Abstract

过去的几十年中，人们在经济发展的过程中，片面强调了追求经济效益的最大化，去呼市了，高污染产业对生态系统的危害，随着生态系统的不断恶化，人们的生活环境也受到了威胁，因此重新引起了对生态系统服务的重视，那么如何衡量一个项目的经济效益和生态服务效益呢？本文将从这一点展开进行阐述。  
我们从生态系统服务的定义切入，选取了三个大类，作为我们主要的研究方向，从这三个研究方向中，选取了15个能够反映一个产业项目对生态系统的影响的指标。这些这15个指标通常由容易得到的自然科学量或社会科学辆的定义。接着我们需要构造一个从自然科学和社会科学量，到以钱为单位的生态系统收益的量化函数。对于每一个项目，可以首先获取这15个指标的相关数据值，然后利用我们的量化函数算出他们的“生态利润”或者“生态债”。  
第二步，我们结合企业的经济效益，做出企业收益（包括生态收益和经济收益）的预测函数，并以这个预测函数的结果为基础，为有关的行政部门工作人员提出我们的建议，在选择项目方面。

In the past few decades, in the process of economic development, people have unilaterally emphasized the pursuit of maximization of economic benefits. They have gone to Hohhot. High-polluting industries have harmed the ecosystem. As the ecosystem continues to deteriorate, people’s lives The environment has also been threatened, so the emphasis on ecosystem services has been re-emerged. So how to measure the economic and ecological service benefits of a project? This article will start from this point.

We cut into the definition of ecosystem services and selected three categories as our main research directions: **Regulation service, Supply service, and Cultural service**. From these three research directions, 15 indicators that can reflect the impact of an industrial project on the ecosystem are selected: carbon fixation, production of biological materials, tourism income, air purification, water supply and storage, research and cultural projects, release of oxygen, water purification, soil conservation, degradation of soil pollutants and organic matter production. These 15 indicators are usually defined by easily available natural science quantities or social science vehicles. Then we need to construct a quantitative function from the quantity of natural science and social science to the benefit of the ecosystem in terms of money. For each project, you can first obtain the relevant data values ​​of these 15 indicators, and then use our quantitative function to calculate their "ecological profit" or "ecological debt."

In the second step, we combine the economic benefits of the company to make a prediction function for corporate benefits (including ecological benefits and economic benefits), and based on the results of this prediction function, we propose to the relevant administrative department staff that we should choose projects The suggestion.

**Keywords: Ecosystem services, Shadow engineering, Predictive model.**