



Announcement of the winners of the open call for good Green Roads Practices



- Open call:

- To gather examples and learnings on good green roads practices
- To trigger people's thinking on this topic
- All targeted at the common goal of transforming our roads into sustainable, climate-resilient, and eco-positive 'Green Roads'

- Open from 24 July 2023 – 15 September 2023

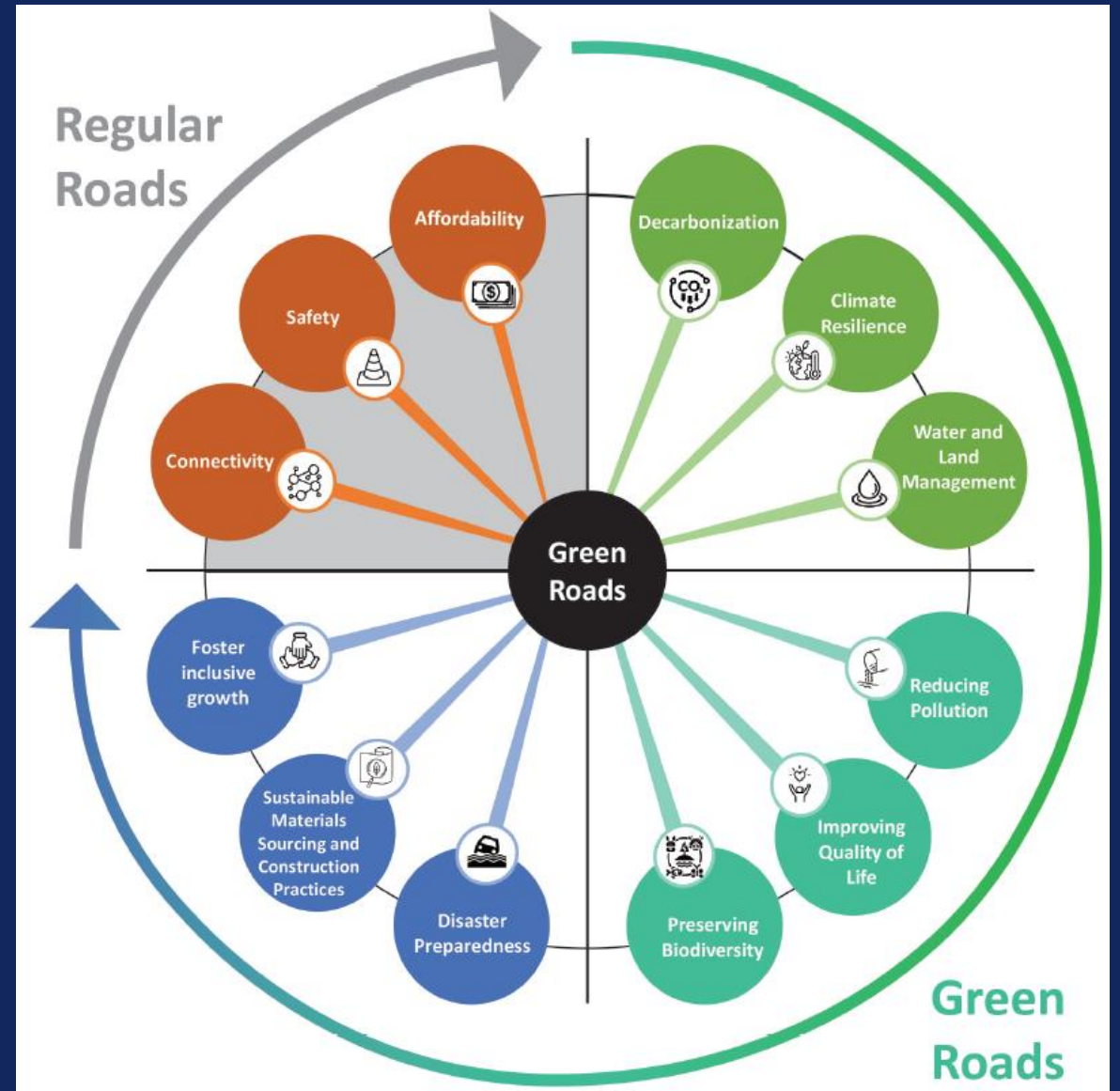
- Six criteria

- Impact
- Applicability
- Cost efficiency
- Appropriateness for the Asian context
- Innovativeness
- Overall quality of the submission



Participants indicated:

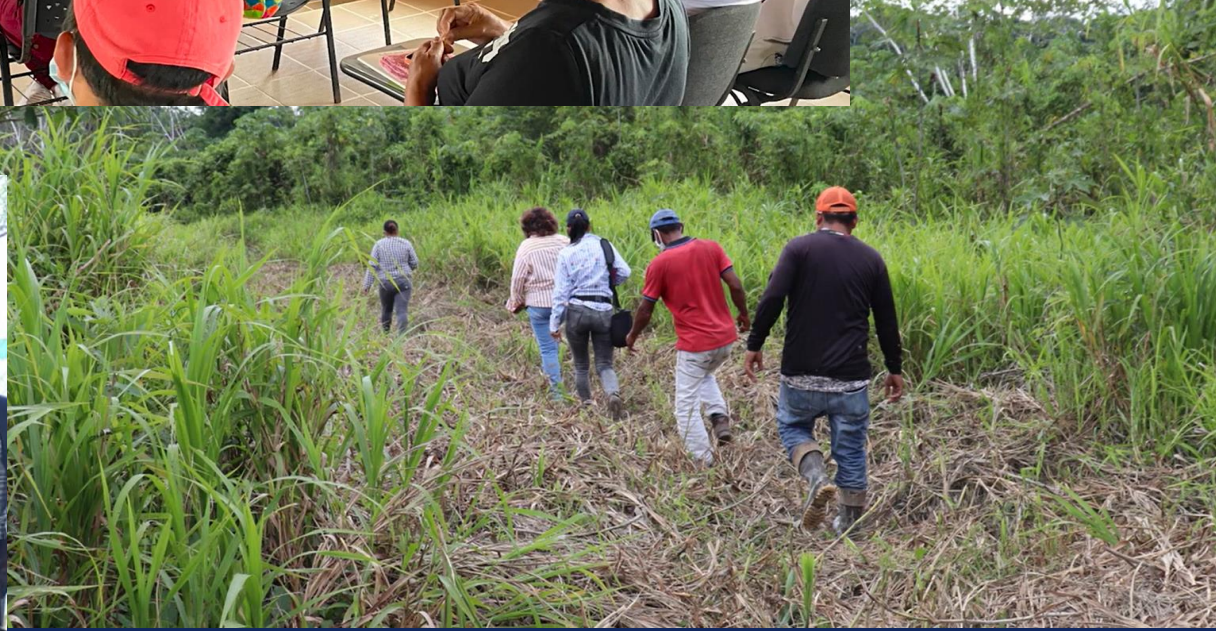
- Dimensions of green road practice + synergies with other dimensions
- Areas of applicability
- Enabling environment



Some examples before moving to the winners ...



The social component of green infrastructure - Colombia



Zona de influencia de la ciclovía rural



Operación de la ciclovía rural en su primera etapa (Superficie en pelo de tierra)

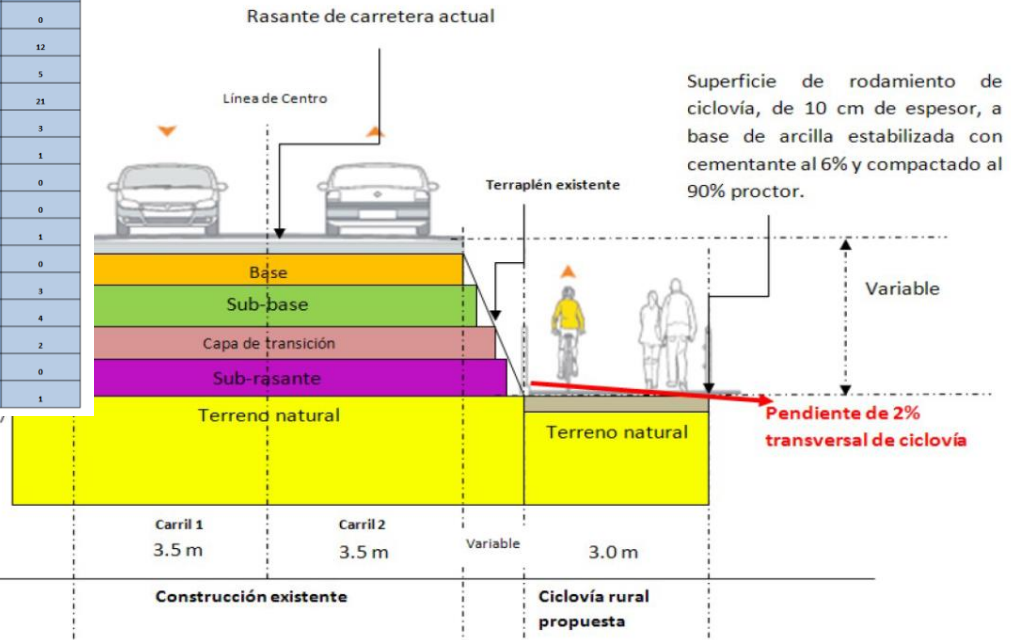
Safety measures for pedestrians and cyclists in Mexico



Aforo ciclista

Ubicación: km 11+387 Carr 431; Fecha: Jueves-9JUL2015

Horario	Ciclistas						SUMA HORARIA
	La Venta - San Fandila	La Venta - IMT	San Fandila - La Venta	San Fandila - IMT	IMT - La Venta	IMT - San Fandila	
6:00 - 6:30							0
6:30 - 7:00	2	5	4		1		12
7:00 - 7:30	1	1	1		1	1	5
7:30 - 8:00	1	11	4	5			21
8:00 - 8:30	1			1		1	3
8:30 - 9:00					1		1
9:00 - 9:30							0
9:30 - 10:00							0
10:00 - 10:30			1				1
10:30 - 11:00							0
11:00 - 11:30	3						3
11:30 - 12:00			4				4
12:00 - 12:30	1		1				2
12:30 - 13:00							0
13:00 - 13:30	1						1



puente sobre canal hidráulico



Road water harvesting in Yemen





Announcement of the winners of the open call for good Green Roads Practices



Inclusive roads with green growth in Kenya

- Makueni County in Kenya
 - Water scarcity
 - Limited community engagement in environmental management
 - Erosion
 - Low agricultural productivity



Michael Maluki

**Superintendent Roads
Engineer, Government of
Makueni County, Kenya**



Inclusive roads with green growth in Kenya

- Turning the tide ...
 - Community sensitization and involving citizens
 - Creating cut-off and mitre drains
 - Gully rehabilitation
 - Involvement of LGIs & community groups



Harvesting hope: How innovative irrigation technique is reviving drought-stricken farms

Sunday, November 19, 2023

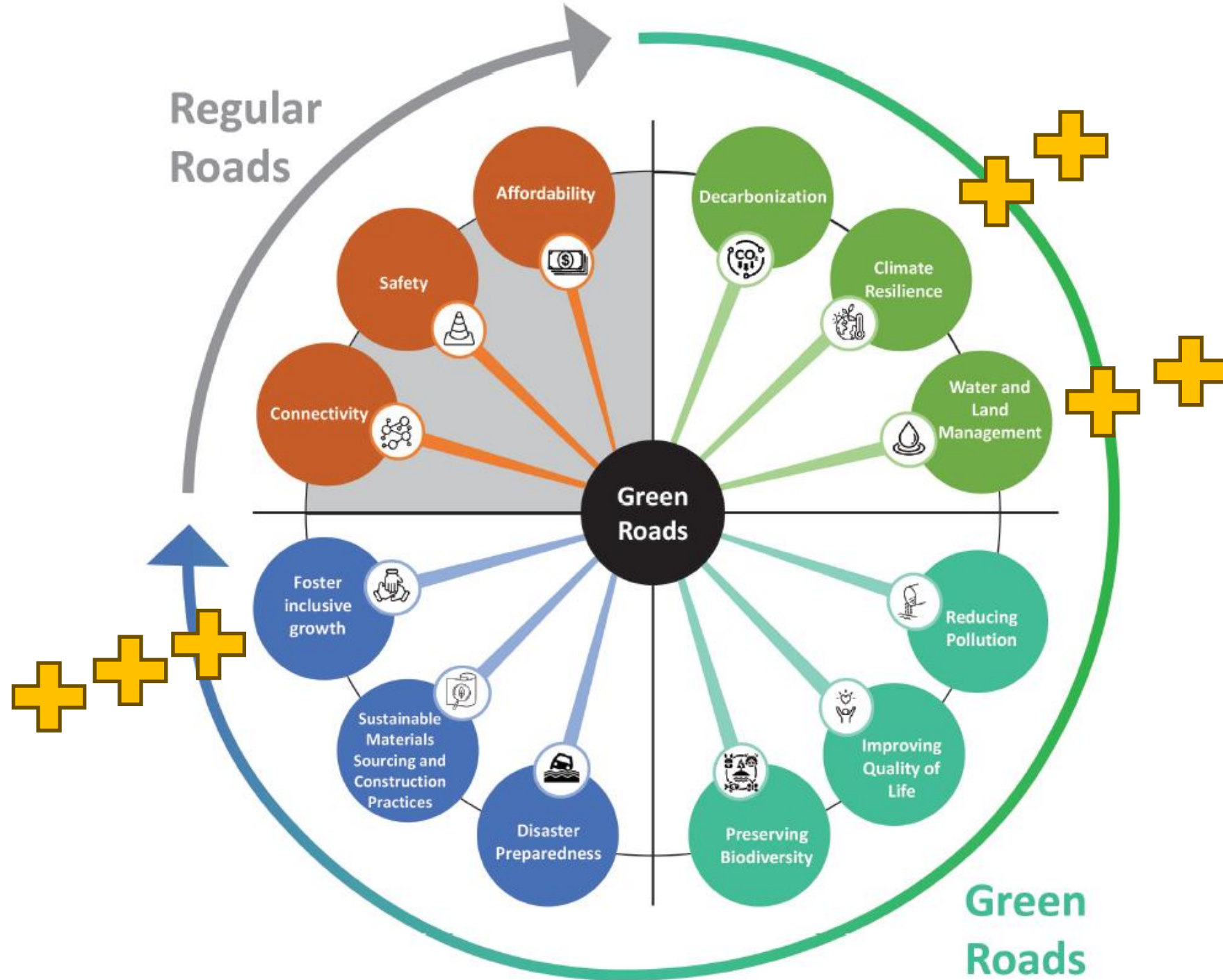


Gladys Kiluni at her farm dam where she harvests road run-off water that she uses to for farming and domestic use in Mbooni sub county, Makueni County on November 4, 2023. PHOTO WILFRED NYANGARESIJINATION



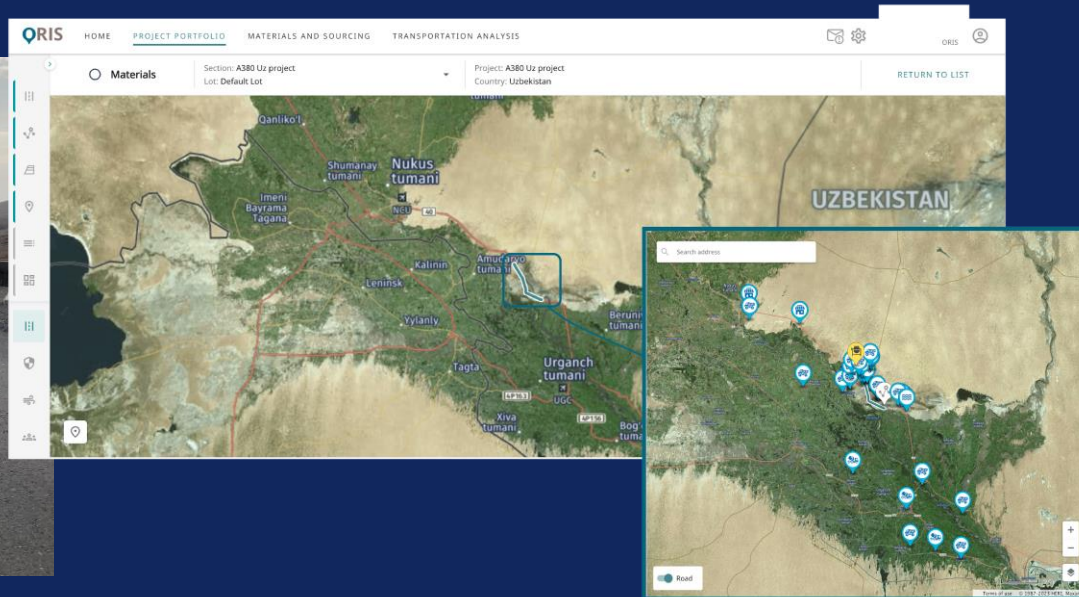
Benjamin Muuo at his farm where he entirely depends on harvested road run-off through trench diversions that boosts water supply to most farms in Makueni County on November 4, 2023. PHOTO WILFRED NYANGARESIJINATION





Using a digital twin for sustainable and climate resilient infrastructure in Uzbekistan

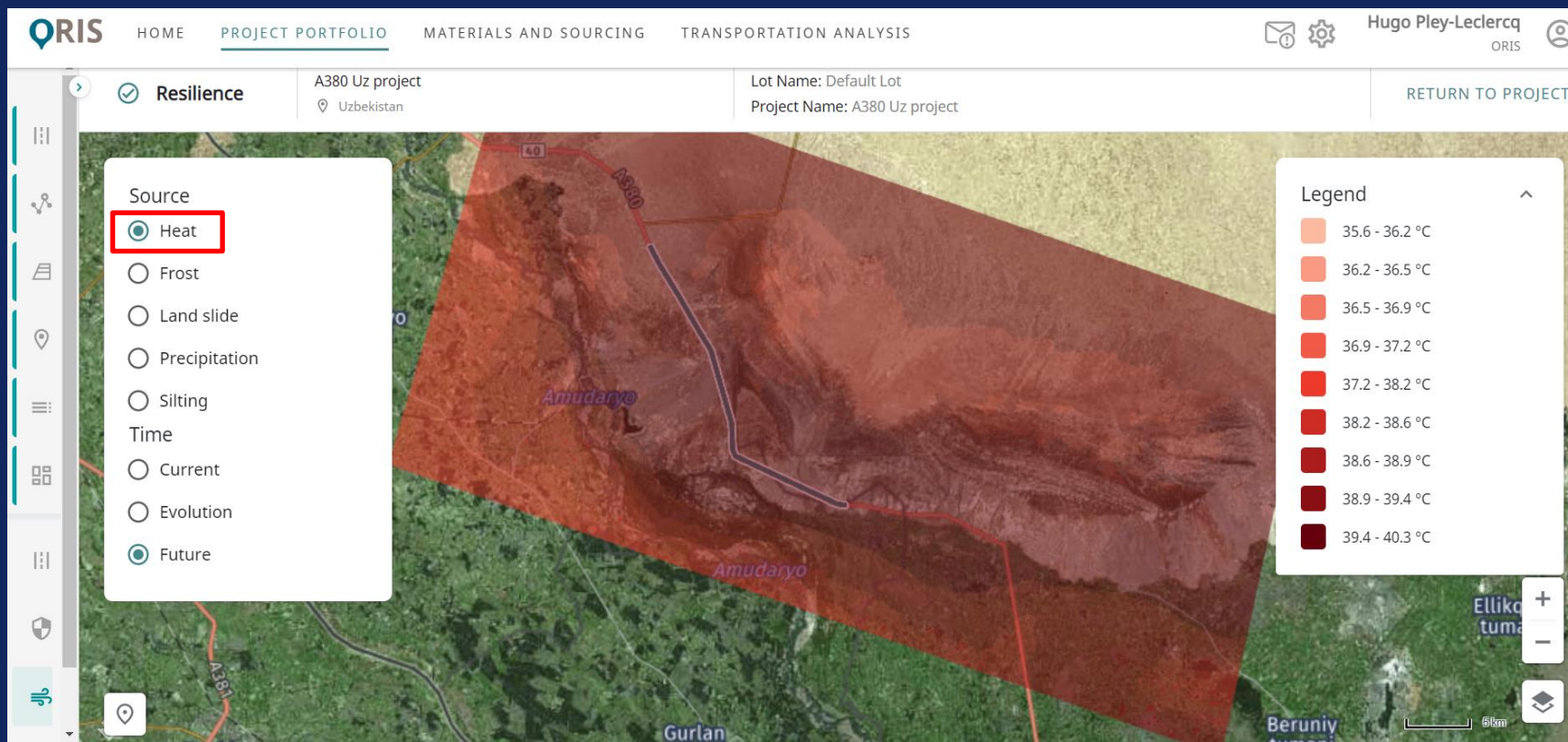
- Mapping the impact of road infrastructure project → Upgrading the A380 Highway in Uzbekistan
- Informed decision making for low-carbon and climate-resilient infrastructure
- Multi-criteria analysis, multiple scenarios – for informed and balanced decision making + countermeasures for foreseen challenges



Pawan Karki
Asian Development
Bank



Using a digital twin for sustainable and climate resilient infrastructure in Uzbekistan



Left: (Heat) modelling

Analysis showed high risk of:

- Heat rise
- Heavy cycle of frost/thaw
- Increase of water run-off and silting

Using a digital twin for sustainable and climate resilient infrastructure in Uzbekistan

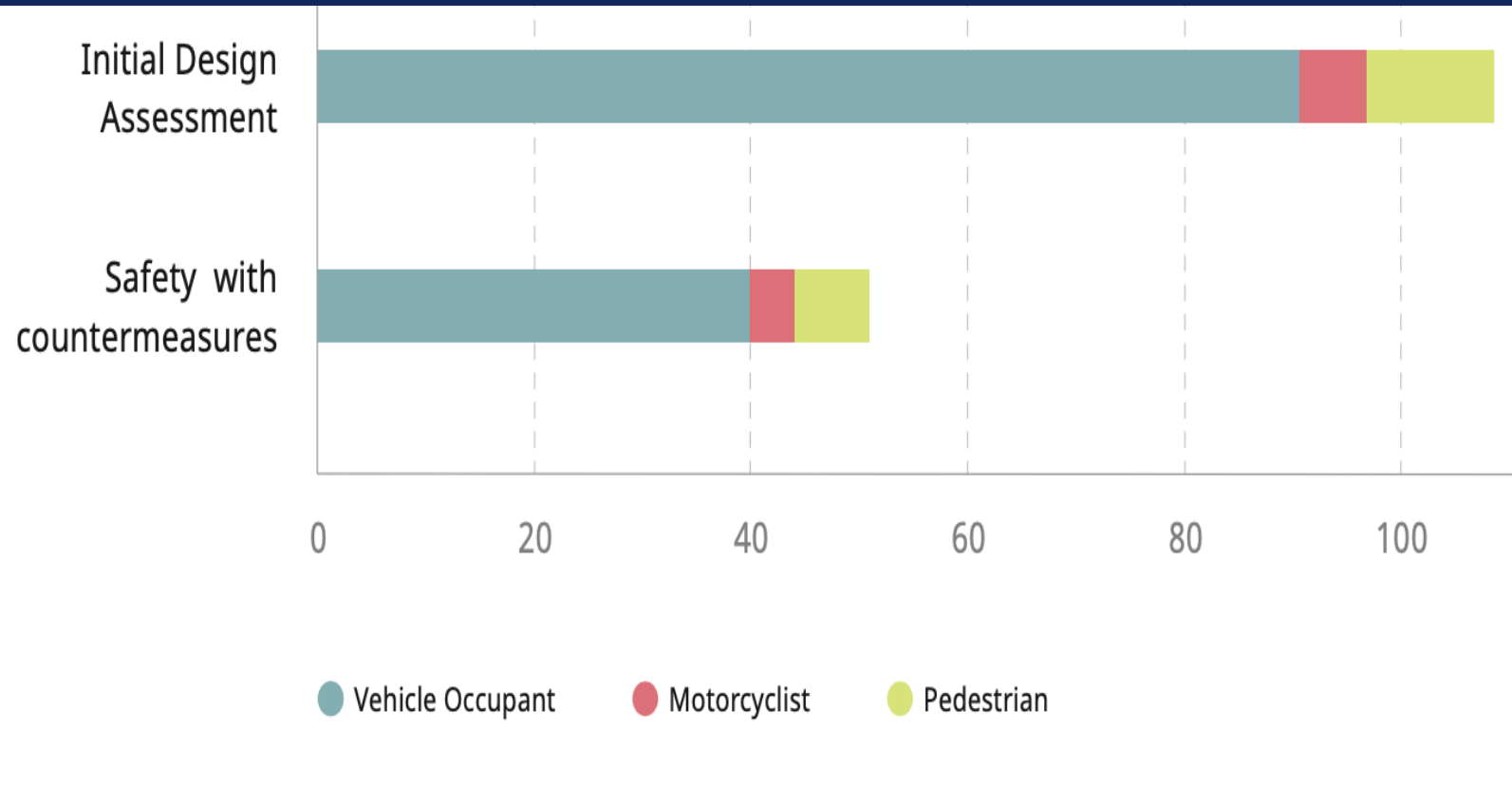
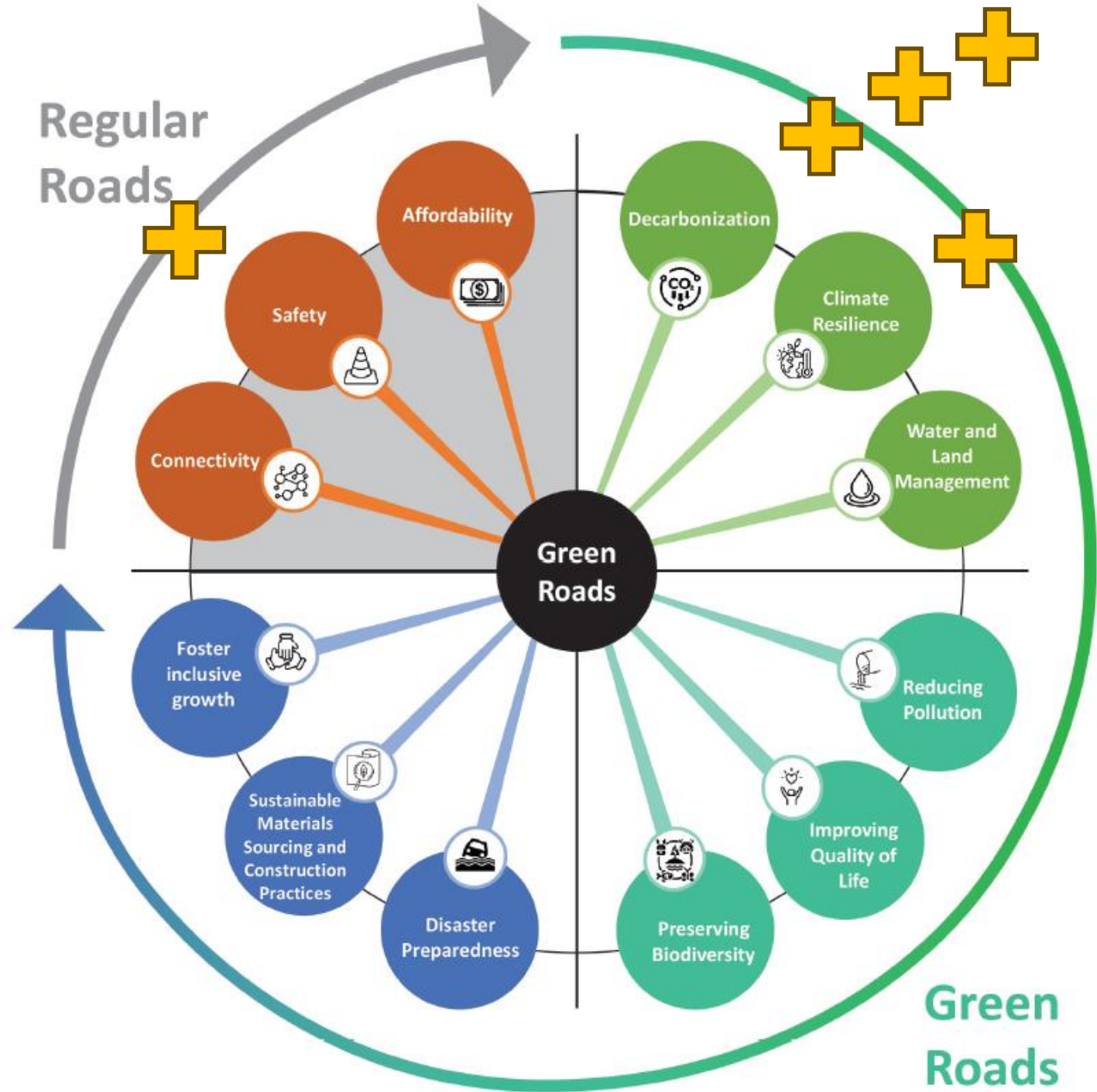


Figure 7: Serious injuries and fatalities estimations before and after countermeasures

Left: Safety prediction based on iRap international assessment methods

Countermeasures include:

- Installation of safety barriers
- Rumble strip vibrators
- Speed management
- Improvement of four intersections



Intervening at the right place: determination of animal vehicles collision hotspots in Portugal

- Biological constraints chart – built on a GIS platform - to record existing species, habitats, and ecosystems, before any intervention
- Implemented in the Ascendi network (North to Centre South of Portugal, 600 km +)
- Applicable in every biome – constraints chart to be adapted to the ecosystems



Pedro Moreira

Ascendi, Portugal



Intervening at the right place: determination of animal vehicles collision hotspots in Portugal

- Biological constraints chart is the support for the application of a wide range of measures – it comes before the measure!

The screenshot shows a GIS application interface with the following components:

- Layer List (Left):** A list of layers including 'Mortalidade', 'Cameras', 'Biodiversidade - Registo de Flora', 'Biodiversidade - Registo de Fauna', 'Biodiversidade - Registo de Flora (poligono)', 'Biodiversidade - Registo de Fauna (poligono)', 'Separador_central_VRI', 'Area_projecto_piloto', 'TabelaDeDados - Passagem Habitativa', 'TabelaDeDados - Sinaliz. - Sinaliz.', 'Rota de Estrada 25 metros', 'Autoestradas', and 'Classificacao_CanCade'. A button 'Adicionar camada' is at the bottom.
- Map View (Center):** A satellite map showing a road network and various markers. A popup window is open over a specific location.
- Popup Window (Right):** A window titled 'ANTVRLA 7.100+630.PS.157.0_0,0' with the following table:

CODE_MAG	CN2_100+630_PS
REF_MAG	
DATA_MONT	21/07/2022, 17:59
NETO	Ceu Limpo
DATA_DESM	
SITUACAO	
DESC	marredas 2 máquinas

Below the table is a photo gallery with two images, the first labeled 'Foto 1.jpg'.
A second popup window is open over a road intersection, titled 'Fauna - Alerta Biodiversidade' with the following details:

Nome Cientifico	Apus apus
Nome Comum	Andorinha-preta
Vingação	Ferme Monitorização
Alertas:	
Essa 1.jpg	
Essa 2.jpg	

The bottom of this popup shows 'Editado por pmoreira@GCCA em 30/05/23 às 14:34' and 'Aplicar zoom'.

Data Analysis Viewer (Biological Constraints Chart)





Announcement of the winners of the open call for good Green Roads Practices

