



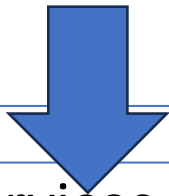
SECOND TANZANIA INTERMODAL AND RAIL DEVELOPMENT PROJECT (TIRP-2)

Korea Green Innovation Days (KGID)

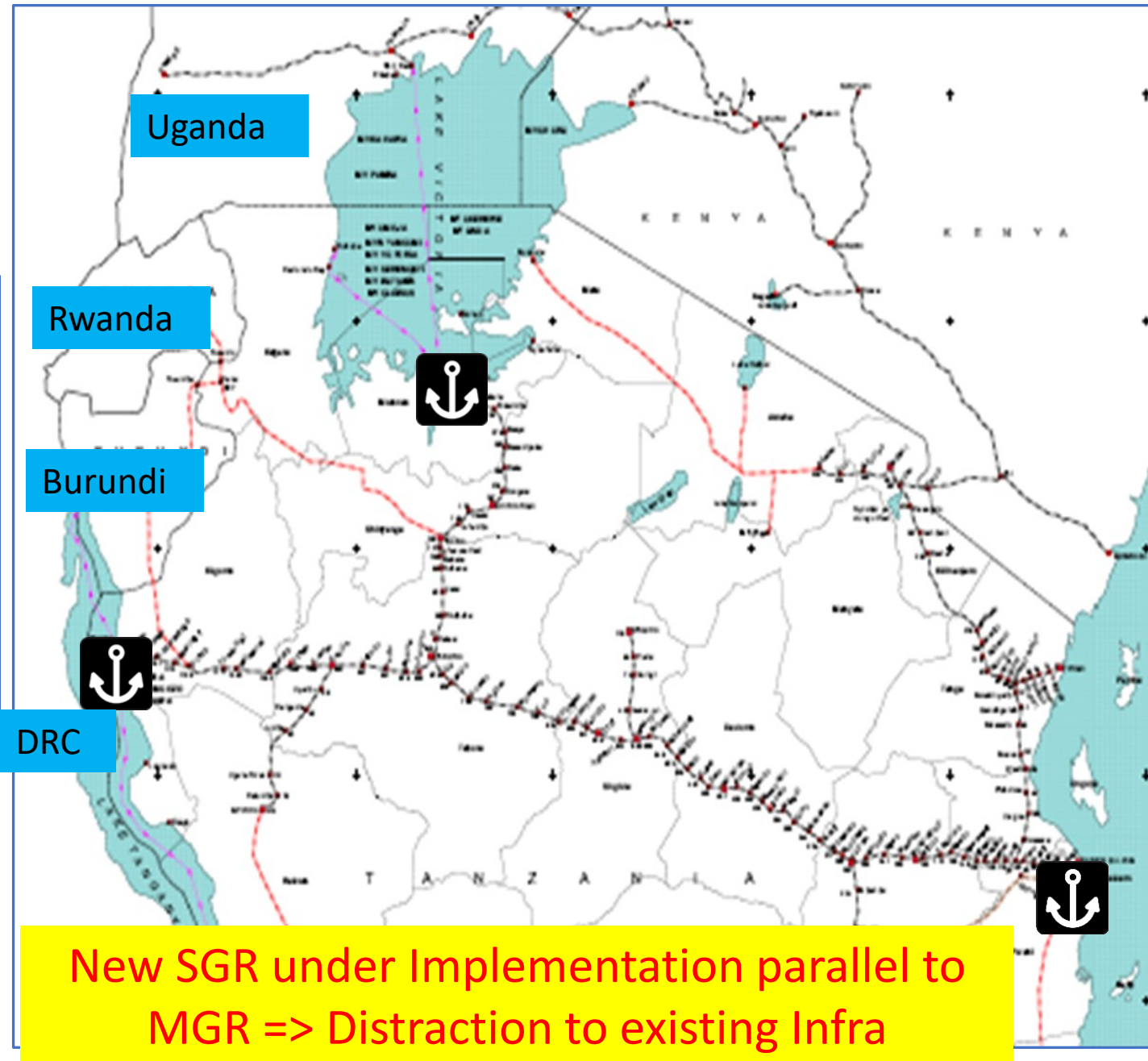
May 6-8, 2026, Sejong, South Korea

Strategically located Port but challenging Railway

- Poor MGR Infrastructure quality
- Poor Train operation standards
- Poor intermodal integration
- Poor safety records
- Flooding



- Unreliable services
- Unpredictable services
- Marginal Modal share (2%)





Tanzania Intermodal & Rail Development Project (2014 – 2022)

Achieved

Rehabilitated 607.75 km of rail track and 377 bridges

Developed Open Access Regulations

Designed 3 Intermodal Terminals

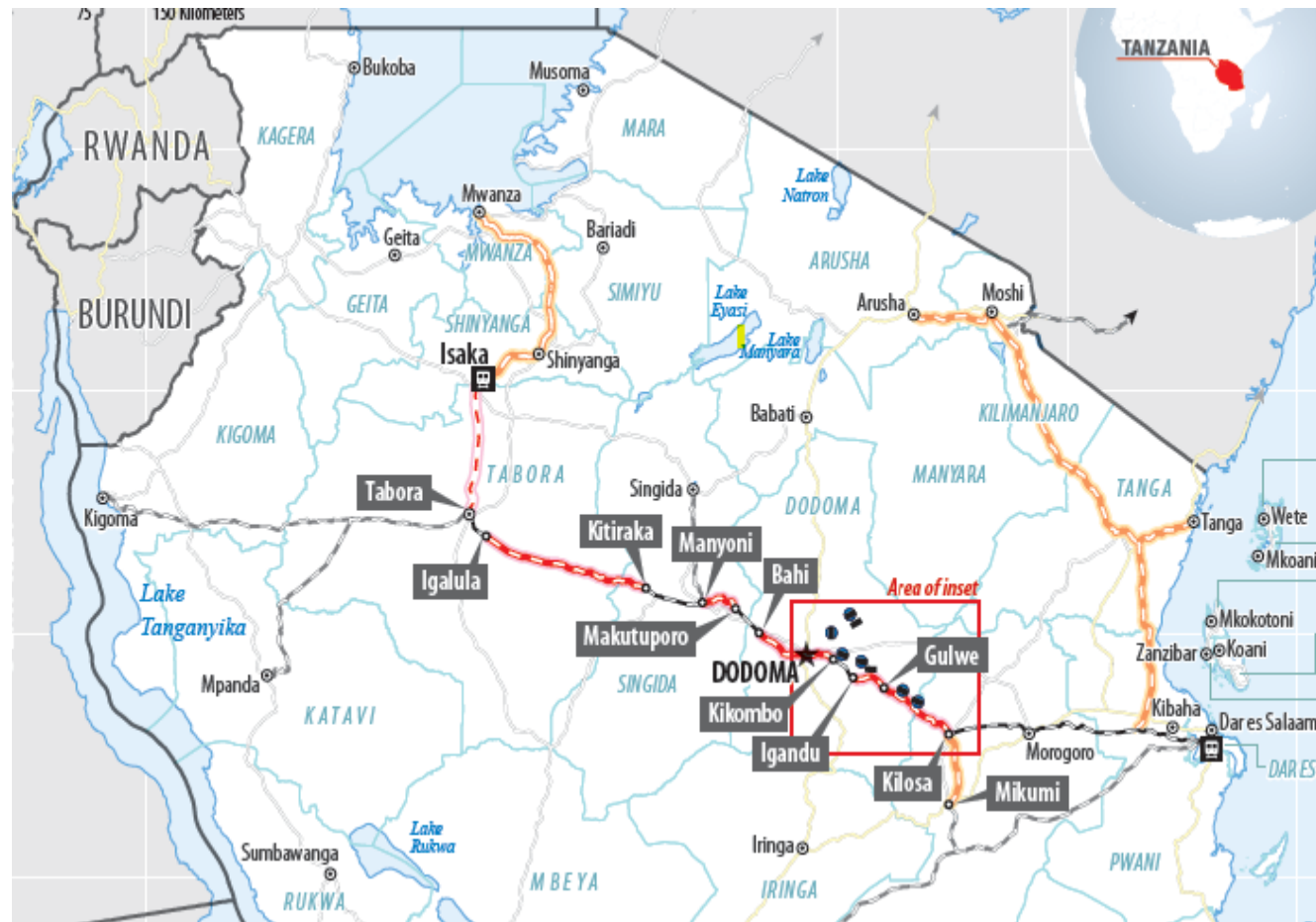
One Freight set of Train

Track Data collection system

Pending areas

- Flood Prone section not addressed = Govt prioritized budgeting for SGR
- Intermodal terminals not implemented due to budget deficit (overruns and exchange losses)
- Rail Rehabilitation length reduced due to further deterioration of rail resulting from continuing operations
- Railway Act changed impacting open-access reforms

Overview/Key Project Information



Project Name:	Second Tanzania Intermodal and Rail Development Project (P176682)
Financing Amount:	<i>US\$200 million</i>
Financing Instrument:	<i>Investment Project Financing (IPF)</i>
Responsible Sector Ministry:	<i>Ministry of Transport and Ministry of Agriculture</i>
Implementing Agencies:	<i>Tanzania Railways Corporation (TRC) and the National Irrigation Commission (NIRC)</i>
Project Development Objective	<i>To improve safety, climate resilience and operational efficiency of the railway along the Dar es Salaam to Isaka segment in Tanzania.</i>
Program Period:	<i>5 years</i>
Effectiveness Date:	<i>August 8, 2025</i>
TTLs:	<i>Yonas Mchomvu; Ernest Ruzindara</i>
Geographic Targeting:	<i>Tanzania</i>

TIRP-2: Follow on to address pending areas

Project Development Objective

To improve safety, climate resilience and operational efficiency of the railway along the Dar es Salaam to Isaka segment in Tanzania

World Bank Financing: US\$200m

Signed: March 28, 2025

Effective: Aug 8, 2025

Component A - Strengthening of railway infrastructure and support of transport studies

Component B - Strengthening Climate Resilience of Kilosa-Gulwe-Igandu section

Component C - Operational and Institutional support

Component D - Contingent Emergency Response



Reliable and Safe MGR Infrastructure; Reduced Railway closure due to flooding from 120 to 10 days; At least ONE Private OA Freight Operator; Increase of Rail Modal share

Component A: Strengthening of Rail

Strengthening of Dar – Tabora (257 km and bridges)

Rehabilitation of climate resilient rail track (84 km) along the flood prone section

Rehabilitation of Tabora-Isaka railway line (130 km and bridges)

Improvement of intermodal terminals

Safety Infrastructure at crossings and townships

Support of key transport studies



Component B: Strengthening Climate Resilience of Kilosa – Gulwe Flood prone section



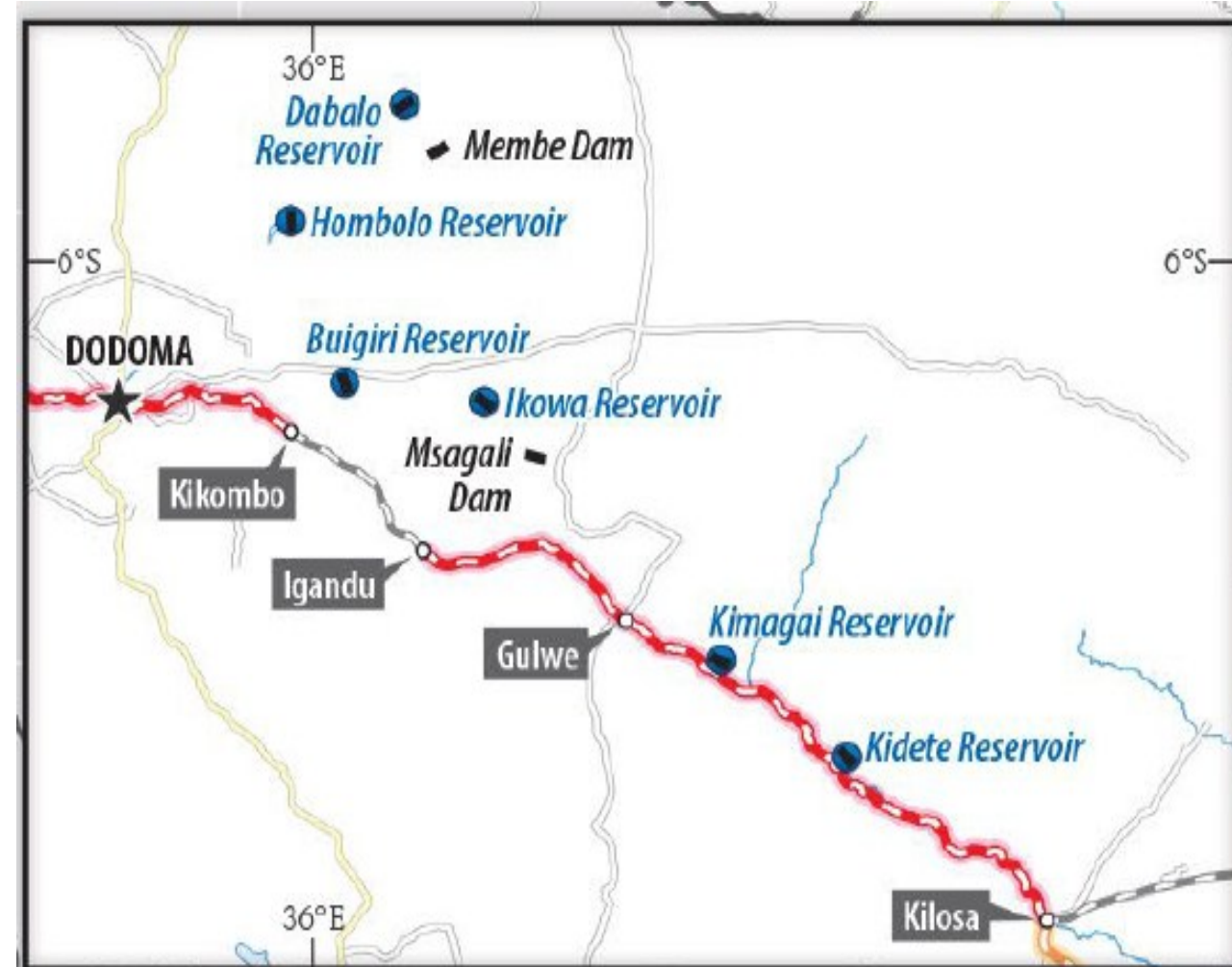
Multi-sectoral collaboration with Agriculture and Water GPs



Restoration of six Flood Control Reservoirs/Dams within Kinyasungwe catchment area



Support preparation of sustainable water use program for **agriculture, water supply, fisheries and livestock**





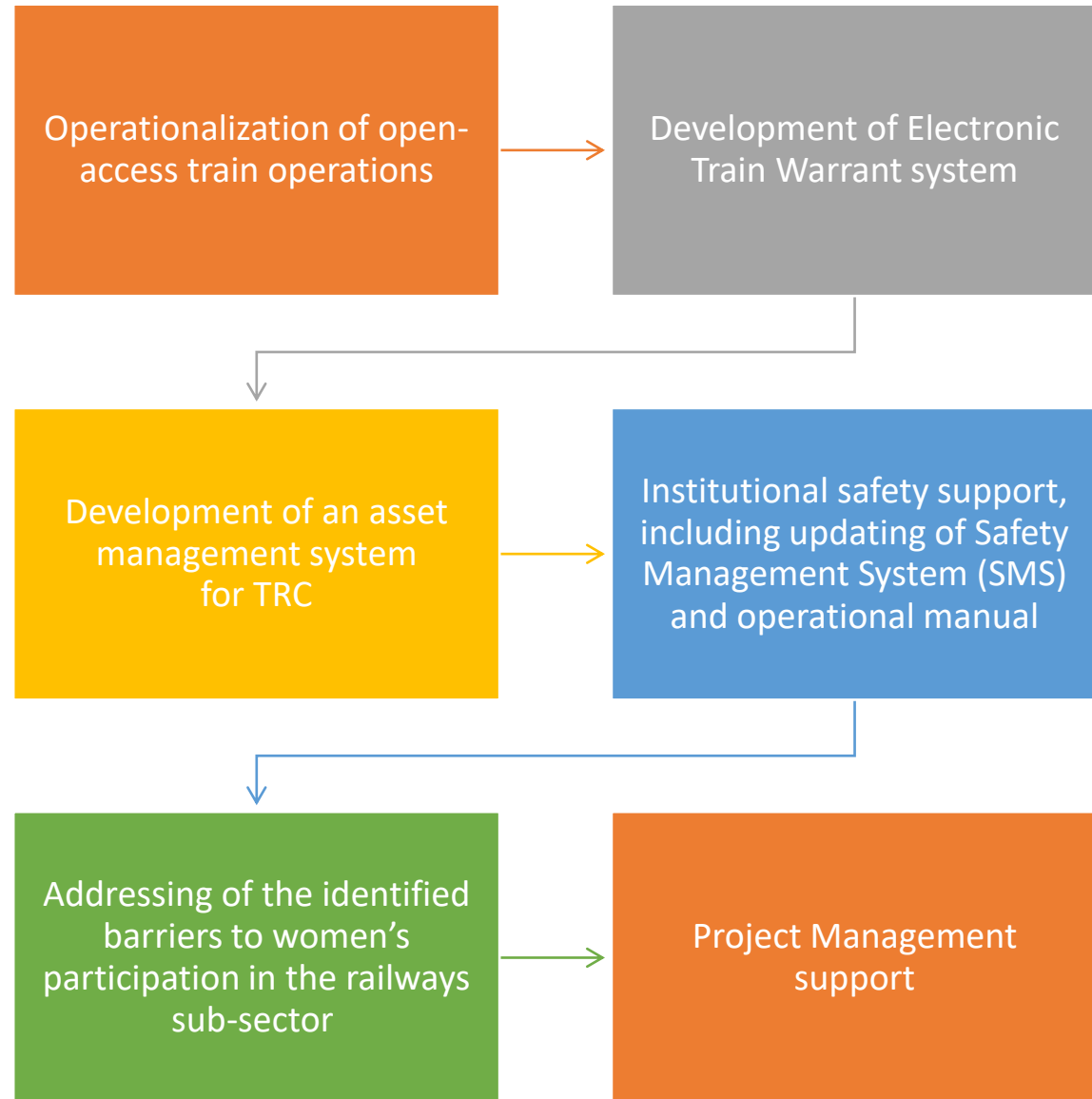
A flood-destroyed MGR railway track

Flood impacts on SGR line



Buigiri sedimented dam

Component C: Operational and Institutional Support



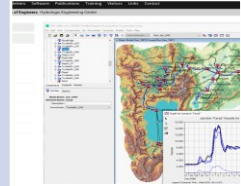
Korea Green Growth Trust Fund (KGGTF)

GRANT

Development of ITS-led Tanzania Railway system for strengthening climate resilient infrastructure based on GIS



Allocation: 600,000 USD



Activity 1: Study of the topography of the Tanzania Central Railway and analysis of flood hazards at the catchment area



Activity 2: Integration of the GIS-based ITS in line with flood hazard mapping and risk assessment.



Activity 3: Knowledge exchange

Project Partners and Stakeholders



DONOR



**KOREA
GREEN GROWTH
TRUST FUND**



COUNTERPARTS

Ministry of Transport

Ministry of Water

Ministry of Agriculture

Tanzania Railways Corporation (TRC)

National Irrigation Commission (NIRC)

Wami Ruvu Basin Water Board (WRBWB)



CONSULTANTS

TARUTIUM Global Consulting

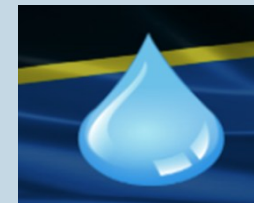
Witek Engineering and Technology
Consulting



THE WORLD BANK



**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF TRANSPORT**



Consultancy Services for Climate Risk Assessment, GIS, and ITS Development for the Tanzania Central Corridor (US\$286,550)

Conduct a study on the topographical conditions and natural hazard vulnerability of TRC's railway networks (MGR & SGR)

01

Develop a GIS database encompassing railway infrastructure, related facilities, climate vulnerability assessment/mapping, & integrating (FFEWS)

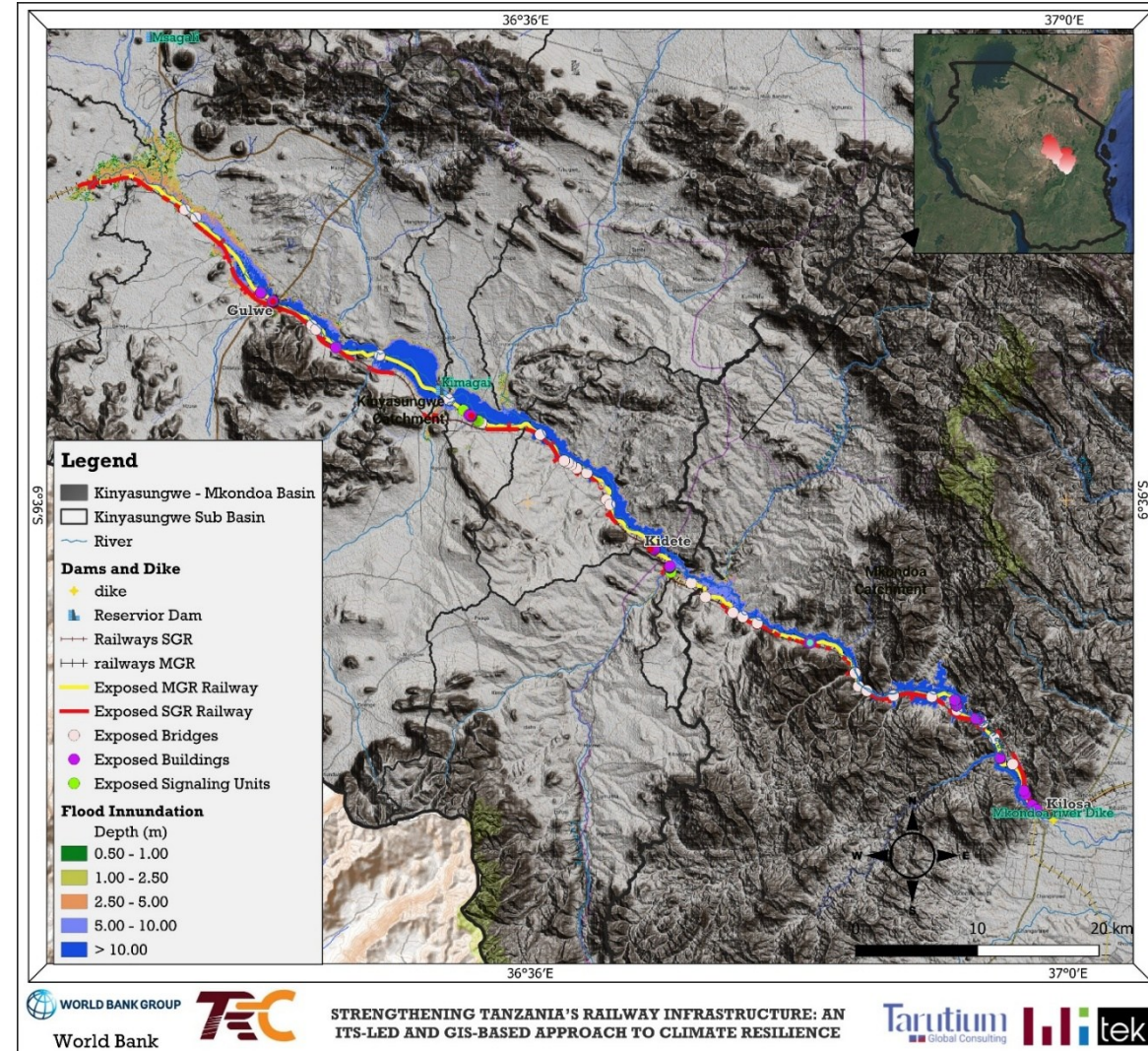
02

Integration of the digitized GIS database with the ITS design for the Central Corridor railway network

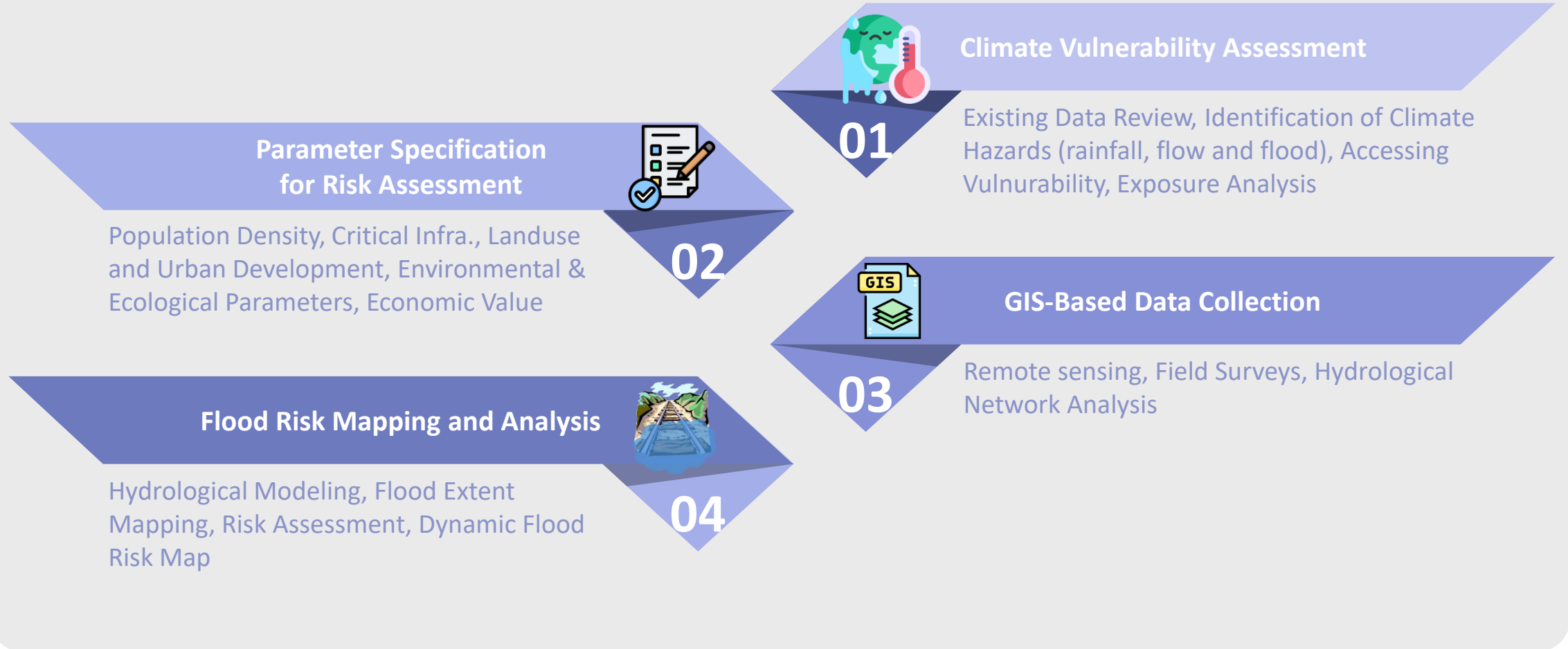
03

Transfer of tools and knowledge

04

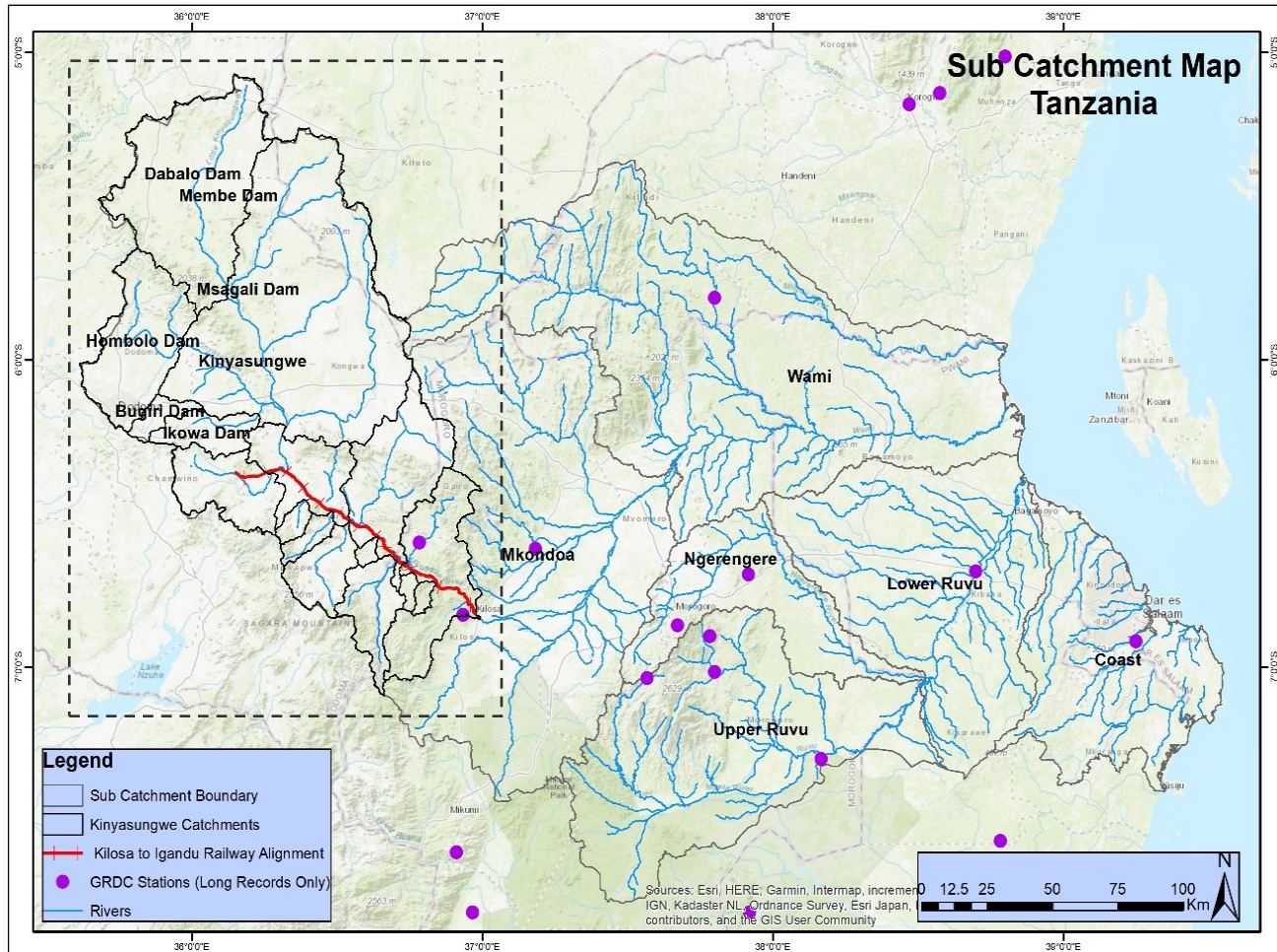


Activity 1: Central Corridor's Topography Study and Flood Hazard Analysis



Area of Focus for hydrologic model

- Kinyasungwe river basin will be the focus for hydrologic modelling and thereby to identify suitable location for setting up water level sensors
- Rivers from north have dams that regulate the rivers flow, whereas the rivers from south does not have major water regulatory structures





Intelligent Transport System (ITS) Design & Field Validation Outcomes

Flood Verification and Ground Validation

Field Validation of Flood-Prone Railway Sections

- Targeted flood impact verification survey (March 2026) along the Msagali–Kilosa section of the Central Railway Corridor.
- Validating of model-identified hotspots, assessing actual flood pathways, and documenting the nature and severity of impacts on railway infrastructure.
- Verification by ground inspections, GIS-referenced observations, and drone imagery.

Multiple high- and very high-risk locations were confirmed

- Several locations identified as vulnerable are subject to recurrent flooding, overtopping, erosion, and drainage failure.
- Critical sections include:
 - Gulwe – prolonged flood inundation and overtopping
 - Mwasa / Kikundi – severe riverbank erosion
 - Mkadage / Mkondoa Bridge area – overtopping and floodplain spread
 - Munisagara – active riverbank erosion and track flooding
 - Msagali and Kidete/Godegode interface zones

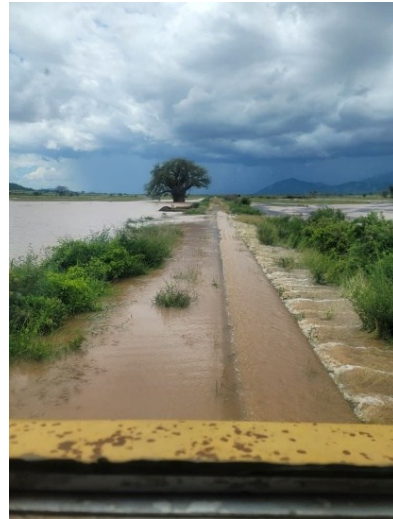


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Key Flood Mechanisms

The field validation confirmed that flood impacts along the corridor are not caused by a single process, but by a combination of:

- River overflow and floodplain inundation
- Backwater effects at tributary confluences
- Sediment deposition and culvert blockage
- Riverbank erosion and lateral channel migration
- Drainage interactions between SGR and MGR systems



ITS – Current Systems & Operational Practices

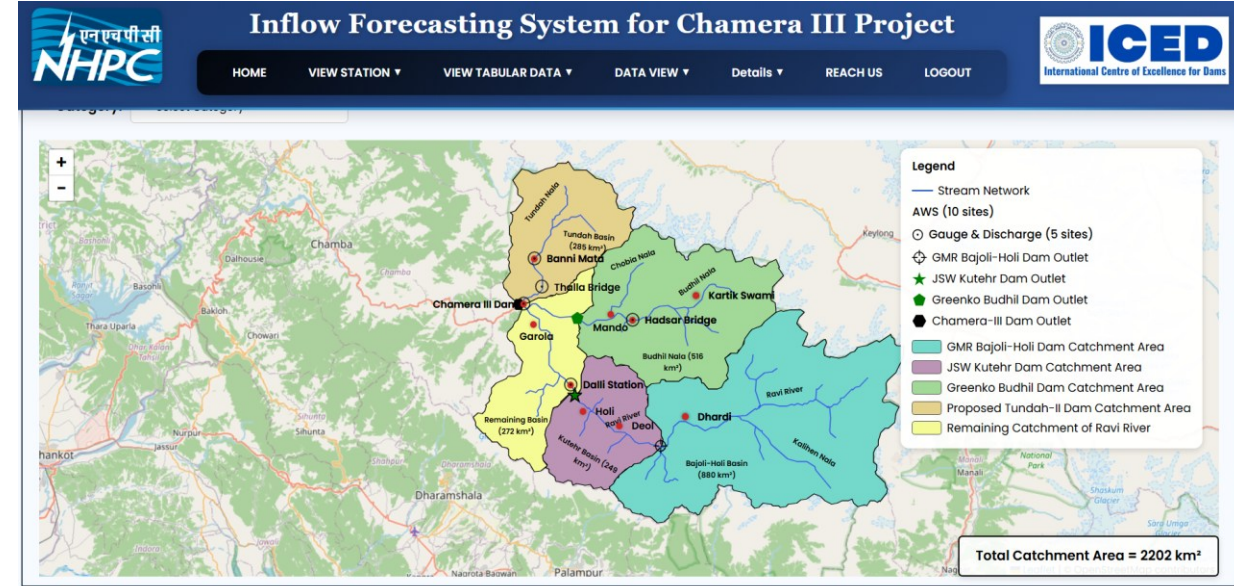
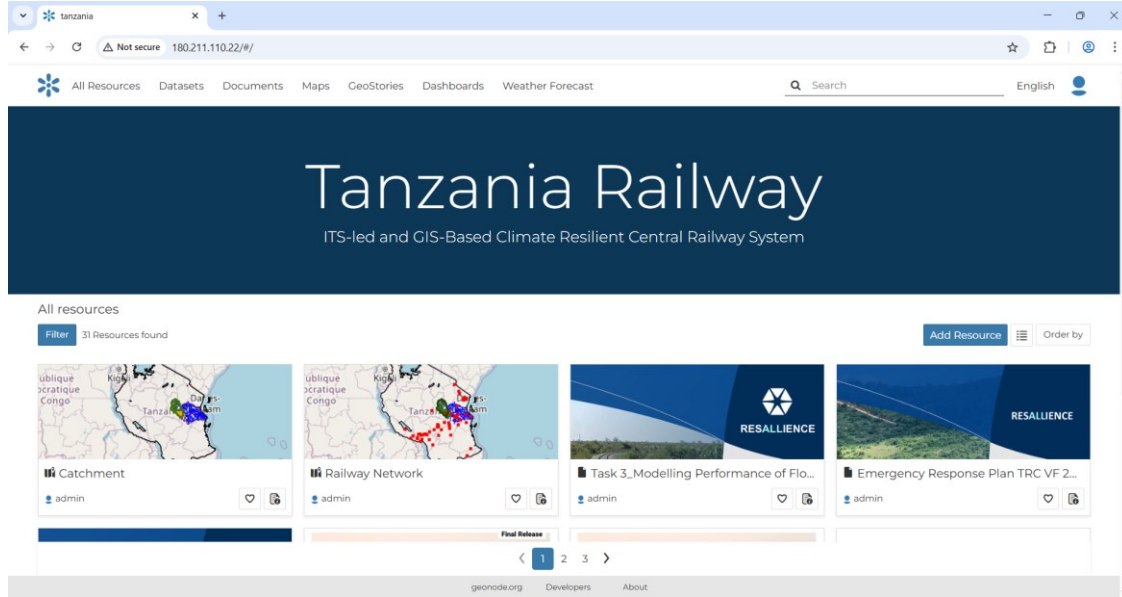
Meter Gauge Railway (MGR)

- Track condition monitoring and disruption verification are undertaken through manual inspections and station-level reporting.
- Communication along the corridor relies primarily on radio communication with no aerial cable systems and limited fiber connectivity.
- Currently there is no dedicated ITS or centralized digital monitoring system is currently in place.
- During disruption events such as flooding, the current system depends on field-based verification, which can delay situational awareness and response.
- No automated hazard-triggered alert or early warning mechanism is currently operational for flood-related disruptions.

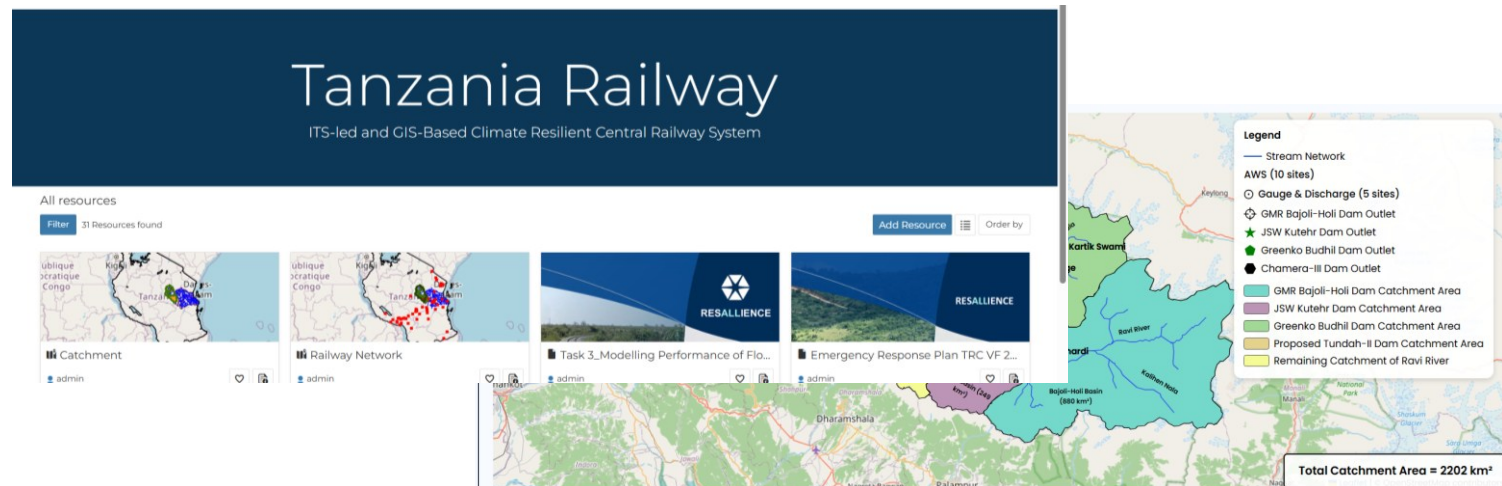
Standard Gauge Railway (SGR)

- Existing operational and digital systems

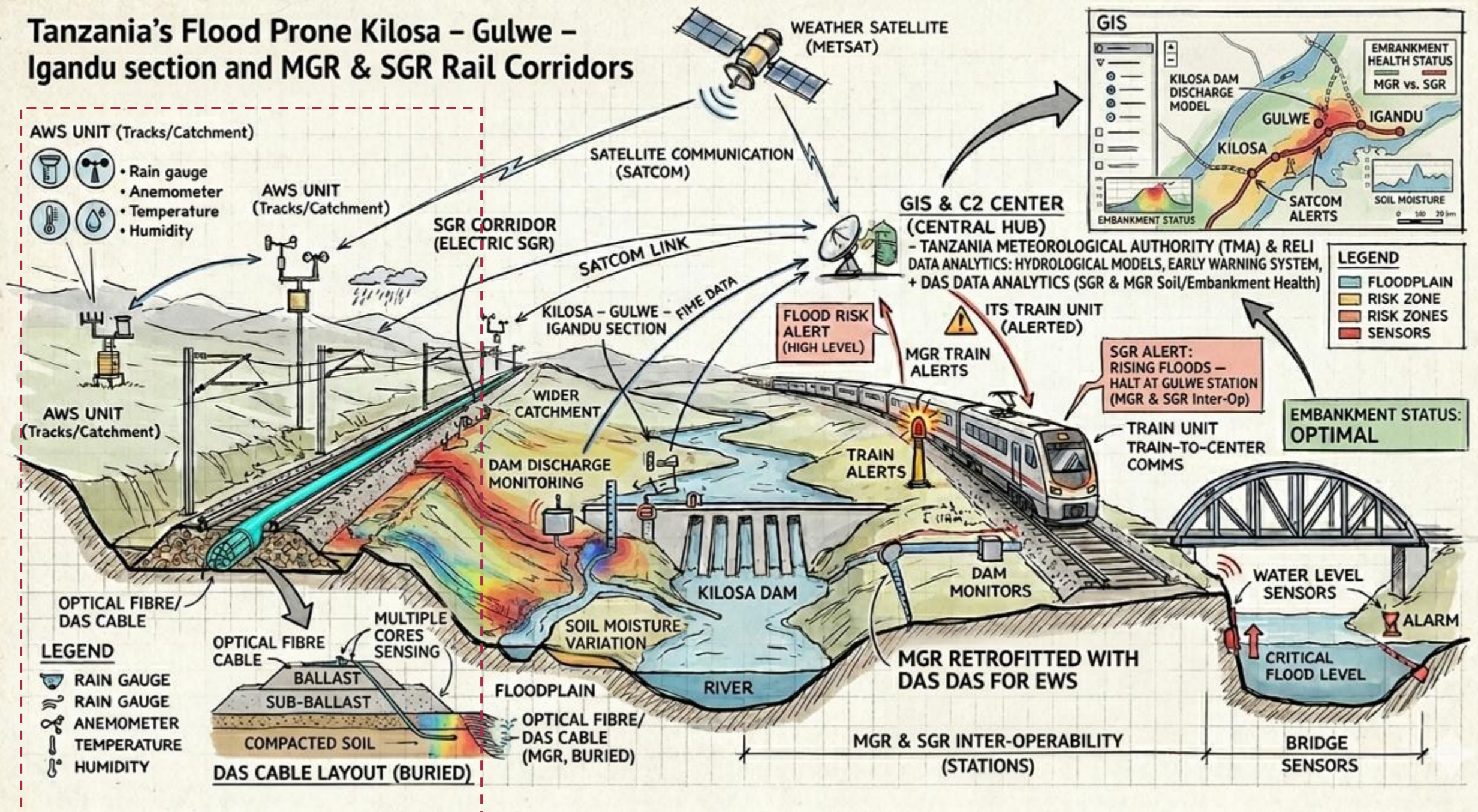
Integration of Dashboard



Integration



Tanzania's Flood Prone Kilosa - Gulwe - Igandu section and MGR & SGR Rail Corridors





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