

Annex No. 3 – Contextual Information

1 BACKGROUND

The SLIM – Sustainable Landscape through Integrated Management project implemented by the Czech Development Agency focuses on strengthening sustainable management of natural resources through a landscape approach. The main objective of the project is to increase the resilience of landscape/forest ecosystems and improve people's living conditions based on an integrated approach within the framework of agriculture-forestry-biodiversity-water-climate links.

By strengthening governance, policies, and coordination, particularly at the level of Zambia's central administration, the project will support the implementation of an integrated landscape management (ILM) approach across sectors, specifically through the following steps:

1. **Adaptation** of the legislative framework (policies, strategies, regulations) for mainstreaming ILM;
2. **Coordination** of actors in the interest of informed decision-making and effective data sharing;
3. **Building the capacity** of partners in the analysis and processing of geospatial data in particular.

The subject of this public contract is the design and implementation of a robust, centralized, secure, and user-friendly GIS solution for a total of 12 public administration institutions, including their decentralized components. One part of this solution will be based on Esri's ArcGIS platform technologies and supported by the National Remote Sensing Center (NRSC), which will ensure the operation of the server GIS solution, infrastructure management, license compliance, data backup, and support for other stakeholders in using the geodatabase. The second part of the solution, based on open-source technology specified by the tender participant, will focus on supporting the forestry department of the Ministry of Green Economy and Environment and will enable advanced data collection and the creation of map data for effective forest management planning.

The implementation of the subject matter of this public contract will lead to the fulfillment of:

the specific objective of the project

- 2. Strengthened governance mechanisms, policies, and coordination for integrated landscape management and climate adaptation;

specifically, **the project outputs**

- 2.1. Strengthened technical and institutional tools for ILM implementation
- 2.2. Improved institutional capacity for planning, management, and monitoring of integrated landscapes;

within the framework of **activities**

- 2.1.4. Support to joint development of various data products/databases with line Ministries to produce evidence for decision-making
- 2.1.5. Technical assistance and support to production of consistent forest statistics, monitoring, and reporting
- 2.2.1. Provision of adequate technological capacities, tools, data access and geospatial data storage infrastructure for the crucial data domains.
- 2.2.2. Capacity building of NRSC in geospatial analysis and data processing
- 2.2.3. Capacity building of line Ministries in geospatial data utilization, use of thematic maps for ILM

2 INVOLVEMENT OF TARGET INSTITUTIONS

2.1 Identification of target beneficiaries of the project

In order to ensure the adequate targeting of the SLIM project, a comprehensive assessment of the current data environment in Zambia was carried out between February and June 2024 through two rounds of consultations, covering everything from the existing infrastructure to the necessary capacities of individual actors who are essential for the implementation of the ILM approach. This initial analysis, which covered individual Zambian ministries and specialized/academic institutions, found that the capacity for integrated landscape planning, management, and monitoring is often limited, with geoinformation skills varying from highly developed to almost non-existent. It was recommended to focus on training in GIS and related skills, including satellite image processing and cartographic visualization, to improve the ability of institutions to effectively manage and monitor landscape changes. Furthermore, the analysis emphasizes the need to develop and support warning and monitoring systems to address environmental challenges such as floods, droughts, and illegal activities, including deforestation and mining. It was also recommended to invest in commercially licensed map servers and promote the use of open-source GIS software for more effective use of technology.

The initial analysis identified various roles of stakeholders in the field of primary data, including data providers, integrators, and analysts. The graphical breakdown of stakeholders is shown below:

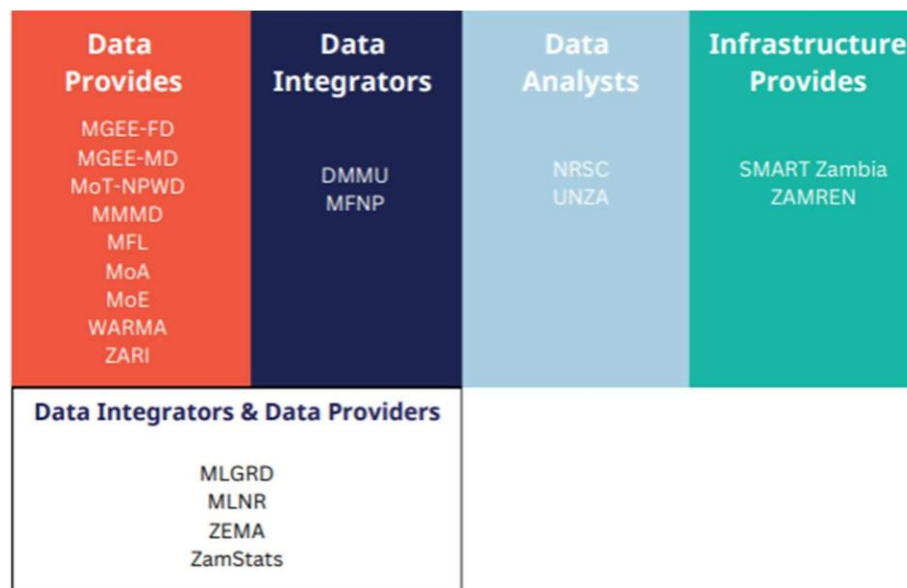


Figure 2. Classification of institutions by primary data area

All of the institutions listed above have gradually become involved in the implementation of SLIM, with an overlap in activities focused on improving environmental management and natural resource management. Each of these institutions brings its own expertise, capacities, and specific knowledge, which are necessary for achieving the project's objectives. The combination of these different areas of expertise is key to comprehensively addressing the issues faced by the project and ensuring effective data management and analysis that will inform decision-making at the government level. Specifically, the implementation of this public contract, however, only selected relevant institutions that play a particularly key role in achieving the desired impacts of the SLIM project as a whole are involved.

Within the SLIM project framework, these specific institutions are divided into three groups according to their level of involvement: **Main partners** play a key role in the execution and implementation of activities, bearing primary responsibility for achieving the project's objectives. **Key stakeholders** provide important support through expertise, coordination, or analysis necessary for effective decision-making and project **direction**. Other **stakeholders** are involved in specific activities, particularly data collection, analysis, and ensuring the long-term sustainability of outputs, and are therefore also essential for the implementation or dissemination of specific parts of the project and its subsequent practical benefits.



Figure 3. Structure of institutions involved in the SLIM project

2.2 Roles and involvement of stakeholders in the project

The table below summarizes the institutions relevant to this hardware delivery within SLIM, outlining their respective roles and providing an overview of their technological infrastructure and data governance arrangements. This overview is essential for ensuring the quality of spatial data, which underline effective decision-making in sustainable landscape management in Zambia. The table covers data management structures, digitization methodologies, data storage and backup processes, and the hardware in use.

Institution	Role within SLIM	Interests / Expertise
National Remote Sensing Centre (NRSC)	Main partner	
	Involved in all project activities, including the use of Copernicus services, drones for land cover change analysis, and training in GIS and remote sensing.	Land Cover Classification Map
Forestry Department of Ministry of Green Economy and Environment (MoGEE-FD)	Main partner	
	Participates in map validation, monitoring, predictive modeling for fire prevention, and digitization of historical data in the field of forestry.	Forest Resource Boundaries Deforestation Licenses Invasive Species Maps Forest Cover Changes" ILUA I and II Vegetation Types
Ministry of Finance and National Planning (MFNP)	Main Partner	
	Involved mainly through its development planning department, which coordinates development interventions, including those on landscape management.	National Development Plan Natural Capital Accounts (NCA)
Water Resources Management Authority (WARMA)	Key stakeholder	
	Involved in flood-prone area mapping and enhancing early warning through GIS and remote sensing.	Surface Water Bodies Surface Water Monitoring Boreholes Groundwater Monitoring Stations
Disaster Management and Mitigation Unit (DMMU)	Key stakeholder	
	Collaborates on disaster-preparedness, including maps for floods, fires, droughts, and pests, and supports validation workshops.	Risk Assessment Reports Field Data incl. drone mapping
Zambia	Key stakeholder	

Environmental Management Agency (ZEMA)	Assesses the impacts of proposed measures for sustainable natural resource or wildfire management.	Environmental Impact Assessment Ecological Mapping Limit Regulations
Zambia Meteorological Department (ZMD)	Key stakeholder	
	Collects precipitation data used to map soil degradation, flooding, and water-shortage risk.	Weather Data Provision
Zambia Agricultural Research Institute (ZARI)	Key stakeholder	
	Participates in the creation of land cover maps, soil degradation maps, and pilot maps for pest monitoring, including data collection and soil sample analysis.	Soil Map Soil Sampling Data Crop Suitability Maps
Ministry of Local Government and Regional Development (MLGRD)	Stakeholder	
	Participates through its department that prepares and updates district-level integrated development plans with a data component.	Integrated Development Plans Spatial Data Plan
Ministry of Agriculture (MoA)	Stakeholder	
	Contributes to drought-risk mapping and supports related capacity-building activities.	Agricultural Zones Demarcation of Farming Blocks
National Parks and Wildlife Department of the Ministry of Tourism (MoT- NPWD)	Stakeholder	
	Developing advanced GIS and RS tools and producing maps of land cover, protected area dynamics, and wildlife monitoring.	Illegal Activities Disease Surveillance / Tracking Species Distribution Wildlife Protected Areas
Zambia Statistical Agency (ZamStats)	Stakeholder	
	Provides IT support, training in statistical analysis, GIS-based data analysis and mapping, and decision-support for crisis management.	Access to Public Services CENSUS Data