

Request for Proposal

Rangelands data platform

Tender reference No ILRI-AA/SC/004/23

GENERAL BACKGROUND

Nearly half of the Earth's land surface is classified as rangeland, and the health and productivity of this land are directly critical to the livelihoods, cultures and resilience to shocks and stresses of more than 500 million people around the world, many of whom are indigenous peoples, who depend on rangelands. However, there are significant data gaps on rangelands in terms of distribution, status, changes taking place, restoration, and other opportunities.

To fill these gaps International Livestock Research Institute (ILRI) will be establishing the first-ever global data platform agreed upon by global actors for consolidating data and monitoring rangelands including in relation to rangelands health and monitoring, resource and land use change, sustainable value chains and opportunities for rangeland restoration.

It is anticipated that this global data platform on rangelands will serve as *the* "go-to" information source on rangelands, with data made publicly available. The information on land use change and restoration will be particularly important for guiding global and national investments in rangelands better building the resilience of communities to shocks and stresses, and for global and advocacy work related to this. It will be a platform for monitoring rangelands and interventions targeting them including those anticipated in the Global Environment Facility project STELARR (Sustainable Investments for Large-Scale Rangeland Restoration) implemented by the International Union for Conservation of Nature (IUCN).

The data will also feed into a set of publications discussing the land use changes found and the impact of this on the resilience of local communities. Such global data are vital for use in global processes and initiatives such as the UN Decade of Ecosystem Restoration, the anticipated International Year of Rangelands and Pastoralists as well as for development agencies such as IFAD and advocacy networks such as Livestock Data for Decisions (LD4D).

Over the past 2-3 years, ILRI has collaborated extensively with a digital technical firm to define the framework for a cutting-edge, global data platform focused on rangelands. Through an intensive research, meticulous planning, and agile development, ILRI has worked hand in hand with the digital technical firm to shape and mould the underlying structure of the platform. This collaborative effort has yielded remarkable results, enabling ILRI to pave the way for the development of a comprehensive, state-of-the-art data infrastructure that spans across continents, bringing together a wealth of information and insights pertaining to rangeland ecosystems. By leveraging the expertise of the digital technical firm and drawing upon ILRI's extensive knowledge in livestock research and sustainable agriculture, the guidelines towards the development of a user-driven platform fostering the advancements in the realm of rangeland studies were established. With a focus on consolidating

rangelands data at global scale, ILRI and its partner have strived to design a platform that not only consolidates and integrates diverse datasets but also provides a user-friendly interface, empowering researchers, policymakers, and stakeholders worldwide to access, analyse, and derive meaningful conclusions on rangelands. Through this collaboration, ILRI has endeavoured to set up the scene for the creation of a globally recognized hub that facilitates interdisciplinary collaboration, encourages data-driven decision-making, and ultimately contributes to the sustainable management and conservation of rangelands on a global scale.

OBJECTIVE OF THE ASSIGNMENT

To establish and maintain for 28months years a global data platform on rangelands as *the* “go-to” information source on rangelands, with data made publicly available. It will include information on land use change and restoration. It will be a platform for monitoring rangelands and interventions targeting them.

SCOPE OF WORK

The scope of work includes:

1. To consolidate the objectives and goals of the Rangelands Data Platform. Determine the purpose of the platform, such as facilitating data sharing, supporting research initiatives, promoting sustainable management, or enabling policymaking.
2. To consolidate the specific requirements and needs of the platform's target audience, including researchers, policymakers, land managers, and other stakeholders.
3. To formulate a development plan. Break down the plan into phases, specifying key milestones, timelines, and resource requirements for each phase.
4. To design the platform architecture. Define the data model, database structure, user interface, and other technical aspects. Consider scalability, security, and interoperability to accommodate future growth and integration with other systems.
5. To develop the Minimum Viable Product (MVP) to provide a functional version of the platform with core features. Prioritize essential functionalities based on user needs and feedback. The MVP should be a simplified version that can be deployed and tested for usability and effectiveness.
6. To include visualization and analysis tools: The platform should provide robust tools for visualizing and analysing rangeland-related data. This can include interactive maps, charts, graphs, and statistical analysis capabilities to enable users to explore and interpret the data effectively.
7. To ensure security and privacy measures: The platform should prioritize the security and privacy of data, implementing appropriate measures to protect sensitive information and ensure data confidentiality. This includes authentication, authorization, and encryption mechanisms to safeguard user data.
8. To add to the MVP with land use change data focussing both in historic and monitoring aspects.
9. To develop and feed the MVP with an atlas for a rangeland's restoration opportunities map.
10. To conduct rigorous testing and gather feedback from potential users and stakeholders. Identify and address any bugs, usability issues, or performance concerns. Iteratively refine the platform based on user feedback to enhance its functionality and user experience.
11. Gradually add additional features and functionalities to the platform based on user feedback and the predefined development plan. Prioritize features based on their importance and potential impact.

12. To develop mechanisms to integrate diverse datasets from various sources into the platform. Establish data standards, protocols, and quality assurance procedures to ensure data accuracy, consistency, and interoperability.
13. To enhance User Interface: Continuously improve the user interface and user experience (UI/UX) based on feedback and usability testing. Aim for an intuitive and user-friendly interface that allows users to easily navigate, search, visualize, and analyse data.
14. To deploy the Rangelands Data Platform on a suitable infrastructure or cloud-based platform. Regularly maintain and update the platform to address security vulnerabilities, add new features, and improve performance.
15. Support the piloting of two national rangelands data platforms in two countries.

DURATION OF ASSIGNMENT, DUTY STATION, AND EXPECTED PLACES OF TRAVEL

Duration: 28 months from July 2023 – November 2025

FINAL PRODUCTS

Final products:

- Development plan report: A detailed plan that outlines the project phases, milestones, timelines, resource requirements, and dependencies.
 - MVP of the global rangelands data platform.
 - Testing and feedback report: Reports summarizing the results of user testing, including identified bugs, usability issues, and feedback from potential users and stakeholders.
 - Refined Platform: An updated version of the platform that incorporates changes and improvements based on user feedback, addressing identified issues, and enhancing the functionality and user experience.
 - Data Integration Mechanisms report: Documented procedures, protocols, and mechanisms for integrating diverse datasets from various sources into the platform, ensuring data accuracy, consistency, and interoperability.
- User manual: This documentation should guide users on how to effectively utilize the platform's features, troubleshoot common issues

PROVISION OF MONITORING AND PROGRESS CONTROLS			
Timeframe	Deliverables	Activities	Payment
1 week	Contract signed		25% payment
Within 1 month	Development plan report	Define the development milestones	-
Within 3 months	MVP of Global Rangelands Data platform	Develop MVP	25% payment
After 1 year of supporting the further development, functioning and maintenance of the platform	Testing and feedback report Refined Global Rangelands Data platform	Collect user feedback and implement corresponding upgrades	20% payment
After 2 years of supporting the further development, functioning and	Data Integration Mechanisms report	Consolidate user experience and datasets of the platform	20% payment

maintenance of the platform		Define mechanisms for inclusion of new datasets	
At end of assignment	Fully functional Global Rangelands Data Platform User manual	Main the platform, deliver user manual and train users in usage	10% payment
TOTAL	100%		

DEGREE OF EXPERTISE AND QUALIFICATIONS

Required qualifications

- Proven track record in developing geospatial data platforms for international organisations.
 - Great experience in doing spatial mapping of rangeland data including drawing from different types of data sources.
 - Sound technical knowledge of rangelands, pastoralism and preferably experience of working previously with organisations working in these.
 - Ability to communicate complex terminology and other in simple terms for different stakeholders.
- Experience with remote sensing data, and preferably linkages with organisations/agencies generating these data products

Recruitment Qualification

Experience:

At least 10 years' experience and proven track record in developing geospatial data platforms.

At least 10 years' experience and proven track record in developing EO-based geospatial data products.

At least 10 years' experience and proven track record in management of Earth Observation and environmental projects for international agencies and institutions.

REVIEW TIME REQUIRED		
Time frame	Deliverables	Review time required
3 months	MVP of Global Rangelands Data platform	1 week
1 year	Testing and feedback report Refined Global Rangelands Data platform	1 week
2 years	Data Integration Mechanisms report	1 week
28 months	Fully functional Global Rangelands Data Platform User manual	1 week