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Using open data to identify potencial areas in agricultural landscape to ES provision

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The production and use of reliable open data create social and economic value, since it can reduce costs to develop public or private work, as well as enable new services and enhance the quality of existing services. Open data also contribute indirectly to improve governance and government services, as its encourage the information dissemination to civil society, increasing its power and demonstrating transparency initiatives. With the high demand for studies to monitoring ecosystem services, the use of open databases, combined with the geo-technologies become important resources to identifying potential areas for the provision of environmental services and hence decision making. An alternative to increase the capacity of ecosystems to restore or improve their functions that is growing in Brazil, as in other countries, are the programs to ecosystem services payment (PES). Thus, this work presents a methodology to identify potencial areas to environmental services provision, using open data and geo-technologies. The study area is located in an important agriculture region in Bahia, Brazil. At this region, the expansion of cultivation area of soybean and cotton has been increasing in recent years. The study was developed in a regional scale (1:250,000), since the total area are about 43,000 km². The results showed that the methodology has high potential to be used by decision makers, since it is easy to understand and to apply considering the evaluation of ecosystem services in agricultural landscapes. It represent a tool that possibility to enhance PES programs, valuating the use of agriculture good practices by farmers.

Keywords: Open data, geo-technologies, ecosystem service payment.