

New framework for natural capital approach to transform policy decisions

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How governments and the private sector consider the natural environment when constructing policy is being transformed thanks to a new "natural capital" decision-making framework.

The new framework is led by the University of Exeter Business School's Professor Ian Bateman, director of the Land, Environment, Economics and Policy Institute (LEEP) and member of the Economics department.

Professor Bateman argues that while "[human capital](#)" (workers and new ideas), "manufactured capital" (offices, factories and machinery) and "financial capital" (money) are all recognized as vital parts of an economy, "[natural capital](#)"—provided by the [environment](#) in the form of clean air, water, land and energy—is often overlooked, yet without it economies cannot operate.

He says that as "natural capital" is typically ignored, it becomes over-used and degraded over time—citing the pollution that results in climate change as one example in a list including the over-fishing of seas, massive soil losses and polluted rivers.

In a new study, Professor Bateman observes that an approach to decision-making that considers the central role of natural capital in sustaining economies is gaining traction internationally.

Through his role on the UK Natural Capital Committee, Professor Bateman has advised on making the natural capital approach the basis of the UK Government's 25 Year Environment Plan, which in turn is the basis of the new Environment, Agriculture and Fisheries Bills.

A natural capital approach to business and policy builds on the fact that all natural resources are limited, so every time a decision is made it rules out the possibility of doing something else. This means that natural capital is valuable—and that value must be recognized within decisions.

Professor Bateman's decision-making framework focuses on the links between the environment and economy and has three components: efficiency, assessing which option generates the greatest benefit;

sustainability, the effects of each option on natural capital stocks; and equity, regarding who receives the benefits of a decision and when.

The study provides examples of what happens when policy fails to consider each of the three components.

"Planting a forest in a certain location may help with timber production and benefit the soil, but it also means the area can no longer be used for conventional agriculture and food output," explained Professor Bateman, in an example that shows why efficiency analysis—central to the framework—should be a key requirement for sustainable development.

The framework also states that any decision that involves the natural environment should consider the distribution of benefits and costs across society, revealing impacts on disadvantaged groups.

"Building better transport infrastructure in urban area might improve air quality and public health, but it could also raise local rents and drive out the poorer residents from the area," Professor Bateman said.

The natural capital approach also considers the long-term sustainability of decisions. For example, renewable resources (e.g. fish stocks) should not be used up at a rate greater than they replenish themselves, while external factors such as greenhouse gas emissions need to be considered when using non-renewable resources (such as oil).

The research states that a natural capital framework is essential for making better, sustainable decisions for the benefit of society.

"As a framework for decision support, the natural capital approach clearly offers the potential for significant improvements over commonly applied alternatives such as reliance upon markets and prices," said Professor Bateman.

"Given that decisions are currently being taken on the basis of extremely limited evidence about benefits and costs, often restricted to just the value of market goods and with hardly any consideration of off-site or longer term consequences, we suggest that we know enough already to start to put these approaches into practice. We should not let the perfect be the enemy of the good."

The study, titled "The natural capital [framework](#) for sustainably efficient and equitable [decision](#) making," is published in the journal *Nature Sustainability*.

More information: Ian J. Bateman et al. The natural capital framework for sustainably efficient and equitable decision making, *Nature Sustainability* (2020). [DOI: 10.1038/s41893-020-0552-3](https://doi.org/10.1038/s41893-020-0552-3)

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