

Terms of Reference

EU Twinning Project IL/12 CRIS 2015/370-467

04-07 December 2016

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

Activity D.4: Development of methodology - Managing and monitoring field surveys (including mapping non-response) using geo-spatial tools

0. Mandatory results and benchmarks for the component

Mandatory results:

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

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.*
- **ID2:** *Methodological paper on managing and monitoring field work using geo-spatial procedures during data collection process.*
- **ID3:** *Methodological paper on optimization of workload allocation of fieldwork using geo-spatial procedures and other tools.*
- **ID4:** *Feasibility test for managing and monitoring field work evaluated.*
- **ID5:** *Feasibility test for optimizing workload allocation of field work evaluated*
- **ID6:** *Design specification of a geo-spatial application, to identify and analyse regional non-response and enable rapid reaction and handling of problematic "hot spots"*
- **ID7:** *Design specification of a geo-spatial application, to optimize allocation of field workers' workload and enable multi-survey sampling*

1. Purpose of the activity

The overall purpose of this activity is to develop and discuss methodologies for managing and monitoring field surveys (including mapping non-response) including the use of geo-spatial tools regarding the monitoring of progress and non-response (geographical, demographic etc.) at different levels of spatial resolution.

Draft of specification paper on monitoring progress and identifying differential under-coverage.

- ICBS will present first pilot of enumeration areas (EA) and first findings using the EA's for managing and monitoring
- MS and ICBS staff will discuss and define various managing and monitoring tools for field surveys during the collection process using geo-spatial tools

2. Expected output of the activity

- Activity report
- Recommendations on methodologies and IT-tools for *managing and monitoring* field work using geo-spatial procedures during data collection process.
- Use cases and requirement specifications for combining GIS – Geographical Information Software and other IT-Tools - with survey methodology
- Revised plan for actions / work in component D

3. Participants

Survey Department ICBS

- **Mr. Nitzan HaCohen**, BC Component Leader , Deputy Senior Director, ICBS Survey Department; nitzanh@cbs.gov.il
- **Ms. Rachel Gur** Senior Director, ICBS Survey Department, Rachelg@cbs.gov.il
- **Ms. Limor Charnotchki**, Director of House Holds Sector, limort@cbs.gov.il
- **Mr. Eyal Avital**, Director of Census Field work Sector, Eyala@cbs.gov.il
- **Ms. Tzipora Radian** Director of Family's Sector, Zipora@cbs.gov.il
- **Ms. Luba Naidis**, Coordinator Households Surveys, luban@cbs.gov.il

Methodology Department

- **Mr. Tzahi Makovsky**, Deputy Director, Tzahim@cbs.gov.il

IT Department, ICBS

- **Ms. Galina Shienberg**, Director of IT developer for Census, Galiash@cbs.gov.il
- **Ms. Anna Binstok Cohen**, Director of GIS for Census division, annabc@cbs.gov.il
- **Mr. Eyal Maharian**, Director of GIS and Geography Sector, eyalm@cbs.gov.il
- **Ms. Rinat Calvo**, Director of GIS-IT Sector, Rinatc@cbs.gov.il

MS experts

- **Mr. Janusz Dygaszewicz**, Director Department of Programming and Coordination of Statistical Surveys, Central Statistical Office of Poland
Specialist knowledge: Methodologies and GIS tools for managing and monitoring field work, Director of Central Census Bureau for Agriculture Census 2010 and Population Census 2011, Leader of the Eurostat projects on the linking administrative and spatial data for agriculture statistics, National coordinator on Big Data in Polish statistics, President of the European Forum for Geography and Statistics, Member of the Executive Committee of the United Nations Global Geospatial Information Management for Europe UN-GGIM:Europe
- **Mr. Artur Łączyński**, Director of Agricultural Statistics, Central Statistical Office of Poland,
Specialist knowledge: Responsible for data collection on agriculture statistics, including field operations using interviewers, methodologies and GIS tools for preparing sample frames and monitoring-managing sample surveys, Satellite imagery in agriculture surveys, Statistics on different domains of agriculture (food security, land use, animal production, agricultural economy, means in agricultural production).

Twinning Staff

- **Mr. Yoel Finkel**, BC Project Leader, Associate Government Statistician, yoel@cbs.gov.il
- **Ms. Sigalit Mazeh**, Director, International Relations and Statistical Coordination Department, sigalit@cbs.gov.il
- **Ms. Batia Attali**, RTA Counterpart, BC Component Leader for component A, International Relations and Statistical Coordination Department, batia@cbs.gov.il
- **Ms. Charlotte Nielsen**, Resident Twinning Adviser cln@dst.dk , CharlotteN@cbs.gov.il
- **Ms. Tamar Rand**, Resident Twinning Adviser Assistant, TamarRa@cbs.gov.il

4. Current Status of Methodological and Geo-spatial Tools for Improving the Quality and the Efficiency of Field Surveys (*quotes from the Twinning contract*)

The ICBS is regularly improving the quality and efficiency of field data collection in surveys. Nonetheless, no attempt was ever made to achieve this goal through optimal use of geo-spatial tools. Geo-spatial tools can support field surveys from the early stage of sample design up to the dissemination phase. In this Twinning project, ICBS seeks to focus on fieldwork management and monitoring, following the recommendations of the experts in the previous twinning project. More specifically: The daily management of field interviews should be improved: Data collection in several surveys should be combined and be performed by the same interviewers; local response rates should be identified by areas, in order to be able to address region-specific problems. Geo-spatial technologies can support the identification and analysis of regional under-coverage, and enable rapid reaction and handling of problematic "hot spots".

There are two main sampling frames: The Population Register – for sampling individuals and households, and the Dwelling Register for sampling dwelling units. Currently, all field surveys conducted by ICBS are sampled after geocoding of each unit in the sampling frames. ICBS conducts four main field surveys - Labour Force Survey, Household Expenditure Survey, Social Survey and Longitudinal Survey. However, the samples of these surveys are drawn separately for each survey. Moreover, the distribution of the workload units between the field interviewers is also performed independently for each survey, which has its own constraints dictated by its methodology: data collection period, time span feasible for collection, reference period, and so on.

Effective and economic work processes would maximize the time allocated by interviewers to data collection and minimize travelling time. ICBS is looking for a methodology that would yield optimized planning and allocation of workload units to interviewers, to reduce travelling time and increase data collection time, by combining data collection for various surveys while taking into account their respective constraints.

The second possible contribution of geospatial methodology deals with the optimal management of the fieldwork in real time. The goal is not only to achieve high response rates (ICBS enjoys a field response rate of 80% and more), but also to identify under-coverage areas and pockets of nonresponse in the midst of data collection and reallocate resources for their optimal treatment. In the current situation, problematic areas of coverage are acknowledged only at the end of the fieldwork.

5. From the contract:

Activity D.4	Development of methodology - Managing and monitoring field surveys (including mapping non-response) using geo-spatial tools
Budget Section	7
Time schedule	Project month 9 – scheduled for November 2016
Subject	Discussion and development of methodologies regarding the monitoring of progress and non-response (geographical, demographic etc.), including the use of geo-spatial tools at different levels of spatial resolution. Draft of specification paper on monitoring progress and identifying differential under-coverage.
Methods	Workshop and consultations
Resources	MS: 2 MS-experts: Janusz Dygazewicz (PL) or Peter Linde (DK), Troels Aksel Vestergaard (DK) BC: ICBS staff Translation / Interpretation
Duration	4 working days
Output	Activity report Draft paper on methodology to manage and monitor progress and non-response using various tools and methods including geo-spatial tools.

Programme for Activity D4: 04-07 December 2016

Development of methodology - Managing and monitoring field surveys (including mapping non-response) using geo-spatial tools.

Date	Place	Time	Event
Sunday 04/12	CBS – floor 3	09:30	Welcoming, acquaintance, programme of the week (Charlotte Nielsen and Nitzan Hacoheh)
		09:45	BC: The way to create a EA – parameters and dilemmas
		11:00	Coffee break
		11:15	BC: First pilot for EA's division
		12:15	Lunch break
		13:30	BC: Presenting the EAs' and discussion
		14:15	Coffee break
		14:45	BC/MS: Questions, remarks and finalising
Monday 05/12	CBS – floor 3	09:00	BC: Collaboration between survey enumeration statuses – the first stage towards a managing system using GIS tools
		10:30	Coffee break
		10:45	BC: Presentation of GIS managing system first pilot using standard enumeration statuses with multi surveys
		12:15	Lunch break
		13:30	BC/MS: Dilemmas and discussion
		14:45	Coffee break
		15:00	BC/MS: Questions, remarks and finalising
Tuesday 06/12	CBS – floor 3	09:00	BC: Presentation of outcome and recommendation. Discussion and comments from the experts and participants
		10:15	Coffee break
		10:30	BC/MS: Work group on the subject
		12:00	Lunch break
		13:00	BC: Presentation of outcome and recommendation. Discussion and comments from the experts and participants
		14:00	Coffee break
		14:15	Drafting a revised work plan – milestones and time plan for the remaining Twinning project time
		15:00	Final remarks for Mission D and thanks

Abbreviations:

BC = Beneficiary Country (Israel)

EA = Enumeration areas

ICBS = Israeli Central Bureau of Statistics

IT = Information Technologies

GIS = Geographic information system

MS = Member State (Poland)

Material to be prepared and sent before the Activity: *Presentations.*