

Data Analysis in Geography

Data Analysis in geography refers to the systematic process of organising, processing, interpreting and presenting geographical data to identify patterns, relationships, trends and spatial variations. Geographical data are collected through surveys, fieldwork, census records, maps, RS, GPS, questionnaires and other sources. Raw data alone may not provide meaningful information. Data analysis converts raw data into useful geographical information.

For eg: Population data of different districts can be analysed to determine population density, growth, distribution and regional disparities.

Qualitative Analysis: content analysis, thematic analysis, perception analysis

Qualitative analysis deals mainly with non-numerical information, such as opinions, perceptions, experiences and observations. Qualitative research frees itself from the quantification process. It concerns gathering or working with text, images or sounds. The information is commonly generated from interviews, survey questions, journals, recorded observations, existing documents, field notes, conversations, photographs, recordings, memos and diaries.

Geographers have analysed such material in the past by coding it manually with pen and paper. In recent years computer packages, such

as Computer Assisted Qualitative Data Analysis Software (CAQDAS), have come into use for the purpose. These assist in three elements of the analytical process - data ordering, interpretation and project management. Qualitative analysis of data is done using different approaches with no clearly agreed rules or procedures for such an analysis.

Content Analysis: Content analysis is a systematic method of examining geographical information contained in interviews, government reports, maps, photographs, newspapers, policy documents and other sources to identify categories, patterns and meanings. It apply in analysing land-use policies and urban development plans. Studying media representations of natural disasters. Examining reports on climate change and environmental degradation. For eg: A researcher studies newspaper reports about floods in Assam. The reports are classified into categories such as flood damage, displacement, government response, agricultural losses and rehabilitation.

Thematic Analysis: Thematic analysis is a method of identifying, analysing, and interpreting recurring themes in qualitative geographical data, particularly data collected through interviews, field observations, focus groups and open-ended questionnaires. Thematic analysis helps to explain the social, economic, cultural and environmental dimensions of geographical processes and how they affect different communities and places.

perception analysis: perception analysis examines how individuals and communities understand, interpret, and evaluate geographical environments, places, landscapes and spatial conditions. It is particularly important in behavioural geography and environmental perception studies. perception analysis helps explain how people's understanding of geographical space influences their behaviour, mobility, settlement choices, environmental decisions and responses to hazards.