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论文

藏西北高寒草原生态资产价值评估

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摘要:

论文基于遥感估算的生态系统净初级生产力(NPP)和植被覆盖率,测算了1992、1995、2000和2006年4期藏西北高寒草原的生态资产价值,并分析了其时空分布规律。结果表明:藏西北地区生态资产在空间格局上由东南向西北逐渐减小。从生态资产构成来看,藏西北地区的生态资产主要体现在大气调节(45%)和涵养水源(40%)两方面,其次为生产有机物质的价值(11%),水土保持和营养物质循环所占比例较小。从生态资产变化趋势来看,藏西北地区生态资产总值由1992年的616.1×10^8元增长到2006年的$1\ 637.2\times10^8$元,单位面积生态资产均值平均每年增加1.06×10^4元/km^2。考虑到多源遥感数据之间存在一定程度的不一致性以及遥感时间序列数据较短等原因,论文所反映的藏西北地区生态资产变化趋势可能比实际情况偏高,其结果还有待于进一步佐证。

关键词: 遥感监测 生态服务价值 藏西北地区

Ecological Capital Assessment for the Alpine Grassland Ecosystem in the Northwest Alpine Pastoral Area of Tibet

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Abstract:

This study computed the ecological capital over the northwest alpine pastoral area of Tibet (NWT) in 1992, 1995, 2000 and 2006, using the net primary productivity (NPP) and vegetation coverage derived from remote sensing data. The spatial and temporal pattern of ecological capital in the NWT was comprehensively analyzed. The results showed that the ecological capital of alpine grassland ecosystem decreased from southeast to northwest in the NWT. In terms of the composition of ecological capital, climate regulation and water conservation contributed the most part, with a percentage of 45% and 40%, respectively. Organic matter production contributed 11%, soil and fertilization conservation 2%, and nutrient cycling 2%. The ecological capital of alpine grassland ecosystem in the NWT was 61.61 billion yuan in 1992, and rose to 163.72 billion yuan in 2006. The mean ecological capital value per unit area has increased 10.6 thousand yuan/km^2 annually from 1992 to 2006. In light of the data inconsistency from different remote sensors and the short time series in remote sensing data, the estimated changing trend in ecological capital may be higher than the actual one, and further investigations should be carried out to validate these results.

Keywords: ecosystem service value remote sensing monitoring the northwest alpine pastoral area of Tibet

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