GIS for Epidemiology

Day 2 of Geospatial Technology for Public Health Policy Workshop *May 27–29, 2024 — GISE Hub, IIT Bombay@Central University Gujarat (CUG), Gandhinagar*

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Welcome

- Welcome to the Day 2 of **Geospatial Technology for Public Health Policy** Workshop!
- The goal for today is to highlight the applications of GIS in Epidemiology while providing the foundational concepts in Spatial Epidemiology.
- The workshop introduces the participants to the field of Spatial Data Science through the statistical programming language R.
- The workshop is intended as an introductory window into the world of spatial data analysis and visualization for public health policy.
- Workshop materials in the github repository GIS4EPI-Workshop

Learning Objectives for the Workshop

At the end of the day, participants will be able to:

- Understand and Apply Foundational Concepts in Spatial Epidemiology:
- Utilize Tools and Techniques for Spatial Data Analysis and Spatial Data Science
- Implement Best Practices for Reproducible Spatial Data Research
- Analyze and Interpret Spatial Data for Public Health Applications
- Explore the applications of spatial epidemiology in public health research and practice
- Gain hands-on experience with spatial data analysis and visualization

Schedule

Time	Session	Topic
10:00 - 10:50	Session1a	Foundational Concepts in Spatial Epidemiology
		Bio-Break
11:00 - 11:50	Session 1b	Introduction to Spatial Data Science using R
		Bio-Break
12:00 - 12:50	Session 1c	Investigating an Outbreak: Applications of Spatial Epidemiology
		Lunch
14:00 - 14:50	Session 2a	Spatial Data Visualization: Principles and Best Practices
		Bio-Break
15:00 - 15:50	Session 2b	Case Studies: Spatial Data Analysis and Visualization
		Bio-Break
16:00 - 16:50	Session 2c	Hands-on Exercises
16:50 - 17:00		*Q&A Session*

In preparation for the workshop

Participants are required to go through the workshop pre-requisites before the commencement of the workshop. This document provides a brief overview of the requisite concepts and provides a step-by-step tutorial on how to install the tools required for the workshop.