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## Land use evolution over time using public data and a new environmental indicator. Application to the Valencia region (Spain)

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In this work a new environmental indicator for the analysis of land use change over time (ENV-IND) is presented. The ENV-IND indicator has been defined and assigned to every land use included on the SIOSE, the official Information System on Land Occupation of Spain. The methodology is based on assigning an ENV-IND value for every polygon considered by the SIOSE as a function of the areal percentage occupied by every land use inside each polygon.

SIOSE is integrated into the National Land Observation Plan (PNOT) whose objective is to generate a database of Land Occupation for all Spain, integrating all the information available from the regional and central Administration of Spain. The ENV-IND indicator has been defined for 80 different land use categories and its value depend in the joint consideration of the following factors: anthropization nature, water consumption, environmental sustainability and landscape value.

The evolution of the ENV-IND indicator over time has been obtained for the whole Valencia Region for three different dates (2005-2009-2015) and shows that the environmental value is decreasing with time in terms of the ENV-IND indicator. The ENV-IND indicator is therefore applicable as a tool to quantify and analyze trends of the environmental quality related with land use change.