

GOVERNMENT OF KIRIBATI
POSITION DESCRIPTION

1. Ministry: Ministry of Environment, Lands and Agricultural Development		
2. Position Title: Chief GIS Officer	3. Salary Level: L6-5	4. Division: Land Management Division
5. Reports To: Director of Lands	6. Direct Reports: Deputy Director of Lands	
<p>7. Primary Objective of the Position: The main objectives for a GIS and Geospatial System to be established in MELAD are: to centralize and integrate diverse geospatial data for improved decision-making, enhance data accessibility, and support real-time monitoring of environmental and agricultural resources. The GIS-Geospatial system will aim to optimize resource management, support policy development with comprehensive analyses, and build GIS capacity among MELAD staff. It also will support on facilitating inter-departmental coordination, assessing and managing risks, and engaging stakeholders through clear and accessible geospatial insights.</p>		

8. Position Overview	
9. Financial:	10. Legal:
11. Internal Stakeholders: All divisions of MELAD	12. External Stakeholders: Line Ministries that have direct relationship with the role of the Chief GIS Officer, NGO's and Private Sectors, donor community etc.
<p>13. KEY ACCOUNTABILITIES(Include linkage to KDP, MOP and Divisional Plan)</p> <ul style="list-style-type: none"> ▪ KDP/KPA: ▪ MOP Outcome: <p><i>Under the supervision of the Director of the Land Management Division the GIS Specialist will be responsible for providing geospatial support to various divisions within MELAD, including land planning and management, coastal erosion analysis, agriculture monitoring, biodiversity, and environment analysis etc. The role involves data collection, geospatial analysis, mapping, and maintaining GIS databases to support decision-making processes and policy development. The GIS Specialist will also play a key role in managing spatial data, conducting environmental assessments, and supporting sustainable land and resource management initiatives in Kiribati.</i></p>	

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Key Result Area/Major Responsibilities	Major Activities/Duties	Performance Measures/Outcomes
<p>1. Geospatial Data Collection and Management</p>	<p>a. Collect, compile, and maintain geospatial data from various sources, including field surveys, satellite imagery, and public datasets.</p> <p>b. Develop and manage GIS databases to ensure data accuracy, consistency, and accessibility for all MELAD divisions.</p> <p>c. Coordinate with external agencies and partners for data sharing and integration to enhance geospatial data resources.</p>	<p>d. Land and agriculture Data are collected meeting predefined accuracy standards,</p> <p>e. A comprehensive GIS database developed, along with a strategic plan for regular updates to ensure data accuracy and relevance over time.</p> <p>f. Data sharing strategy/policy across MELAD Division and other Ministries developed</p>
<p>2. GIS Analysis and Mapping</p>	<p>a. Produce high-quality maps, reports, and visualizations to communicate geospatial information effectively to stakeholders.</p> <p>b. Conduct spatial analysis and modelling to support land management, coastal erosion studies, agricultural planning, biodiversity conservation, and environmental monitoring.</p> <p>c. Analyse geospatial data to identify trends, patterns, and relationships to inform decision-making and policy development.</p> <p>d. Monitoring of agricultural resources, including crop health, soil conditions, and water usage. It supports decision-making by providing up-to-date information on crop yields, pest infestations, and the impacts of climate change</p>	<p>a. Developed interactive web-based GIS dashboard that provides stakeholders with access to dynamic maps, detailed reports, and visual data presentations for easy interpretation.</p> <p>b. Predictive models for land planning and management, coastal erosion, identification of high-risk areas for biodiversity loss, and spatial plans for sustainable agricultural land use are developed.</p> <p>c. Prepared reports highlighting spatial trends in land use changes, identification of critical areas for conservation, and recommendations for policy interventions based on geospatial data insights.</p> <p>e. Real-time monitoring system for agricultural resources that delivers alerts and updates on crop health, soil moisture</p>

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		levels, and water usage efficiency, enabling timely interventions for better resource management.
3. Support Land and Natural Resource Management	<ul style="list-style-type: none"> a. Provide technical support in land use planning, zoning, and land allocation processes using GIS tools and methodologies. b. Assist in monitoring and assessing coastal erosion, land degradation, and environmental changes through geospatial analysis. c. Collaborate with the Biodiversity and Environment Divisions to map and monitor critical habitats, species distributions, and environmental impacts. d. Support geospatial analysis for agro-ecological zoning in close collaboration with other MELAD Divisions. 	<ul style="list-style-type: none"> a. GIS-based zoning maps and land use plans to guide land allocation decisions prepared. b. Generated land/coastal degradation and erosion risk maps and degradation assessment reports to inform mitigation strategies. c. Developed habitat maps and species distribution models for conservation planning. d. Developed agro-ecological zoning maps to optimize land use for sustainable agriculture.
4. Policy and Strategy Support with focus on Land Management and agriculture development and DRM	<ul style="list-style-type: none"> a. Contribute to the development policies, standards, and strategies to enhance the use of geospatial technology within MELAD. b. Support the integration of geospatial information into national and local policies, plans, and decision-making processes. c. Supports policymakers in zoning areas based on soil quality, topography, water availability, and environmental constraints, which is crucial for sustainable land management and agriculture planning. d. Monitoring of agricultural resources to 	<ul style="list-style-type: none"> a. Improved geospatial policy framework that enhances the adoption and effectiveness of GIS technology within MELAD. b. Greater incorporation of geospatial data into policy decisions, resulting in more informed and effective planning. c. Development of optimized zoning plans that guide sustainable land use and agricultural practices. d. Data-driven strategies for enhancing agricultural productivity and sustainability based on comprehensive resource monitoring. e. Enhanced risk management strategies

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	<p>support in the formulation of strategies for improving productivity and sustainability.</p> <p>e. Assess risks related to natural disasters like floods, droughts, and soil erosion, which are critical in land and agriculture management.</p> <p>f. Visualize and analyse spatial data, which is essential for informed decision-making in land management and agriculture development policies</p>	<p>and preparedness plans for natural disasters, improving resilience in land and agriculture management.</p> <p>f. Clear visualizations and analyses of spatial data that facilitate better decision-making and policy development in land management and agriculture.</p>
<p>5. Integrate GIS into DRM to support disaster management cycle: preparedness, response, recovery, and mitigation.</p>	<p>a. Risk assessment and hazard mapping involving GIS, remote sensing, field surveys, and historical records to identify and analyze areas at risk from natural disasters.</p> <p>b. Disaster preparedness and planning by facilitating evacuation planning and resource allocation through modelling different routes and identifying safe zones based on real-time data on hazards and infrastructure.</p> <p>c. Disaster response through integrating real-time data from sources like satellite imagery, weather updates, and social media feeds to provide situational awareness.</p> <p>d. Recovery and reconstruction after a disaster through development of detailed maps of damaged infrastructure and affected communities, guiding reconstruction efforts.</p> <p>e. Mitigation support leveraging GIS to identify and prioritize areas where risk reduction measures are most needed.</p>	<p>a. Risk Assessment and Hazard Mapping prepared based on geospatial data.</p> <p>b. Vulnerability Assessment mapping prepared based on primary data and remote sensing information.</p> <p>c. Preparedness and Planning mapping for DRM</p> <p>d. Propose DRM Mitigation Measures based on GIS analysis</p>

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<p>6. Capacity Building and Training</p>	<p>a. Conduct training sessions and workshops to build GIS capacity within MELAD divisions and among stakeholders.</p> <p>b. Develop user manuals, guidelines, and best practice documents to support the effective use of GIS tools and technologies.</p>	<p>a. Increased GIS proficiency and self-sufficiency among MELAD staff and stakeholders, leading to more effective use of GIS tools.</p> <p>b. Enhanced consistency and efficiency in GIS tool usage, supported by clear, accessible documentation and guidelines.</p>
<p>7. Project Support and Collaboration</p>	<p>a. Work closely with MELAD divisions on various projects, providing GIS support and expertise as required.</p> <p>b. Collaborate with external consultants, researchers, and stakeholders on geospatial projects related to land management, agriculture, environmental protection, and sustainable development.</p>	<p>a. Successful integration of GIS solutions into MELAD projects, improving project outcomes and decision-making.</p> <p>b. Production of comprehensive geospatial analyses and recommendations that advance land management and sustainability goals.</p>
<p>8. Technical Support and System Maintenance</p>	<p>a. Maintain and update GIS software, tools, and equipment to ensure reliable and efficient operations.</p> <p>b. Troubleshoot GIS-related issues and provide technical support to users across MELAD divisions</p>	<p>c. Enhanced operational efficiency and reliability of GIS systems, leading to uninterrupted support for data analysis and project execution.</p> <p>d. Resolved GIS issues promptly, resulting in minimized downtime and increased user satisfaction across MELAD divisions.</p>
<p>10. Key Challenges</p>		<p>11. Selection Criteria</p>
<ul style="list-style-type: none"> • Lack accurate information and GIS analysis. • Insufficient expertise among staff and the need for ongoing training to keep up with GIS and remote sensing advancements. • Lack of expertise on combining various data types and 		<p>11.1 PQR (Position Qualification Requirement):</p> <p>Education/Experience:</p> <ul style="list-style-type: none"> • Bachelor’s degree, preferable Master’s degree in Geographic Information Systems, Remote Sensing, Geomatics.

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ensuring the accuracy of remote sensing data.

- Lack of technology and inadequate infrastructure for effective data collection, processing, and transmission.
- Challenges in scaling GIS applications and adapting to rapid environmental changes and climate variability.
- Issues with monitoring specialized sectors (e.g., livestock health) and managing large volumes of data efficiently.
- Lack of effective collaboration and secure data sharing across MELAD divisions.
- Limited use of GIS and remote sensing applications integrated with environmental policies and regulatory requirements.

- 5 years proven experience in GIS data management, analysis, and mapping, preferably in land management, environmental, or agricultural contexts.
- Proficiency in GIS software such as ArcGIS, QGIS, or similar tools.
- Proficiency in Remote Sensing modelling and analysis
- Strong analytical skills with the ability to interpret complex geospatial data.
- Excellent communication and presentation skills, with the ability to convey technical information to non-technical audiences.
- Ability to work independently and as part of a team in a cross-functional and multicultural environment.
- Knowledge of the environmental and land management issues facing Kiribati is an asset.

11.2 Key Attributes (Personal Qualities):

- Experience in remote sensing, spatial modelling, or web-based GIS applications.
- Familiarity with GPS data collection and integration.
- Understanding of coastal processes, biodiversity conservation, and sustainable land management practices.

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