

# Management of Farmers' and Farmland Information: A Case Study in Turkey

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## SUMMARY

As a result of the dramatic change in The Common Agricultural Policy (CAP) of the European Union in 1992 from coupled to de-coupled payment system, establishment of Integrated Administration and Control Systems (IACS) and Land Parcel Identification Systems (LPIS) as the spatial part of IACS have been required to manage related agricultural land information. Similarly, IACS/LPIS like systems (Farmers Registry System, Farm Registry System, Agricultural Monitoring and Information System) in Turkey have been developed since the early 2000s. Yet, they are largely dependent on the declaration information by farmers. So, they cannot include all farmers' and farmland information which makes them inadequate for the needs of different institutions which serves not only for agricultural policy but also for other sectors. The Turkish Statistical Institute had the leading role in this context for the production of reliable agricultural statistics in a convenient way by collaborating with the Ministry of Food, Agriculture and Livestock for further development of current systems, which is still not adequate for meeting the needs of other institutions. In this study, based on the conducted survey with all related institutions which need similar data on farmers', farmland and agricultural crops, data requirement analysis was done. In order to serve for similar yet different data requirements, a pilot application in Elagoz district of Kocasinan County, Kayseri Province, Turkey were carried out within a national project (no 112Y027) financially supported by the Scientific and Technological Research Council of Turkey. In this pilot application, access to all available data sources (through web services or by replication depending on the database structure and services available) which include civic and address information of inhabitants, cadastre parcels data, ownership data in land registry, farmers', farmland and agricultural crop data declared by farmers previously was established. In addition to available data sets, an agricultural land use/cover dataset produced previously within the project is used for the determination of agricultural land to be visited. Required additional information was collected through visits to either land owners, users (farmers) or alternatively (in the case of unavailability) district headman. All available data was analysed, developed by reclassifying or collecting additional information, and converted into a standardized data structure in the cases this is required. For spatial data management sub-parcel data structure was used. For attribute data, different levels of agricultural land classifications and also agricultural product classifications were used. Temporal data management issues were also handled. Deficiencies (in some rare cases) of the methodology used in the pilot application have been further studied. As the second part of the pilot

application, studies in order to serve farmers' and farmland information to related institutions via web services were carried out. In the development of web services availability of data content and use rights were designated exactly with the needs of the related institutions. Intellectual property rights were neglected in this stage of the pilot application and only one sample web service was currently developed for the Turkish Statistical Institute.