

Natural Disasters and Complex Emergencies: Geo-Referencing their Human Impacts

David Hargitt & Antonio Zugaldia



Centre for Research on the Epidemiology of Disasters (CREED)

- Impacts of Natural Disasters
- Conflict and Health Research
- Database and Information Support
- Capacity Building and Training



EM-DAT: The International Disaster Database

- Occurrence & Impacts of disasters
- Natural & technological disasters
- 1900 to today
- Inclusion criteria
- National Resolution

www.emdat.be



EM-DAT Outputs:

Centre for Research on the Epidemiology of Disasters

THIRTY YEARS OF NATURAL DISASTERS 1974-2003: THE NUMBERS

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UNIVERSITÉS
DE LOUVAIN

Centre for Research on the Epidemiology of Disasters (CRED)

CRED CRUNCH

"Disaster Data: A Balanced Perspective" Mar 2005

The Centre for Research on the Epidemiology of Disasters (CRED) is pleased to present its first CRED CRUNCH publication. As part of our objective of providing the international community with more statistics for the worldwide assessment and impact of disasters, we are pleased to share our comprehensive research report with the prepared and unprepared in equal measure.

	2004	1994-2004
No. of disasters	206	2022
No. of countries affected	120	150
No. of people affected	2,248,140	200,000,000
Total population affected	2,248,140	200,000,000
Estimated economic losses	123,514,100,000	15,500,000,000

2004 was clearly dominated by the Indian Ocean tsunami which accounted for nearly 80% of all reported deaths from natural disasters. By the end of the year, the global response to the disaster was unprecedented, with an influx of disaster pledges from donor nations as well as from the international scientific, engineering and support firms around the world.

As a disaster does strike, from development projects in progress, relief and recovery, the issues highlighted in this report are the need for the improvement of disaster planning, development projects, strengthening the resilience of disaster risk environment in high vulnerability areas and the building of disaster response and disaster preparedness and response.

The implementation of disaster preparedness, through cooperation, is not one of disaster preparedness and response. The idea of being prepared for the response to disasters calls for the improvement of building and response to prevent other major preparedness, response preparedness and disaster relief management services.

Finally, the information relief funds that were provided to the affected countries for disaster relief and recovery, and the disaster preparedness for the world, are the main objectives of the disaster preparedness of these countries in the world.

Dr. Christian Guha-Sapir
Director

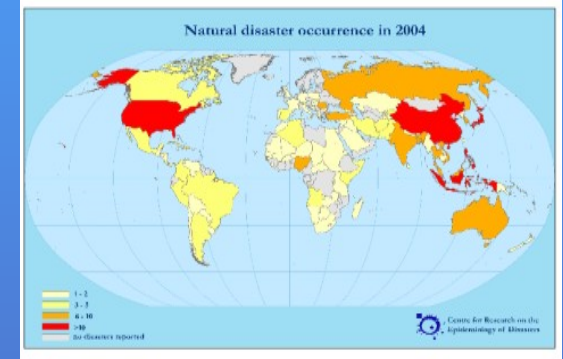
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Annual Disaster Statistical Review

The Numbers and Trends 2007

J.M. Scheuren
O. le Polain de Waroux
R. Below
D. Guha-Sapir
S. Ponserre*



World Disasters Report

Focus on community resilience

International Federation of Red Cross and Red Crescent Societies

United Nations Development Programme

UNDP

REDUCING DISASTER RISK

A GLOBAL REPORT

A CHALLENGE FOR DEVELOPMENT

ISDR

Living with Risk

A global review of disaster reduction initiatives

2004 Version • Volume I

United Nations

Natural Disaster Hotspots

A Global Risk Analysis

THE WORLD BANK



CE-DAT: The Complex Emergency Database

- Compilation of Field Surveys
- Epidemiological Indicators
 - Mortality Rates
 - Malnutrition Rates
 - Vaccination coverage
- Geo-referenced using longitude/latitude

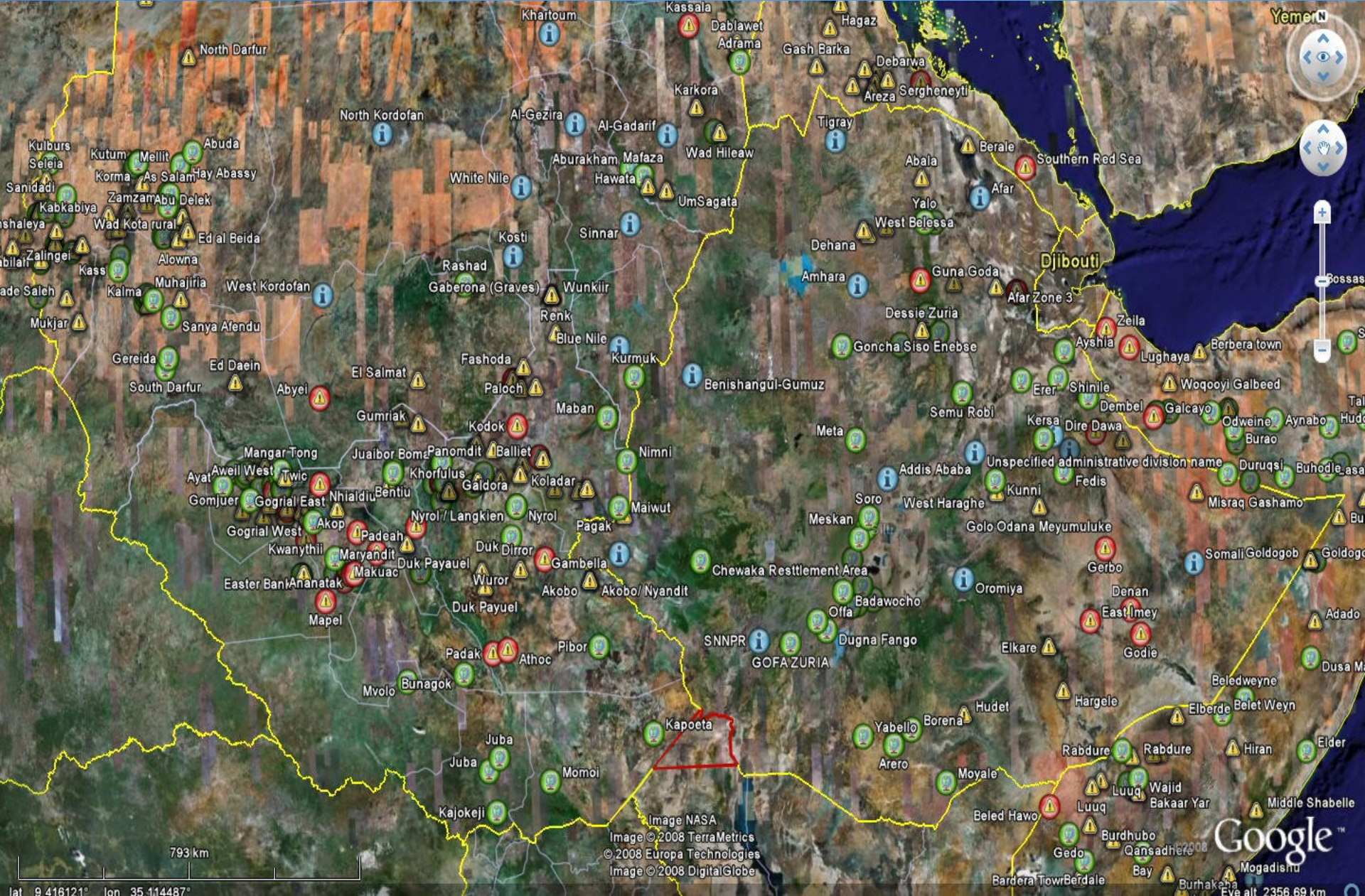
www.cedat.be



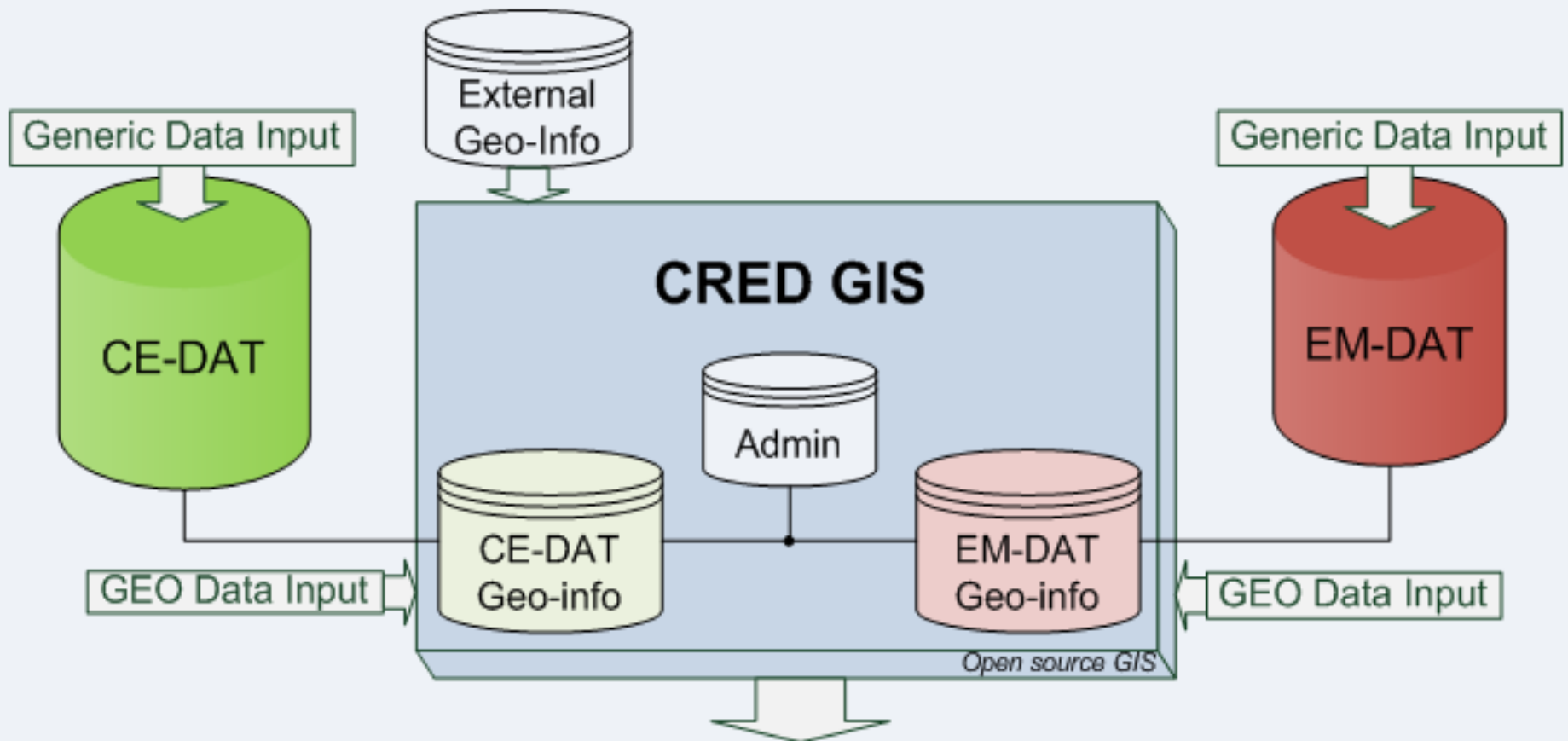
CE-DAT Outputs:



Acute malnutrition In the Horn of Africa



From Points to Polygons



- Maps
- Web-integrated geo-services
- Geo-statistical analyses
- Added values for the databases and improved services

From Points to Polygons

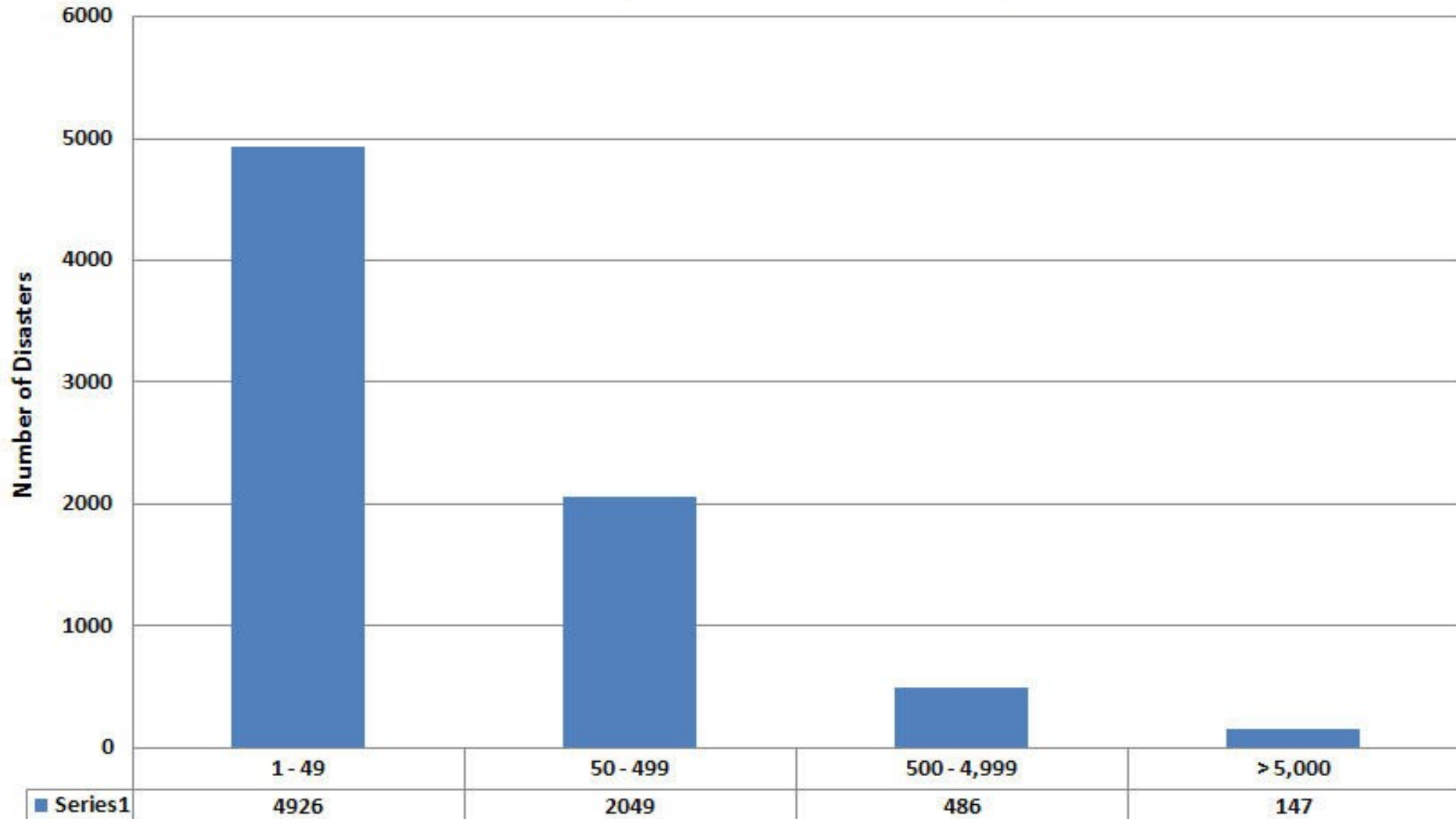
- Software: PostGIS stack
- Multiple Geocoders
- Datasets:
 - FAO GAUL Dataset
 - WHO/UNICEF DRC Health Zones
 - WFP/VAM Livelihood Zones
- Custom data entry interfaces



Space technology & EM-DAT

Disaster footprints

Disaster Occurrence by Numbers of Persons Reported Killed



From Satellites to the Field: Bridging the gap

- Tracking displaced populations
- Population distribution/densities
- Sampling methods



Space technology & CE-DAT

Sampling methods

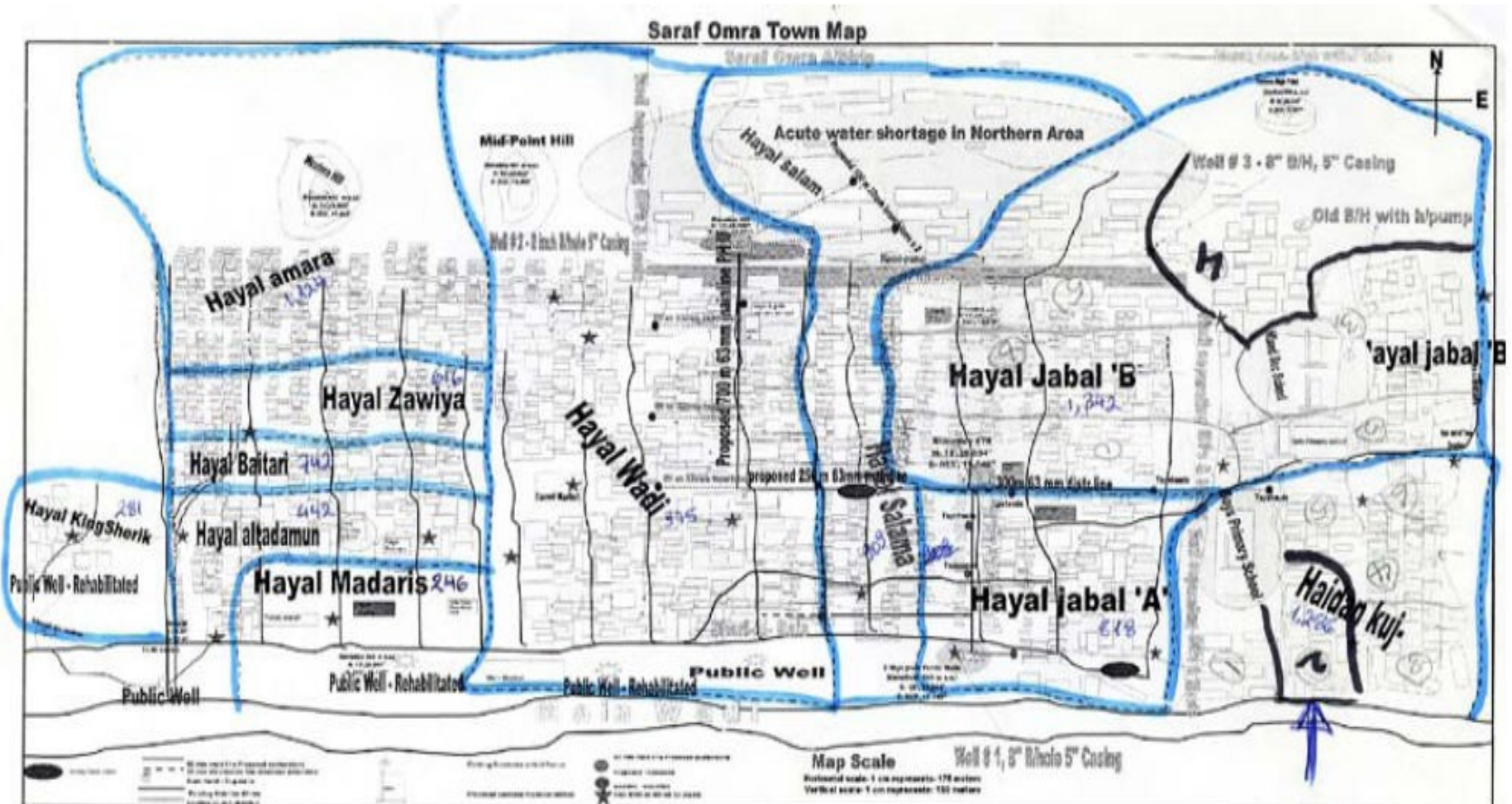


Figure 2.1 – Sampling procedure (geographical segmentation)

Thank you

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