Finding the balance between the needs of people and nature: ecosystem service approaches

A challenge for people and nature

Achieving a balance between people and nature has always been difficult. This balance is even more important to achieve today because of the climate crisis, socio-economic issues and an increasingly damaged environment. So how do we balance the needs of people with the needs of nature? This has been described as one of the greatest challenges of this generation and many possible solutions have been offered. Many of these solutions take advantage of ecosystem service is a benefit people get from nature such as clean air from trees or food from pollinators. The supply and demand of these can be measured to better manage the balance between people and nature. One tool which can assess ecosystem services is EcoservR, that was developed at Liverpool John Moores University. This is freely available to allow users ability to perform ecosystem service assessments, as long as users have access to R and a GIS software (such as QGIS).

Basemap (made with EcoservR and QGIS)



Why these are important

These maps show how habitat improvements can lead to achieving wider goals for natural recovery. EcoservR also can run models for services which are more human-focused such as access to nature and air quality. With these maps we can assess what is needed from a development or improvement and design it to meet the needs of nature and the needs of people. Next steps include validation of the model and working alongside landowners and developers to see how the model can be made more useful.

Service maps (made with EcoservR and QGIS)

The maps below show the service provision of the environment before (top row) and after (bottom row) the habitat improvements. The services are carbon storage (first column) and flood mitigation (second column).





Capacity: Carbon Storage 100













Further reading

https://ecoservr.github.io/EcoservR/ Hancock J. 'The case for an ecosystem service approach to decision-making: an overview' Bioscience horizons 2010 Arkema K et al 'Embedding ecosystem services in coastal planning leads to petter outcomes for people and nature' PNAS 2015