

Land Ecosystem: An Overview

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Editorial

Natural ecosystems help both humans and the environment in a variety of ways, including supplying food, storing carbon, cleaning the air, safeguarding biodiversity, and regulating local temperatures, to name a few. In the subject of environmental impact assessment, the study of ecosystem services has become a prominent issue. Costanza proposed a technique for assessing the value of global ecosystem services, as well as a concept for doing so. They divided the world's biosphere into 16 ecosystems and assessed the ESV using 17 different service functions. Many academics afterwards began to estimate ESV on a regional and global scale using different or improved approaches. Based on a prior study and other related research, Costanza revised the worldwide ESV in 2014.

There was a significant rise in value per hectare when compared to 1997 levels. The conclusions of the study were extensively embraced by other experts in China, who divided China's mainland into six ecosystems and nine service function kinds based on local ecological features. Because natural ecosystems rely on land as a carrier, changes in land usage can have a significant impact on the ESV. Many studies have found that matching land use types to analogous biomes can serve as a proxy for ecological services. As a result, most studies of ecosystem services to measure environmental change are focused on land use change.

Land use change, particularly which connected to urban sprawl, has been demonstrated in studies to have a major influence on ecosystem services and function. Many studies have indicated that land-use change has a variety of detrimental consequences on the ecosystem, and this subject has gotten a lot of attention in recent years. The ESV of built-up land has been set to zero in many studies, which may not accurately reflect the situation; built-up land contains green land that may offer ecosystem services. Furthermore, some types of built-up land can facilitate cultural services such as sports and recreation facilities, recreation, education, scientific research institutions, and cultural and artistic activities; however, previous studies rarely included a quantitative discussion of ESV for built-up land.

As a result, we feel it is vital to re-examine ESV for built-up land using quantitative methodologies. The majority of past research has been on ESV valuation and the effects of land use change on ESV. Although some researchers have advocated that land management be used to safeguard natural habitats,

such preservation has often been done from a particular standpoint, such as minimal carbon emissions or maximum carbon storage. ESV assessments take into account a wide range of service functions; consequently, employing a synthetic evaluation index to analyse the environment and alter the land use structure based on ESV appears to be more significant than relying just on one perspective. We initially tried to optimise ESV in 2014 by altering the land use arrangement for the entire country of China.

As a result, unlike in interior locations, ESV changes generated by land use changes are more likely to be seen on the shore and to affect coastal features. Furthermore, despite the Chinese government's efforts, many environmental protection plans have proven ineffective; for example, the 2005 land use plan in Jiangsu Province sought to limit built-up land expansion to 877.34 km² in 2010, but the expansion increased by 4.89 times the planned area in 2010. As a result, a more detailed geographical analysis is required to ensure the execution of ecological land preservation [1-5].

Conflict of Interest

None.

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