Use of Geoinformation Technologies in the Preparation and Conduct of Population Census

Tatyana Babuk
Population Statistics Section Head
2009 MAPPING EXERCISE

Reference plans and site plans for 205 cities and towns, and 30 large villages;

site plans for 118 administrative districts

were produced as part of the preparations and conduct of the 2009 Population Census
POPULATION CENSUS GIS: OBJECTIVES

- to create a database of spatial and attributive data of the Population Census GIS in ArcGIS format;
- to link final 2009 Belorussian census data with relevant geographic areas of the baseline map;
- to automate spatial analysis and to produce mapping and graphic (by business graphics means) presentations of final census data with standard ArcGIS means;
- to provide users with mapping and graphics information, including in digital format for dissemination through the Internet.
Structure of geodatabase

Spatial classes or layers of borders:

- country;
- provinces;
- administrative districts;
- settlements
ADDRESS DATA LAYER

Linkages to addresses of the raster map with structure outlines
ATTRIBUTIVE TABLE OF ADDRESS DATA LAYER

Contents:

- name of a settlement;
- name of a street, square, avenue, etc.;
- house number;
- geographic coordinates
USES OF ADDRESS LAYER

✓ verification of a household;
✓ carrying out enumeration zoning;
✓ estimation of a enumerators’ work load;
✓ monitoring of progress and dissemination of results
AUTOMATED CONSTRUCTION OF STATISTICAL AREAS

- aggregation of data from administrative sources, on address information, i.e. count records on those living in the same house;
- information interlinks between objects of address layer in the Population Census GIS and aggregated data on the number of people based on the address data;
- identification of the area and borders of statistical areas as per established criterion on the resident population;
- division of the country and its parts into statistical areas. Thus, each user has to be able to indicate a province, region and settlement for which the division is to be made;
- colouring of statistical area borders;
- numbering of statistical areas within a region, district, provincial city that is not divided into regions;
- a possibility to manually adjust borders of statistical areas; and
- uploading statistical areas as separate shape files
POPULATION ENUMERATION GIS

www.belstat.gov.by
USES OF THE POPULATION CENSUSGIS

- visual presentation of official statistics by subjects areas in statistical compilations;

- preparation of map materials for sampling purposes in household living standards surveys and surveys for measuring employment
VISUAL PRESENTATION OF DATA

Pollutant emissions

Housing per capita
USE OF ADDRESS DATA LAYER

Enables producing electronic map materials and use those:

- throughout the census cycle when verifying households, carrying out census zoning, estimating workload of enumerators, progress monitoring and dissemination of results;
- for preparing and conducting sample surveys.
THANK YOU!