Training course on GIS and Remote Sensing for Monitoring Social Protection Outcomes

Professional Development Training Course Outline

Category	Social Protection	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Geographic Information Systems (GIS) and Remote Sensing for Monitoring Social Protection Outcomes is an innovative and powerful discipline that leverages spatial data and satellite imagery to enhance the precision, efficiency, and reach of social protection programs. Traditional monitoring and evaluation (M&E) often lack the spatial dimension, making it challenging to understand geographical disparities in vulnerability, service access, and program impact. This course equips participants with the advanced theoretical and practical tools to integrate "where" with "what," enabling them to visualize, analyze, and interpret spatial patterns of poverty, vulnerability, and program outcomes. It recognizes that geospatial intelligence is key to optimizing resource allocation, improving targeting, and fostering more equitable and responsive social protection systems. Training Course on GIS and Remote Sensing for Monitoring Social Protection Outcomes is meticulously designed to equip with the advanced theoretical insights and intensive practical tools necessary to excel in GIS and Remote Sensing for Monitoring Social Protection Outcomes. We will delve into the foundational concepts of geospatial data, master the intricacies of spatial analysis techniques, and explore cutting-edge applications of satellite imagery for poverty mapping, vulnerability assessment, and real-time monitoring. A significant focus will be placed on hands-on application using leading GIS software (e.g., QGIS, ArcGIS basics), integrating diverse data sources, and understanding the ethical considerations of using location-based data. By integrating industry best practices, analyzing real-world complex social protection case studies, and engaging in intensive practical exercises, attendees will develop the strategic acumen to confidently champion and implement GIS and remote sensing solutions, fostering unparalleled precision, equity, and evidence-informed decision-making in social protection.

Programme Curriculum

Training Course on GIS and Remote Sensing for Monitoring Social Protection Outcomes

Introduction

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Course Objectives

Upon completion of this course, participants will be able to:

1. Analyze the fundamental concepts of **GIS and Remote Sensing** and their relevance to social protection.
2. Comprehend the strategic importance of **geospatial data for monitoring social protection outcomes**.
3. Master the principles of **spatial data acquisition, management, and quality control**.
4. Develop expertise in performing **fundamental spatial analysis techniques** for social protection.
5. Formulate strategies for utilizing **remote sensing data (satellite imagery)** for poverty and vulnerability assessment.
6. Understand the critical role of **integrating social protection program data with geospatial layers**.
7. Implement robust approaches to **designing interactive web maps and dashboards** for spatial insights.
8. Explore key strategies for ensuring **data privacy, security, and ethical use of location-based data**.
9. Apply methodologies for **spatial targeting and service delivery optimization** in social protection.
10. Understand the application of GIS and Remote Sensing in **shock-responsive social protection** and humanitarian aid.
11. Develop preliminary skills in **using GIS software** (e.g., QGIS) for practical applications.
12. Design a comprehensive **GIS and Remote Sensing M&E plan** for a social protection program.
13. Develop expertise in performing basic spatial analysis operations

Target Audience

This course is essential for professionals seeking to leverage geospatial technologies for social protection:

1. **M&E Specialists & Data Analysts:** Responsible for monitoring and evaluating social protection.
2. **Social Protection Program Managers:** Leading program design and implementation.
3. **Urban Planners & Geographers:** Applying spatial skills to social development.
4. **Government Officials:** From ministries of social welfare, planning, and statistics.

5. **Development Practitioners:** From NGOs and international organizations.
6. **Researchers & Academics:** Studying spatial dimensions of poverty and social policy.
7. **Humanitarian Actors:** Involved in emergency response and vulnerability mapping.

Course Duration: 10 Days

Course Modules

Module 1: Foundations of GIS and Remote Sensing

- Define Geographic Information Systems (GIS) and its core components.
- Explain the basics of Remote Sensing and how satellite imagery is acquired.
- Differentiate between raster and vector data models in GIS.
- Discuss common spatial data formats (e.g., shapefiles, GeoJSON).
- Overview of the relevance of GIS/Remote Sensing for social protection.

Module 2: Geospatial Data Acquisition and Management

- Master techniques for acquiring geospatial data (GPS, digitization, open sources).
- Learn methods for collecting ground truth data for remote sensing.
- Understand geocoding: converting addresses to geographic coordinates.
- Explore data quality issues in geospatial data and how to address them.
- Discuss best practices for organizing and managing spatial datasets.

Module 3: Fundamental Spatial Analysis Techniques

- Develop expertise in performing basic spatial analysis operations.
- Learn to use geoprocessing tools (e.g., clip, dissolve, merge, buffer).
- Understand overlay analysis for combining multiple spatial layers.
- Explore proximity analysis for service accessibility mapping.
- Practice fundamental spatial analysis in GIS software.

Module 4: Advanced Spatial Analysis for Social Protection

- Formulate strategies for advanced spatial analysis techniques.
- Learn about hotspot analysis for identifying clusters of need or impact.
- Understand spatial interpolation methods (e.g., Kriging, IDW) for estimating values.
- Explore network analysis for optimizing service delivery routes.
- Discuss spatial regression models for analyzing spatial relationships.

Module 5: Remote Sensing for Poverty and Vulnerability Assessment

- Understand how satellite imagery can be used for poverty mapping.
- Explore the use of night-time lights data as a proxy for economic activity.
- Discuss vegetation indices (e.g., NDVI) for rural vulnerability assessment.
- Learn about built-up area indices for urban development monitoring.
- Analyze case studies of remote sensing for vulnerability assessment.

Module 6: Integrating Social Protection Program Data with Geospatial Layers

- Understand the critical role of linking program data to geographic locations.

- Learn techniques for geocoding beneficiary addresses and payment points.
- Discuss integrating social registries with spatial data for targeting.
- Explore mapping program coverage and service delivery gaps.
- Analyze the benefits of a unified spatial database for social protection.

Module 7: Designing Interactive Web Maps and Dashboards

- Implement robust approaches to designing interactive web maps.
- Learn to create dynamic dashboards for real-time spatial monitoring.
- Understand principles of effective cartographic design for social protection maps.
- Explore tools for sharing interactive maps online (e.g., ArcGIS Online, QGIS Cloud).
- Practice building interactive spatial dashboards.

Module 8: Data Privacy, Security, and Ethical Considerations

- Explore key strategies for ensuring data privacy in geospatial applications.
- Understand the ethical implications of using location-based data on vulnerable populations.
- Discuss techniques for data anonymization and aggregation to protect identities.
- Learn about legal and regulatory frameworks for geospatial data (e.g., GDPR, national DPA).
- Address surveillance concerns and ensure responsible data use.

Module 9: GIS and Remote Sensing in Shock-Responsive SP

- Apply methodologies for using GIS/Remote Sensing in crisis contexts.
- Understand rapid damage assessment using satellite imagery after disasters.
- Learn to map displaced populations and humanitarian needs.
- Explore the use of geospatial data for early warning systems.
- Discuss how GIS supports adaptive management in emergencies.

Module 10: Capacity Building and Institutionalization

- Understand the importance of building GIS capacity within social protection agencies.
- Discuss strategies for training staff in GIS and remote sensing.
- Explore institutional arrangements for managing geospatial data.
- Advocate for investment in GIS infrastructure and software.
- Learn about establishing partnerships for geospatial expertise.

Module 11: Advanced Applications and Future Trends

- Explore advanced applications of GIS and Remote Sensing.
- Discuss the integration of AI/Machine Learning with geospatial data.
- Learn about using drones (UAVs) for high-resolution data collection.
- Consider the role of real-time satellite data for dynamic monitoring.
- Examine emerging trends in geospatial technology for social protection.

Module 12: Practical Application and Case Studies

- Engage in a comprehensive group exercise to design a GIS/Remote Sensing M&E plan for a social protection program.
- Analyze real-world challenges in applying GIS/Remote Sensing and brainstorm solutions.
- Discuss lessons learned from diverse country contexts regarding geospatial successes.
- Present and receive feedback on developed plans and maps.

- Collaborate on a project to map social protection outcomes using open-source data.

Training Methodology

- **Interactive Workshops:** Facilitated discussions, group exercises, and problem-solving activities.
- **Case Studies:** Real-world examples to illustrate successful community-based surveillance practices.
- **Role-Playing and Simulations:** Practice engaging communities in surveillance activities.
- **Expert Presentations:** Insights from experienced public health professionals and community leaders.
- **Group Projects:** Collaborative development of community surveillance plans.
- **Action Planning:** Development of personalized action plans for implementing community-based surveillance.
- **Digital Tools and Resources:** Utilization of online platforms for collaboration and learning.
- **Peer-to-Peer Learning:** Sharing experiences and insights on community engagement.
- **Post-Training Support:** Access to online forums, mentorship, and continued learning resources.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

- Participants must be conversant in English.
- Upon completion of training, participants will receive an Authorized Training Certificate.
- The course duration is flexible and can be modified to fit any number of days.
- Course fee includes facilitation, training materials, 2 coffee breaks, buffet lunch, and a Certificate upon successful completion.
- One-year post-training support, consultation, and coaching provided after the course.
- Payment should be made at least a week before the training commencement to Fineskill Training Center account, as indicated in the invoice, to enable better preparation.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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