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It is of significance to study the effect of land use change on ecosystem service values. This paper aimed to provide decision support for sustainable use of resources and protection of eco-environment by assessing land use change and its consequent changes in ecosystem service values of Jilin Province. We obtained land use data by interpreting remote sensing images. Based on dynamic data of land use in Jilin, this paper analyzed changes in land use and ecosystem service values using the ecosystem service value coefficients put forward by Costanza et al. In addition, coefficients of sensitivity were introduced to test the rationality of ecological value coefficients. Results show that from 1980 to 2000, area of rangeland, water bodies and wetlands decreased and other categories of land use increased. Due to comparatively small valuation coefficients (VC) of cultivated land and comparatively big VC of wetland and water bodies, the increment in cultivated land could not offset the total decrement in regional ecosystem service values because of decrease in area of wetlands and water bodies. Meanwhile, city sprawl has also led to loss of ecological values. The total ecosystem service values of the study area reduced dramatically, from USD10700.38 × 10⁶ in period 1980-2000. There was a 13.46% net decline in annual value of ecosystem services in study area (i.e. USD1664.76 × 10⁶ net decline in total ecosystem service values) and a 0.72% decline per year. In recent five years, the degradation of woodland, wetland and rangeland slowed down because of enhancement of eco-environment protection. There was an 0.54% decline per year in ecosystem service values from 1995 to 2000, while there was a 0.78% decline per year from 1980 to 1995, which shows that the decline in ecosystem service values has been lessened in recent five years.

【Key Words】 : **land use change ecosystem service ecological values Jilin Province**

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