



Support to the Israeli Central Bureau of Statistics in Improving the Quality of Official Statistics

Component D: Methodological and geo-spatial tools for improving the quality and efficiency of field surveys

Introduction to component D and to Survey department

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Content

- The target of the Twinning project (MR)
- ICBS Surveys Background
 - Sampling Frames
- Main field surveys
- ICBS districts
- Field operation goals
- EA concept
- Karmiel study case

Benchmarks:

- **ID1:** Definition of indicators to measure the efficiency of field work and reliability of estimates with a view to reduce costs and improve sample quality developed by 3rd quarter.
- **ID2:** Methodological paper on managing and monitoring field work using geo-spatial procedures during data collection process by 3rd quarter.
- **ID3:** Methodological paper on optimization of workload allocation of fieldwork using geo-spatial procedures and other tools by 3rd quarter.
- **ID4:** Feasibility test for optimizing workload allocation of field work evaluated, including determination of optimal size of enumeration areas by 6th quarter.

- **ID5:** Design specification for an integrated management system for multi-field work load allocation and monitoring survey status in real time in designated areas by 8th quarter.
- **ID6:** A roadmap for an integrated management system for multi-field work load allocation and monitoring including milestones, deliveries, time frame, need for resources and responsibility presented to the ICBS management by the 9th quarter.
- **ID7:** Multi-year work plan for the organisational framework and training plan for managing field surveys in designated areas 10th project quarter.

Mandatory result

**Optimization of field workload allocation
using geo-spatial tools for managing field
surveys in designated areas**

If we simplify the MR:

- 1. Optimization field workload allocation using geo-spatial tools**
- 2. Using geo-spatial tools for managing field surveys in designated areas**

Activity D.6

Design specifications of a geo-spatial application to allocate interviewers' workload in multi-field surveys and to manage and monitor field surveys

The ICBS and data sources used by it

How are Data Collected?



Administrative Files



Surveys



Sampling Frames



- The Central Population Register (CPR): for sampling individuals and households
- Dwelling Register: for sampling dwelling units



Israel Central Population Register



- 🏠 Received: 3 times a year at ICBS, arrives coded
- 🏠 Source: Population & Immigration Authority
- 🏠 Geographical coverage: National
- 🏠 Description: 9,116,537 records
- 🏠 Addresses geocoded: 563,811 - 98.6% (to statistical area level)



Building and Dwelling Register (BDR)



- 🏠 Received: Annually, May-June
- 🏠 Source: 10 different suppliers (5 of them are localities and the rest are computer companies)
- 🏠 Geographical coverage quality differ by locality & supplier
- 🏠 Main use incentive (for the localities): property tax services

BDR Description

- 🏠 The register holds information for 1,214 localities
- 🏠 Description: 3,749,181 records in 2015, contains information for dwelling and other land use.
- 🏠 Addresses geocoded: 3,160,220 – 92% (to statistical area level)

Sampling Frames and Geocode

After geocoding of each record in the sampling frames, field surveys are sampled, and then allocated for fieldwork



Survey's Management

Main field surveys

1. Labour Force Survey (sampled from BDR)
2. Household Expenditure Survey (sampled from BDR)
3. Social Survey (sampled from CPR)
4. Longitudinal Survey (Sampled from CPR in the first wave 2012)

The samples of these surveys are drawn separately for each survey

Interviewers and workload

- Most ICBS interviewers work on one survey
- The workload distribution thereby is performed independently for each survey
- Interviewers get paid by hours and get Km payment and time travel
- Mostly they work between 80-100 hours a month

Surveys Constrains

- Each survey has its own constraints created by its methodology:
 - Data collection period
 - Time span feasible for collection
 - Reference period, and so on.

All this constrain make it difficult to create a workload

Survey Characteristics

	constrains			
	Duration of investigation	Length of interview	Workload	paper / laptop
Labor Force	Two weeks	15 minutes	10 per week	Lap top
Household Expenditure	Three weeks Minimum 4 visits over 8 days of dairy filling in	Vary by stage of interviewing	16 per month	paper
Social	Three months	45 minutes	30 per month	Lap top
Longitudinal	One month Flexibility of 1 month	1 hour +	25 per month	Lap top

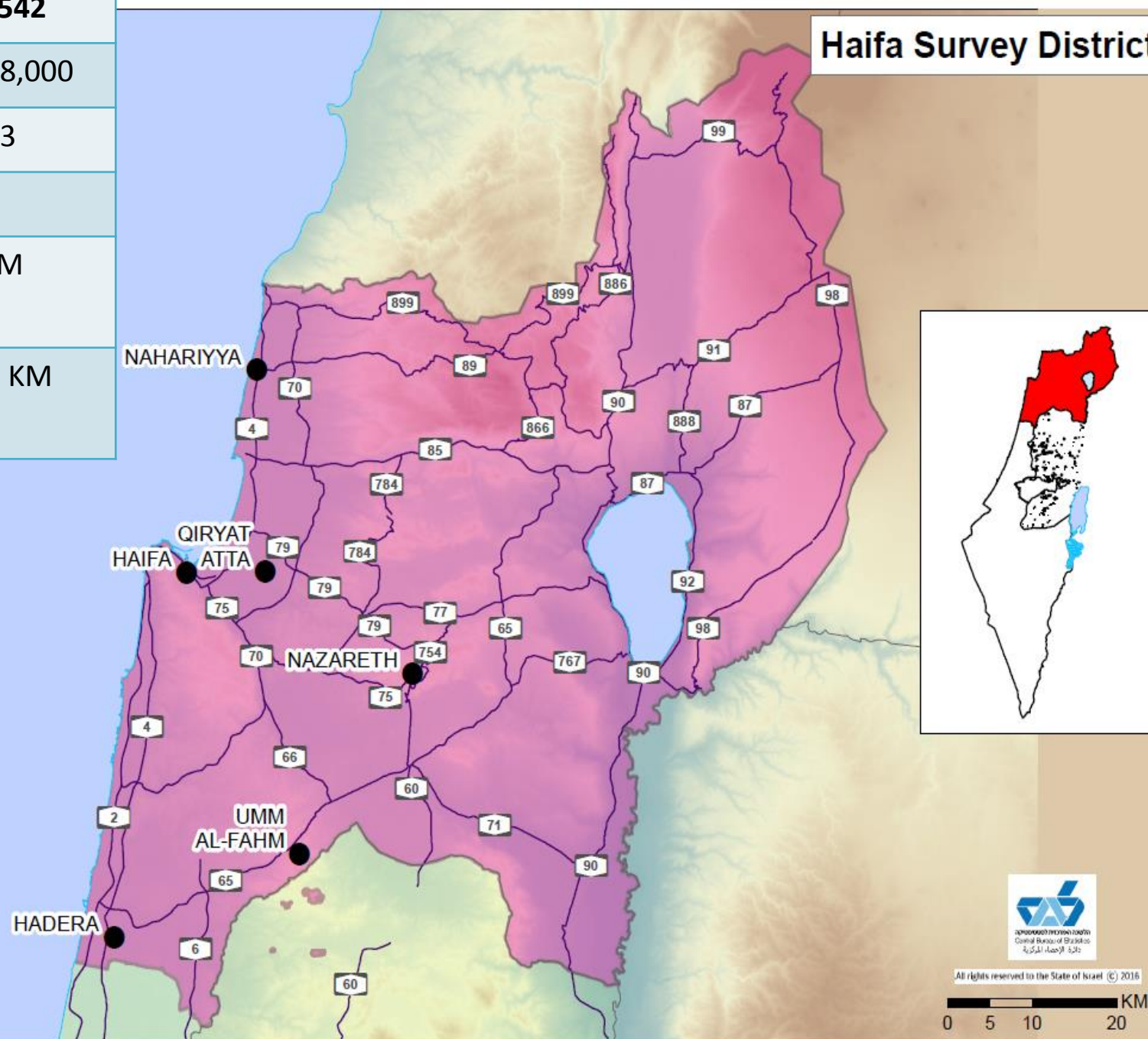
Field work operation organizational structure

Field work structure

- Israel is divided to 3 districts:
 - Haifa: manages the north part of the country. About 30% of Israel's population (2.6 M)
 - Jerusalem: manages the city of Jerusalem and its surroundings: About 12% of Israel's population
 - Tel Aviv: The rest of the country
- ICBS employs approximately 350 field interviewers

Localities:	542
Population:	2,618,000
Area (SKM):	5,353
Distances:	
From Haifa south east	65KM
From Haifa north east	87.5 KM

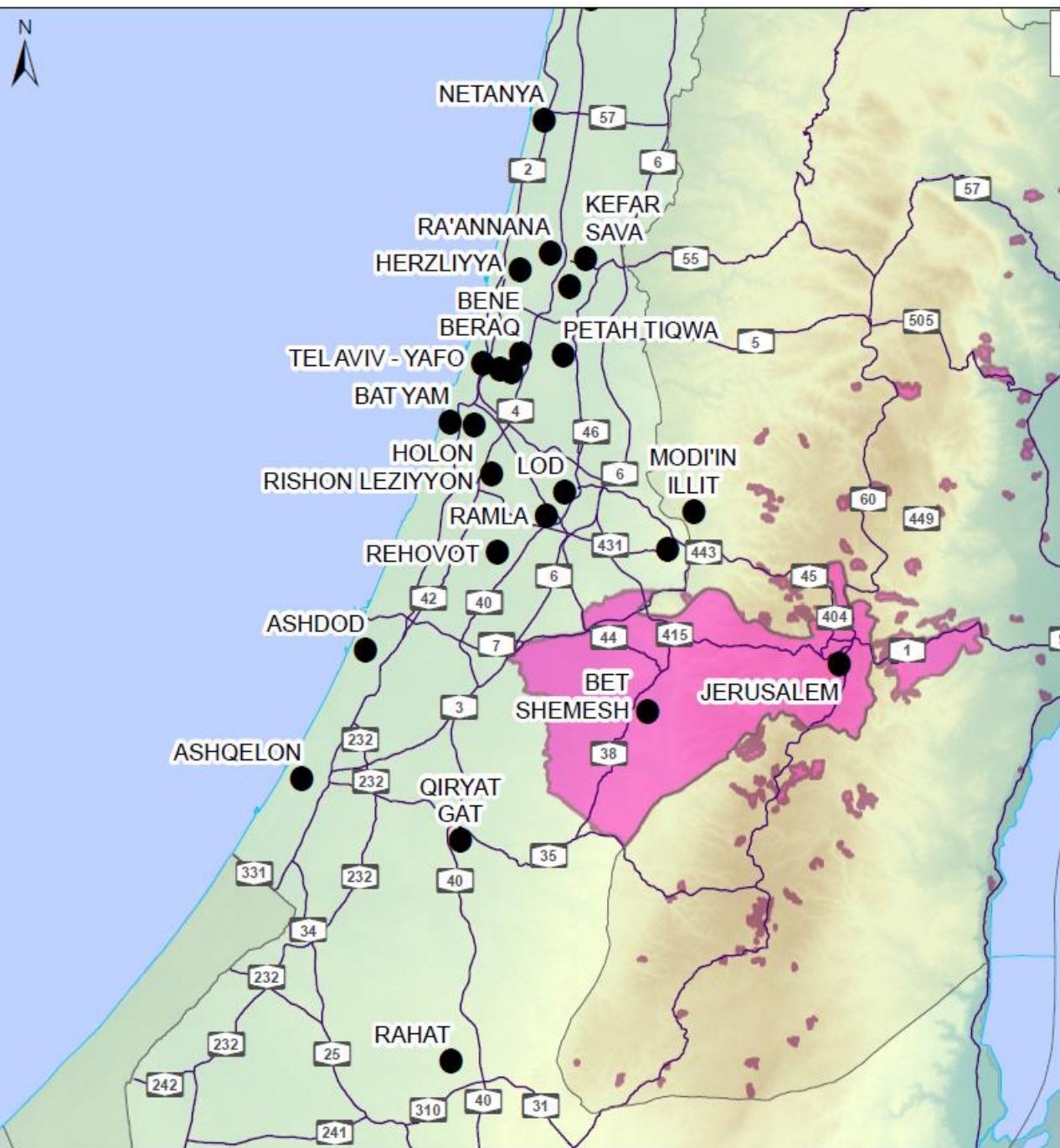
Haifa Survey District





Jerusalem Survey District

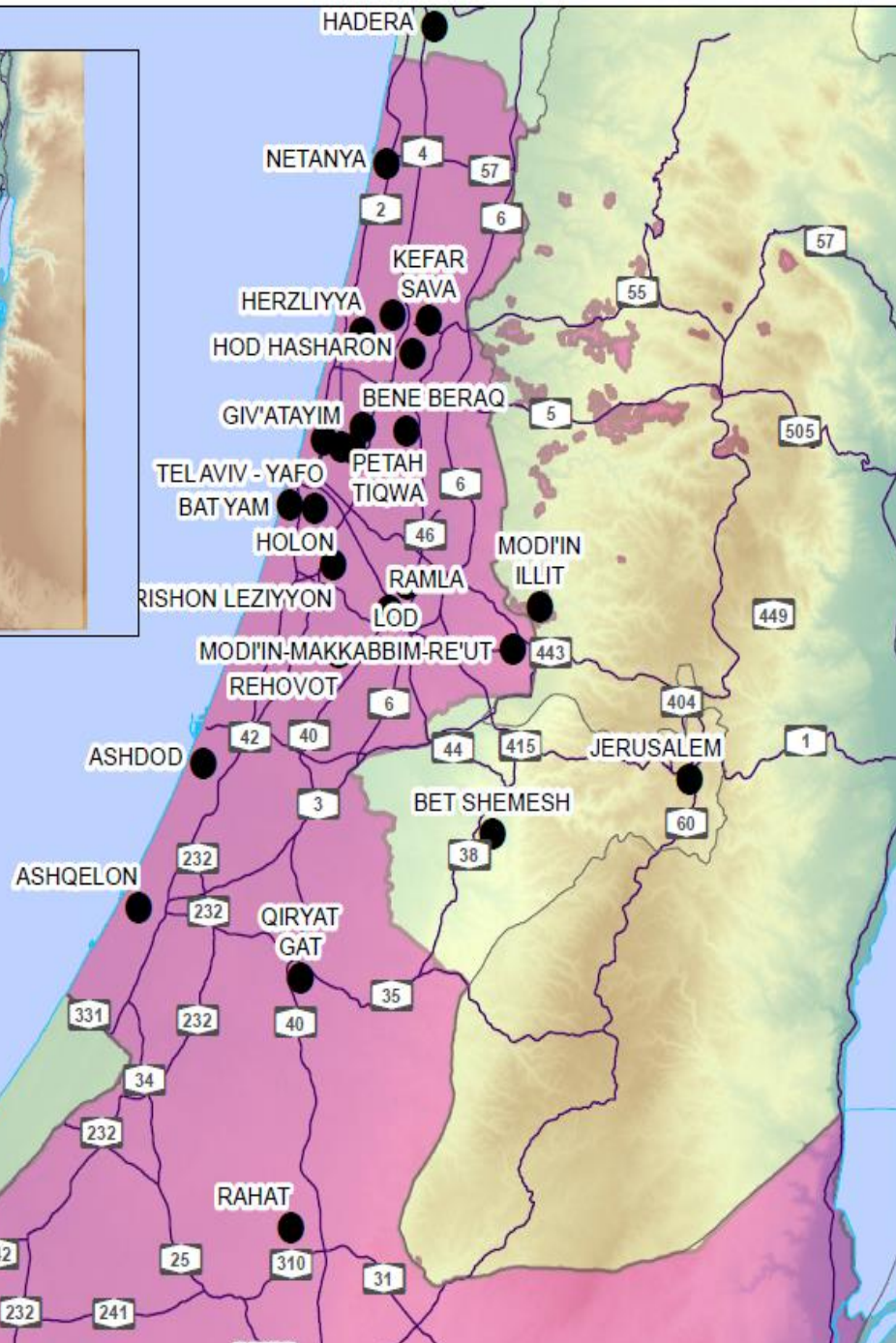
Localities:	147
Population:	1,237,000
Area (SKM):	775
Distances:	
From Jerusalem south	47KM
From Jerusalem west	32.5 KM
From Jerusalem north	70 KM



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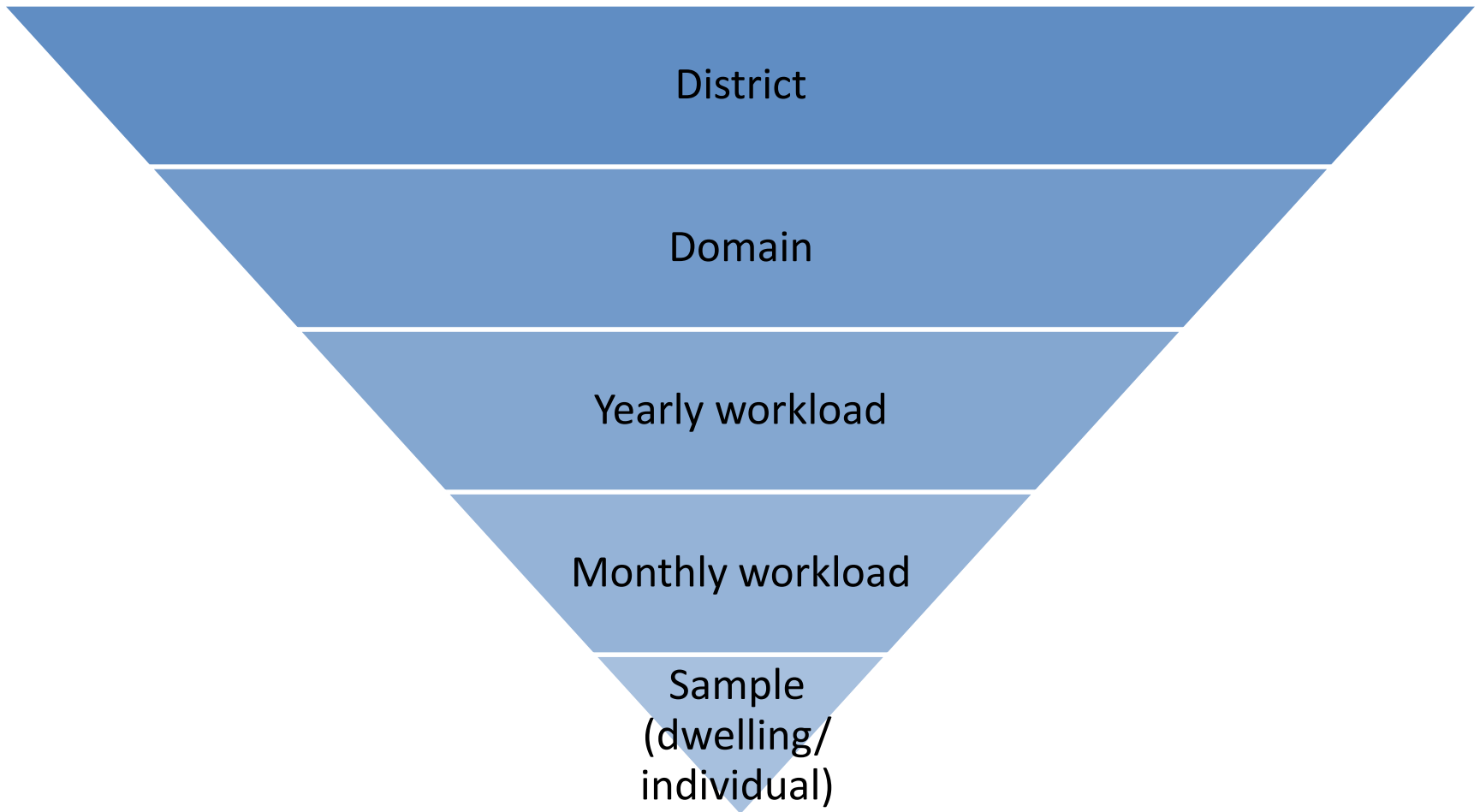
0 5 10 20 KM

Tel Aviv Survey District



Localities:	516
Population:	4,376,000
Area (SKM):	15,702
Distances:	
From TLV south	161 km
From TLV east	138 km
From TLV north	39.5 km

Nesting output hierarchy for each survey per district:



Thanks for your attention