Human influence on the global environment throughout the Holocene:

results from HYDE 3.0

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More and more studies of global (climate) change are focusing on the past. Hundreds and thousands of years of land use, driven by population growth have left their trace/mark on the Earth's surface. We are only at the beginning to understand the complex relationship of human induced disturbances of the global environment, and the consequences for future climate. It is therefore essential that we get a clear picture/understanding of past relationships between population growth, land use and climate. In order to facilitate climate modelers to examine these relationships, the HYDE database has been updated and extended.

The update of HYDE described here includes several improvements compared to its predecessor: (i) the HYDE 2 version used a Boolean approach with a 30 minute degree resolution, while HYDE 3 uses fractional land use on a 5 minute resolution; (ii) more and better sub-national (population) data (Klein Goldewijk, 2005) to improve the historical (urban and rural) population maps as a basis for allocation of land cover; (iii) implementation of different allocation algorithms with time-dependent weighting maps for cropland and grassland; (iv) the period covered has now been extended from the emergence of agriculture (10,000 B.C) to present time (2,000 A.D.), with different time intervals.

References

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