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2. Mapping, visualisation and data access tools of ecosystem services (TWG 4,5)

A proposal to mapping ecosystem service in rural landscape at Atlantic Forest in Brazil

Type: Presentation

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This proposal arises from the need to fill a gap regarding the establishment of methodologies and protocols for mapping and modeling ecosystem services. This is an important and critical stage in the evaluation of these services. In this paper, we propose a methodology for mapping, modeling and integrating data and information concerning a rural landscape in a mountain area of Rio de Janeiro state, Brazil. The focus is the ecosystem services related to nutrient cycling and food provision. The methodology that was used included the definition of environmental units, based on soil types, land use and soil samples. These environmental units were called "pedoenvirometal unit", composed by the combination of those parameters. All of this information was evaluated in a GIS environment.

The results show that the methodology worked very well, especially those concerning the identification of potential areas for the provision of ecosystem services. Also, it was possible to identify the different functions of each pedoenviromental unit (soil type + land use = pedoenviromental unit) in the landscape.

This framework provides actions for a protocol to evaluate the ecosystem services using spatial analyses. This approach is a good opportunity to use and integrate data and information that have already been generated for a study area and now it can be used to characterize the ecosystem services in this area. It is also an incentive for the implementation of sustainable practices in rural landscape with the possibility to generate income for small farmers. This kind of approach also has the potential to contribute to political and institutional measures for the definition of standards and adjustments already in place. Therefore, quantifying and mapping ecosystem services are fundamental actions for decision makers, spatial planning and the development of public policies.