

A PREDICTION APPROACH TO AGRICULTURAL LAND USE ESTIMATION USING A HIGH- RESOLUTION SPATIAL MODEL OF LAND USE DYNAMIC

Ambrosio L., Marín C. and Iglesias L.

Universidad Politécnica de Madrid. Spain

The prediction approach for finite populations using (super population) linear models is now well - established. Nevertheless, for count and binary data non linear models are more adequate. In this study a high-resolution spatial model of land use dynamics is proposed to estimate agricultural land uses using as auxiliary information crop rotation, agrometeorological crop suitability index and political measures such as set aside aids. Land use dynamic is modelled as a multinomial (choice) model, using a generalized linear mixed model where the correlation structure is modelled using spatiotemporal semivariogram models. , Predictors of agricultural land uses and of error prediction are proposed using this model.