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WUI dynamic, main responsible of land cover change, results from two kinds of processes: social process (discontinuous urban spread) and natural process (vegetation spread and growth). Moreover, forest fire management has to be performed at local scale, and require simulation model at this scale. We developed a set of two models, called *Macropolis* and *Micropolis*, specialized in WUI change simulation for forest fire risk management and planning. *Macropolis* is a cellular automata-based model, developed in a raster GIS environment (both GRASS and ESRI ArcInfo Grid) specialized in WUI spatial dynamics representation at macro-local scale. Its particularity is that variables of the transition functions include spatial (contextual) analysis index of WUI (entropy, vegetation aggregation, buildings density, etc.), calculated by the GIS system. *Micropolis* is an agents-based model aimed at representing social and ecological processes at the origin of spatial changes in WUI at micro-locale. It implements a scheme of specific land cover branched trajectories: from agricultural used to land abandonment, then to built-up areas or to burnt areas. It is composed of different specialized modules, each either being or not multi-agents based sub-models: an agricultural model for land abandonment representation, a land tenure models for land exchanges representation, etc. It also includes a global agent based forest fire model, with an ignition module, a propagation module and a firefighting module. In the framework of the FUME European research project, many simulations were performed in different Mediterranean contexts (Southern France, Spain, Sardinia). Results of simulations of different scenarios at both macro-local and micro-local scales show a great inertia of spatial processes with a low efficiency of regulation policies. However, it seems that in the future, occurrences of very large fires might decrease, while occurrences of smaller fire might increase.		
0273	The ecosystem service transition in mountain socio-ecosystems	Sandra Lavorel, Bruno Locatelli, Ulrike Tappeiner, Davide Geneletti	France
Land use is one of the main drivers of ecosystem service provision. The forest transition theory has provided a productive framework for the analysis of land use dynamics worldwide, based on development trajectories leading from contraction to expansion of national or regional forest area. We propose that a similar generic framework can be developed to analyze and predict changes in the delivery of multiple ecosystem services, going beyond the simple consideration of changes in area of different land cover types to consider changes in their qualities in terms of ecosystem service supply. This framework depicts trajectories of provisioning, regulating and cultural services, and the resulting trade-offs when moving from agrarian societies focused on self-sufficiency to resource-extraction economies and amenity seeking societies. We illustrate the framework in the case of mountain socio-ecological systems, as key multifunctional systems which have undergone and are expected to undergo large changes in land use and ecosystem services as a result of global change. The analysis of case studies selected to picture the global diversity of mountain socio-ecological systems reveals how the interplay between ecological constraints and changes in demand as a result of societal change and specific policy instruments underpins past, current and expected ecosystem services. Finally we discuss expected impacts of drivers of global change such as climate or policy, and how the framework can be applied to understand transformations of mountain coupled human-environment systems.			
0274	The importance of time, trade, and scale when assessing agricultural production and conservation trade-offs	Van Butsic, Tobias Kuemmerle	Germany
The classic land sharing vs. land sparing (LSLS) model (Green 2005) to analyze trade-offs between agricultural production and biodiversity conservation is static, scale independent, and does not allow for interactions between different land uses across space. Most empirical examples of LSLS have followed			