

Using integrated geospatial data in official statistics

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Geographically positioned aerial photos, or orthophotos, are a new, non-traditional data source in official statistics. The increasing resolution and frequency of the images is opening opportunities for its use in a broader array of fields. They provide visual information, for a snapshot in time, on buildings, parks, wilderness areas, agriculture and land use, without the traditional field work costs associated with surveys. As our knowledge and experience with this data source improves, we see that these data can provide multiple uses in official statistics.

Here I describe two examples of the use of geospatial, secondary data (integrated orthophotos and administrative data) in official statistics. This first project assesses rates of delayed registration of newly built holiday homes. By integrating the building footprint from administrative geographical files in our cadastre with orthophotos we were able to determine an approximate age for the buildings. We were able to combine data sources using GIS tools with a common projection. This provided a measure for the bias in our statistics on new holiday homes due to missing data on the age and allowed an imputation plan to correct for this. Advanced web map services were used to scroll through historic pictures for the sampled units. In addition to quality assessments, orthophotos have also been used by Statistics Norway for new analyses on land usage. We estimated total areas for various categories of land usage from a sample of disused agriculture areas and provided a picture of the pressures farming areas are facing. We were also able to provide statistics on the estimated amount of areas that are continued to be farmed; thereby an under-coverage assessment of our land-use register.