

Submitted Abstract

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Abstract

Land use change and socio-economic related marginality consequences occurred in the last 60-70 years have largely modified type and quality of ecosystem services (ES) supplied by Apennine forests. The massive migration to urban areas and the following abandonment of silvo-pastoral activities have drastically changed priorities in societal expectations from mountain areas and forests.

The presence of Forest Consortia gathering private and shared properties (e.g. Commons) can guarantee a sustainable and multifunctional forest management and social aggregation in areas otherwise prone to abandonment. The project BIO.S.E.I.FOR.TE. (Biodiversity and Ecosystem Services in Forested Areas) funded with the sub-action 16.1 of the 2014-2020 RDP in the Marche Region aims the definition of the main ES and related stakeholders in a mountain area of the central Apennines (Mt. Nerone) between Marche and Umbria. The goal is to support the forest management as a tool to provide biodiversity conservation and other ecosystem services such as slope erosion control and to find the appropriate forms for their payments.

The project leader is the Mt. Nerone Forest Consortium composed by local commonal associations that share property and management of agro-silvo-pastoral resources since the XVI century. Forest cover is over 50% largely made of mixed deciduous coppiced forests under different silvicultural regimes (managed, stored coppices, coppices in conversion). We provide a participatory process with local population to increase ecological awareness about ecosystem services, the appropriate stakeholders, and the payment solutions.

During the first year we worked in two directions: i) at watershed scale by merging the land use and land cover changes data with land movement inventory and erosion risk data; ii) at stand scale by selecting differently managed forests, mapping trees, and measuring structural parameters and the potential biodiversity (deadwood, dendrologic microhabitats, etc.). Preliminary results on beech forests suggest that managed stands have higher diversity values and that selective approach in thinning and conversion can further enhance their potentials.

Data collection will continue adding high resolution satellite images and historical aerial photos to reconstruct former landscapes and track the changes of land use and forest cover through time.