Enabling factor(s) aligning with the current conditions or policies

<input type="checkbox"/> Improved Design Standards	<input type="checkbox"/> Public Awareness and Education
<input type="checkbox"/> Modified Tendering Procedures	<input type="checkbox"/> Collaborative Partnerships
<input checked="" type="checkbox"/> Policy Development	<input type="checkbox"/> Roadmaps for Green Roads
<input type="checkbox"/> Environmental Standards	<input checked="" type="checkbox"/> Supply systems: available Resources and Materials
<input type="checkbox"/> Regulatory Frameworks	<input type="checkbox"/> Application of New Technologies
<input type="checkbox"/> Improved Planning Systems	<input checked="" type="checkbox"/> Connection with other programs

Green Road Practices found

48

GR objectives served: ● Core contributions ○ Secondary contributions

Enabling factors

			1 CO 2	2 Re s	3 W &L	4 Pol	5 Qo L	6 Bio	7 Dis	8 Ma t	9 Inc	10 Con	11 Saf	12 Aff	Improved Design Standards	Modified Tendering Procedures	Policy Development	Environmental Standards	Regulatory Frameworks	Improved Planning Systems	Public Awareness and Education	Collaborative Partnerships	Supply systems: available Resources and Materials	Application of New Technologies	Connection with other programs
Green Road Theme	Intervention Area	No.	Practice Name																						
1. Decarbonization	1.4. Vegetative measures to sequester CO2	1.4.1	Roadside tree planting for sequestering CO2		●	○	○	○	○	○			○		○										
2. Climate Resilience	2.1. Resilient routing/ avoiding vulnerable areas	2.1.1	Moving roads out of channel migration zones			●	○																		
2. Climate Resilience	2.1. Resilient routing/ avoiding vulnerable areas	2.1.2	Avoid unstable and wet areas			●	○				○														
2. Climate Resilience	2.2. Climate resilient road drainage design	2.2.1	Preventing stream diversion at road-stream crossings			●		○			○			○											
2. Climate Resilience	2.2. Climate resilient road drainage design	2.2.2	Avoid using multiple small culverts			●																			
2. Climate Resilience	2.2. Climate resilient road drainage design	2.2.3	Climate resilient culvert design			●	○				○														
2. Climate Resilience	2.2. Climate resilient road drainage design	2.2.4	Road surface drainage to prevent water concentration			●		○			○	○													
2. Climate Resilience	2.3. Increased Stabilization of road sides	2.3.1	Complete ground cover in disturbed areas			●	○																		

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# Identified opportunities

THEME		INTERVENTION	
1	Decarbonization	1.1	<b>Reuse of existing road material</b>
		1.2	LED lighting
		1.3	<b>Roadside tree planting</b>
2	Climate resilience	2.1	<b>Bio-engineering sections in critical sections</b>
		2.2	<b>Rethinking road drainage in critical sections</b>
3	Water management	3.1	Mudflow control from the top
		3.2	Explore water reuse options
4	Controlling pollution	4.1	Safe decommissioning of petrol stations
		4.2	Rethink de-icing strategies
		4.3	Use of bio-accumulator plants in roadside vegetation
5	Quality of life	5.1	Blossom road in roadside tree planting
		5.2	Roadside tree planting
6	Biodiversity	6.1	Additional underpasses
9	Inclusive growth	9.1	<b>Local sourcing plan to optimize engagement of local capabilities</b>



# Marginal cost of agreed measures

**Engineer's estimate:** **\$120 million**

**Cost of additional agreed measures :** **\$424,000 or 0.35%**



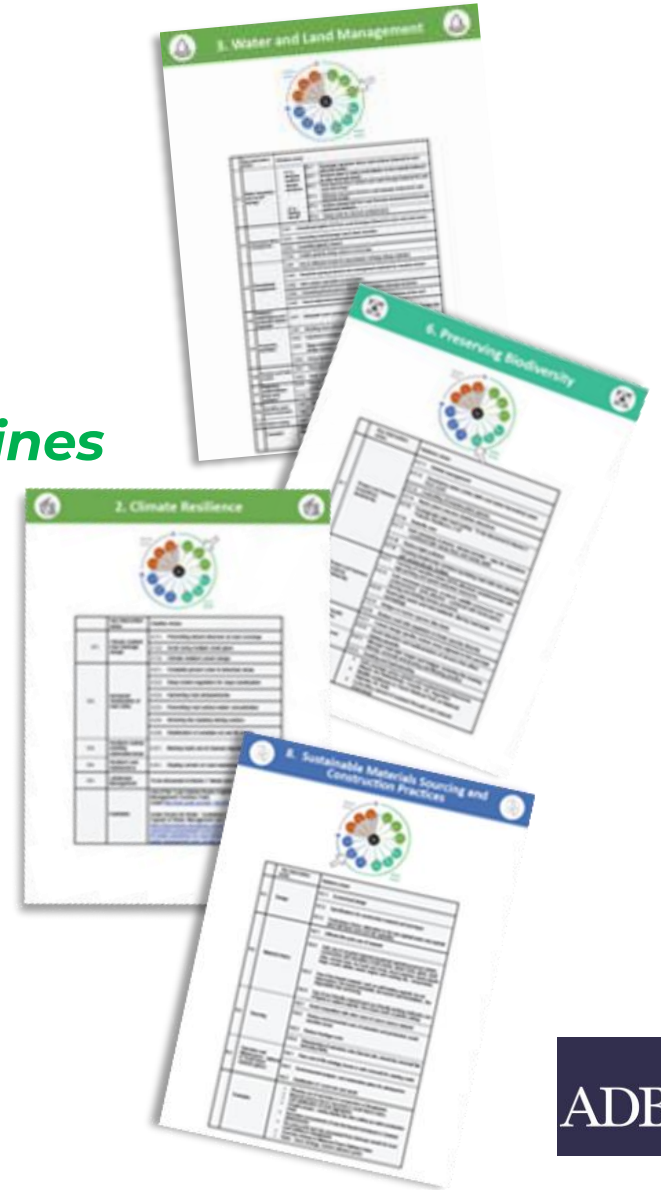
# Next steps

Supervising Engineer & ADB Project Officer to continue option identification

Development of *Tajikistan National Green Road Design Guidelines* for government approval in 2026

ADB development of a web based option generator

150 best practice sheets and increasing



# Thank you!

Lets please keep talking.

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