Fire patterns and drivers obtained by a global SEVER-FIRE model

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I present SEVER-FIRE (Socio-Economic and natural Vegetation ExpeRimental global fire model which is incorporated into the SEVER-DGVM. One of the major focuses of SEVER-FIRE model is an implementation of human activities like timing of their contacts with natural vegetation and their ability to ignite or suppress fire, determined by socio-economic and demographic conditions in a certain area. Burned areas and emissions from the SEVER model are compared to GFED areas burnt and GHG gases emissions, derived from satellite observations, while number of fires are compared with regional historical fire statistics. We focus both on the model performance and on its assumptions regarding fire drivers, and :make:

1- An evaluation of the predicted spatial and temporal patterns, focusing on fire incidence, seasonality and inter-annual variability.

2- Analyses to evaluate the assumptions concerning the etiology, or causation, of fire, including climatic and anthropogenic drivers, as well as the type and amount of vegetation.

SEVER-FIRE model reproduces he large fires associated with the 1997-98 El Niño event in Indonesia, Central and South America, which had considerable impact upon vegetation and greenhouse gases.We further suggest possible research outlook for global fire models of next generation