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Development of a national geodatabase (Greece) for soil surveys and land evaluation using space technology and GIS

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This project was funded by OPEKEPE, Ministry of Agricultural Development and Food, Greece and involves development of a national geodatabase and a WebGIS that encompass soil data of all the agricultural areas of Greece in order to supply the country with a multi-purpose master plan for agricultural land management.
The area mapped covered more than 385,000 ha divided in more than 9.000 Soil Mapping Units (SMUs) based on physiographic analysis, field work and photo interpretation of satellite images.
The field work included description and sampling in three depths (0-30, 30-60 and >60 cm) of 2,000 soil profiles and 8,000 augers (sampling 0-30 and >30 cm).
In total more than 22,000 soil samples were collected and analyzed for determining main soil properties associated with soil classification and soil evaluation.
Additionally the project included (1) integration of all data in the Soil Geodatabase, (2) finalization of SMUs, (3) development of a Master Plan for Agricultural Land Management and (4) development and operational testing of the Web Portal for e-information and e-services.
The integrated system is expected, after being fully operational, to provide important electronic services and benefits to farmers, private sector and governmental organizations. An e-book with the soil maps of Greece was also provided including 570 sheets with data description and legends.
The Master Plan for Agricultural Land Management includes soil quality maps for 30 agricultural crops, together with maps showing soil degradation risks, such as erosion, desertification, salinity and nitrates, thus providing the tools for soil conservation and sustainable land management.