

Work Session on Geographical Information Systems  
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**GEOGRAPHICAL INFORMATION SYSTEMS AND THEIR INCREASING  
SIGNIFICANCE FOR THE COMPILATION OF AREA-BASED STATISTICS**

Submitted by Statistics Netherlands<sup>1</sup>

CONTRIBUTED PAPER

**Abstract**

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1. Geographical information systems (GIS) are more and more introduced in statistical processes in national and international statistical offices. Differences in emphasis exist, however, with regard to the various stages of the statistical process in which GIS is used. In some offices GIS is particularly used as a data gathering technique; others are using GIS primarily as an analysing tool or as a technique for dissemination purposes of statistical data. Statistics Netherlands emphasises the capability of GIS as a tool for the compilation of area-based statistics, particularly in the field of small area statistics.
2. The paper describes various results reached up to now with regard to the use of GIS for compilation purposes in the statistical process as well as some prospects for the near future. Particular attention is given to the use of the digital topographic map of the Netherlands - the first edition of which recently has been released by the Topographic Agency - for compilation of area-based statistics. The content of this map as well as the various modules of the GIS-application to compile these statistics are described. Also some preliminary results are presented. Moreover, the national grid system as a tool for the integration of small area statistics is emphasised. In the near future this grid system will be combined with polygon oriented systems in order to compile more detailed area- based statistics.
3. In addition to the technological renewal achieved by the use of GIS and geometric data in the statistical process, the statistical results emanating from the GIS-applications are also very relevant from a social point of view. Many of these statistical results are used by the Government of the Netherlands for funding tasks which are performed by regional and local authorities. Having grasped the importance of GIS-technology in the statistical process, the central government responsible for financing these authorities are stimulating Statistics Netherlands both to enlarge and to integrate GIS-applications for area based statistics.