Training Course on GIS for Non-Profit and Humanitarian Organizations

Professional Development Training Course Outline

Category	GIS	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Geographic Information Systems (GIS) represent a transformative **spatial intelligence** tool for **non-profit organizations (NPOs)** and **humanitarian aid** agencies. In an increasingly complex global landscape, where crises and development challenges demand data-driven and spatially informed responses, GIS provides unparalleled capabilities for **situational awareness**, **resource optimization**, and **impact assessment**. Training Course on GIS for Non-Profit and Humanitarian Organizations is meticulously designed to empower professionals with the essential **geospatial skills** to leverage GIS for enhanced **program efficiency**, **community resilience**, and ultimately, a greater positive **humanitarian impact**.

From **disaster response** and **vulnerability mapping** to **logistics management** and **monitoring and evaluation (M&E)**, GIS offers a visual and analytical framework to understand complex spatial patterns. This training will bridge the gap between traditional operational methods and cutting-edge **geospatial technology**, enabling NPOs and humanitarian actors to make more informed decisions, improve **operational planning**, and communicate their work with compelling **geographic visualizations**. Participants will gain practical expertise in utilizing leading **GIS software** and **open-source mapping tools** to address real-world challenges faced by the sector.

Programme Curriculum

Training Course on GIS for Non-Profit and Humanitarian Organizations

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Course Duration

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Course Objectives

1. Develop proficiency in **data acquisition**, **data cleaning**, and **database management** for diverse humanitarian datasets.
2. Apply advanced **spatial analysis techniques** for **needs assessment**, **vulnerability mapping**, and **risk assessment** in humanitarian contexts.
3. Create compelling **cartographic products** and **interactive web maps** to effectively communicate program reach, gaps, and impact.
4. Utilize GIS for **logistics optimization**, **supply chain mapping**, and efficient **resource distribution** in emergency and development settings.
5. Implement GIS for **early warning systems**, **damage assessment**, and **emergency coordination**.
6. Leverage **mobile GIS applications** and **field data collection tools** for real-time data capture and situational awareness.
7. Understand the use of **satellite imagery** and **drone mapping** for rapid assessment and monitoring in inaccessible areas.
8. Integrate GIS into **M&E systems** to track program indicators, measure progress, and evaluate outcomes geographically.
9. Comprehend and apply best practices for **data privacy**, **data protection**, and **ethical data handling** in sensitive humanitarian operations.
10. Gain hands-on experience with popular **open-source GIS software** (e.g., QGIS) for cost-effective and sustainable geospatial solutions.
11. Explore **GIS modeling** techniques for forecasting humanitarian needs, disease outbreaks, and population movements.
12. Understand how GIS promotes **information sharing** and **coordinated efforts** among diverse humanitarian stakeholders.
13. Create impactful **geospatial narratives** and **story maps** to engage donors, policymakers, and the public.

Organizational Benefits

- Data-driven insights from spatial analysis lead to more informed and effective programmatic and operational decisions.
- Optimized deployment of personnel, supplies, and funds, reducing waste and increasing efficiency.

- Better targeting of interventions to vulnerable populations and areas of greatest need.
- Visual and verifiable evidence of activities and impact for stakeholders and donors.
- Rapid assessment and coordination capabilities during crises, saving lives and alleviating suffering.
- A common operational picture facilitates seamless information exchange among teams and partners.
- Leveraging open-source tools and efficient planning reduces operational expenditures.
- Proactive identification and analysis of hazards and vulnerabilities.
- Organizations equipped with advanced GIS skills are better positioned for funding and partnerships.
- Support for long-term planning and monitoring of development initiatives.

Target Audience

1. Program Managers and Coordinators in NGOs and humanitarian organizations.
2. Monitoring and Evaluation (M&E) Officers.
3. Information Management Officers.
4. Field Officers and Frontline Responders.
5. Data Analysts and Researchers.
6. Decision-makers and Leaders.
7. Advocacy and Communications Specialists.
8. IT Professionals

Course Outline

Module 1: Introduction to GIS in Humanitarian & Non-Profit Contexts

- Understanding the fundamental concepts of GIS and its relevance to humanitarian aid and development.
- Exploring the power of spatial thinking in addressing complex social and environmental issues.
- Overview of typical GIS workflows in humanitarian operations: data acquisition, management, analysis, and visualization.
- Introduction to key GIS software: QGIS (Open Source) and its interface.
- Discussion on the ethical considerations of using spatial data in sensitive contexts.
- **Case Study:** The role of GIS in the Ebola crisis response in West Africa – mapping confirmed cases, contact tracing, and resource allocation.

Module 2: Geospatial Data Fundamentals & Acquisition

- Understanding different types of geospatial data: vector and raster data.
- Sources of humanitarian spatial data: OpenStreetMap, HDX, satellite imagery providers, crowd-sourcing platforms.
- Techniques for data acquisition: GPS devices, mobile data collection apps, digitizing maps.
- Data quality and validation: ensuring accuracy, completeness, and consistency of spatial data.
- Introduction to coordinate systems and map projections, and their importance in data integration.
- **Case Study:** Collecting baseline data for post-disaster needs assessment in a hurricane-affected region using mobile data collection tools.

Module 3: Data Management & Database Design for GIS

- Principles of effective spatial database design for humanitarian projects.

- Organizing and managing attribute data linked to spatial features.
- Performing data cleaning, transformation, and integration from various sources.
- Introduction to geodatabases and their role in structured data management.
- Querying and filtering spatial and non-spatial data to extract relevant information.
- **Case Study:** Designing a database to track displaced populations, shelter locations, and aid distribution points in a conflict zone.

Module 4: Spatial Analysis Techniques for Impact & Needs Assessment

- Proximity analysis: buffering, nearest neighbor analysis for service accessibility.
- Overlay analysis: combining multiple data layers to identify areas of overlap or unique characteristics.
- Density mapping and heatmaps for visualizing concentrations of populations or incidents.
- Network analysis: route optimization for logistics, accessibility analysis for critical services.
- Introduction to geostatistics for understanding spatial patterns and distributions.
- **Case Study:** Identifying underserved communities in a rural health program by analyzing the spatial distribution of health facilities and population density.

Module 5: Cartography & Map Production for Communication

- Principles of effective map design for clarity, impact, and audience understanding.
- Choosing appropriate symbology, color schemes, and labeling for different data types.
- Creating thematic maps: choropleth, proportional symbol, dot density maps.
- Designing map layouts: integrating titles, legends, scale bars, and north arrows.
- Exporting maps for various outputs: print, web, and presentations.
- **Case Study:** Developing a series of maps to illustrate the impact of a drought on agricultural production and food security for a donor report.

Module 6: Mobile GIS & Field Data Collection

- Utilizing smartphone applications for GPS data collection and geotagging photos.
- Designing and deploying survey forms for mobile data collection platforms
- Real-time data synchronization and visualization from the field to the office.
- Offline mapping capabilities for remote areas with limited internet connectivity.
- Best practices for training field teams on mobile data collection tools.
- **Case Study:** Rapid damage assessment post-earthquake using mobile data collection by field teams to map affected buildings and infrastructure.

Module 7: Remote Sensing & Drone Applications

- Introduction to remote sensing principles and types of satellite imagery.
- Applications of satellite imagery in humanitarian contexts: damage assessment, displacement monitoring, land use change.
- Basic image interpretation techniques: identifying features, land cover classification.
- Overview of drone technology for localized aerial mapping and rapid assessment.
- Ethical considerations and best practices for using drones in humanitarian settings.
- **Case Study:** Using pre- and post-disaster satellite imagery to assess flood extent and damaged infrastructure for recovery planning.

Module 8: Advanced GIS & Future Trends

- Introduction to web GIS platforms for sharing and collaborating on spatial data online.
- Building interactive web maps and story maps for public engagement and advocacy.

- Brief introduction to programming for GIS
- Emerging trends: AI/Machine Learning in GIS, Big Data for humanitarian analysis, 3D GIS.
- Developing a strategic roadmap for integrating GIS into organizational operations and long-term planning.
- **Case Study:** Creating an interactive online dashboard visualizing real-time humanitarian needs and intervention progress for regional coordination.

Training Methodology

This training course will adopt a highly **interactive** and **hands-on** methodology, ensuring practical skill acquisition. It will combine:

- **Instructor-Led Presentations:** Clear explanations of core GIS concepts and principles.
- **Practical Software Exercises:** Extensive hands-on sessions using **QGIS** (open-source) and other relevant tools, with guided step-by-step instructions.
- **Real-World Case Studies:** In-depth analysis and discussion of actual humanitarian and non-profit scenarios where GIS has been effectively applied.
- **Group Work and Collaborative Projects:** Participants will work in teams on mini-projects to solve simulated challenges.
- **Q&A and Discussion Sessions:** Open forums for clarification, problem-solving, and sharing experiences.
- **Demonstrations:** Live demonstrations of advanced GIS functionalities and workflows.
- **Resource Sharing:** Provision of comprehensive training manuals, datasets, and links to online 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

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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