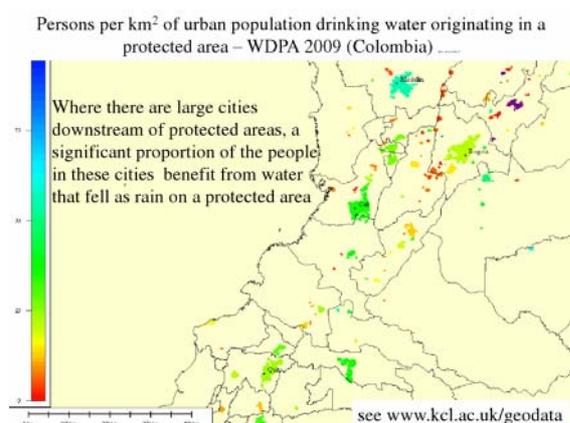


● Mapping the value of nature

A geographer has worked in collaboration with the United Nations Environment Programme to develop Co\$ting Nature, a policy support tool which is able to map globally the relative value provided to humanity by protected areas and other ecosystems.

Key words: ecosystem services; nature; Geographical Information System (GIS)

The world's protected ecosystems have obvious intrinsic value to people living near them and for the landscapes and species they preserve, but they also provide quantifiable economic benefits to humanity. These are known as 'ecosystem services' and include the provision of reliable clean water and crop production; regulation of the global climate; and the role of supporting services, such as soil formation. All are critical to the delivery of food, water, and energy upon which we rely, but the role of nature in providing these often goes unrecognised and un-quantified in economic decision-making.



To this end, geographer Dr Mark Mulligan of King's College London has devised Co\$ting Nature in collaboration with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). This is a science-based policy support tool for understanding the value of water, carbon and tourism-related services from the world's ecosystems and especially from protected areas.

Co\$ting Nature combines satellite-derived datasets on carbon uptake, rainfall, terrain and urban extents, with data on human populations, protected areas and carbon stocks held in a Geographical Information System (GIS). These data are then coupled with process models connecting areas 'providing' services, with those populations 'receiving' them.

Co\$ting Nature is presented as a globally applicable web based interactive policy-support tool using 'neo-geo' maps, and is increasingly used by conservation and development organisations to understand the ecosystem service values of existing and proposed protected areas and the implications of their conservation or loss.

Dr Mark Mulligan, who devised the initiative, said: "The tool means that those planning conservation interventions can understand priority areas in the landscape on the basis of current human pressure, future threats, biodiversity and the number of people benefiting from the ecosystem services provided."

"For example, we can assess how much the quality of drinking water supply for an urban population has been improved as pollutants such as those from agricultural run-off are diluted by groundwater draining from cleaner protected areas upstream."

"This enables more strategic planning upstream of cities of both agriculture and nature at the same time to provide a solution that would otherwise have required costly intensive water treatment or water transfer."

- [Dr. Mark Mulligan](#), Reader in Geography, King's College London
- [Further information](#)



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