# Training Course on GIS and Statistical Analysis for WASH Programmes

Professional Development Training Course Outline

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

## Course Introduction

Geographic Information Systems (GIS) and statistical analysis are pivotal tools in enhancing the effectiveness of Water, Sanitation, and Hygiene (WASH) programs. The GIS and Statistical Analysis for WASH Programmes Training Course is designed to equip professionals with the essential skills required to analyze and interpret spatial data and statistical information to improve WASH interventions. By combining the power of GIS with statistical tools, this course will help participants understand the geographic factors influencing WASH program outcomes and enable data-driven decision-making.

WASH programs rely heavily on precise data to allocate resources, track progress, and address challenges related to water access, sanitation infrastructure, and hygiene behavior. GIS provides critical spatial insights that help map out resources, identify vulnerable areas, and plan interventions more effectively. When combined with statistical analysis, GIS offers a robust framework for understanding the impact of WASH programs, ensuring the interventions are both effective and sustainable.

## Programme Curriculum

**Training Course on GIS and Statistical Analysis for WASH Programmes**

**Introduction**

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The course covers essential GIS tools and techniques, such as mapping, spatial analysis, and the integration of GIS with statistical software. Participants will learn how to analyze spatial and non-spatial data to identify trends and correlations, helping them to evaluate the impact of WASH programs on local communities. By the end of the training, professionals will be proficient in using GIS and statistical tools for data analysis, program monitoring, and reporting.

This course is tailored to professionals working in the WASH sector who seek to enhance their data management and analytical capabilities. From local governments and NGOs to private sector organizations, the skills learned in this training will empower participants to improve program delivery, impact, and resource optimization in WASH initiatives.

**Course Duration**

5 Days

**Course Objectives**

1. Understand the role of GIS and statistical analysis in WASH program planning and evaluation.
2. Learn to collect and manage spatial and non-spatial data relevant to WASH programs.
3. Master GIS tools for mapping, spatial analysis, and data visualization in WASH contexts.
4. Perform statistical analysis on WASH data to assess program effectiveness.
5. Integrate GIS with statistical software for comprehensive data analysis.
6. Apply statistical methods to evaluate water access, sanitation, and hygiene behaviors.
7. Develop spatial models to forecast future WASH needs and program impacts.
8. Use GIS to identify gaps in WASH infrastructure and plan interventions.
9. Interpret data insights and communicate findings to stakeholders effectively.
10. Implement GIS-based monitoring and evaluation techniques for continuous program improvement.

**Organizational Benefits**

1. Improved decision-making through data-driven insights into WASH program performance.
2. Enhanced capacity for mapping and spatial analysis to identify underserved areas.
3. Streamlined resource allocation based on spatial and statistical data.
4. Increased efficiency in monitoring and evaluating WASH program outcomes.

5. Better communication of program results through maps and statistical reports.
6. Enhanced ability to assess program impacts and make necessary adjustments.
7. Stronger integration of GIS and statistical tools in program management.
8. Empowered staff with advanced skills in GIS and statistical analysis.
9. More effective targeting of interventions to areas with the greatest need.
10. Strengthened organizational credibility through data-backed evidence of program success.

**Target Participants**

- WASH program managers and coordinators.
- Monitoring and evaluation (M&E) officers in water and sanitation sectors.
- GIS specialists working in the development sector.
- Data analysts and statisticians in WASH programs.
- Public health professionals focused on waterborne diseases and sanitation.
- NGOs, local governments, and development agencies implementing WASH projects.
- Environmental scientists and geographers working on WASH-related research.
- Urban planners involved in water and sanitation infrastructure.
- Students and professionals interested in GIS and statistics for public health and development.
- Consultants and researchers involved in WASH assessments and evaluations.

**Course Outline**

**Module 1: Introduction to GIS and Spatial Analysis for WASH**

1. Overview of GIS and its relevance to WASH programs.
2. Key GIS concepts: Layers, spatial data, and mapping.
3. Collecting and managing geographic data for WASH projects.
4. Mapping water access, sanitation facilities, and hygiene infrastructure.
5. Case study: GIS mapping of water scarcity in rural communities.

**Module 2: Statistical Analysis for WASH Data**

1. Descriptive statistics and data visualization techniques for WASH data.
2. Statistical methods for assessing water access and sanitation coverage.
3. Sampling techniques and data collection for WASH assessments.
4. Statistical modeling and correlation analysis in WASH contexts.
5. Case study: Statistical analysis of hygiene behavior patterns in a region.

**Module 3: Integrating GIS with Statistical Software**

1. Introduction to GIS software and statistical tools.
2. Importing and exporting data between GIS and statistical programs.
3. Spatial analysis techniques using GIS and statistics together.
4. Visualizing results: Creating integrated maps and graphs.
5. Case study: Combining GIS and statistics to evaluate a WASH program’s impact.

**Module 4: Spatial Data Analysis for WASH Program Planning**

1. Identifying patterns and trends in WASH data using spatial analysis.
2. Mapping infrastructure needs and gaps in WASH services.
3. Geographic clustering and hotspots in water and sanitation access.
4. Forecasting WASH needs using spatial models.
5. Case study: Spatial analysis to identify water scarcity hotspots in urban areas.

**Module 5: Monitoring and Evaluation (M&E) in WASH Using GIS and Statistics**

1. M&E frameworks for WASH programs.
2. Using GIS for real-time monitoring of WASH projects.
3. Statistical methods for evaluating WASH outcomes.
4. Visualizing M&E data: Interactive maps and dashboards.
5. Case study: M&E of a sanitation program in a peri-urban setting.

**Module 6: Reporting and Stakeholder Engagement Using GIS and Statistics**

1. Creating effective reports with GIS maps and statistical findings.
2. Presenting data insights to stakeholders through maps, charts, and graphs.
3. Communicating program outcomes and impact through visual storytelling.
4. Engaging stakeholders using GIS-driven data visualizations.
5. Case study: Reporting results to donors and government agencies for continued funding.

**Training Methodology**

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

**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**