



Biodiversity Conservation Threatened by Land Market Dynamics

According to a new study, it is important to consider the impact of real estate market dynamics when considering land purchase in conservation programmes for biodiversity protection. Without good data and an understanding of the laws of supply and demand, the purchase of land for conservation could sometimes even do more harm than good for biodiversity.

The purchase of land by public or private organizations for biodiversity protection purposes has become an important instrument to conserve vulnerable species and ecosystems, especially in countries with strong private property rights. Traditionally, the approaches used to prioritise sites for protection ignored economic forces. This was not a problem in the past when conservation buyers were a very small part of the land market, and therefore did not have a major impact on the real state market dynamics. However, nowadays the scale of conservation buying programs has increased to the point where it can change the way real estate markets operate.

A recent study investigated how conservation purchases affect land prices and the impact of the resulting market feedbacks on the effectiveness of the conservation efforts. The authors conducted an economic analysis of land-buying practices based on a variety of assumptions about where biodiversity resides.

The results of the analysis showed that there are various market feedbacks that determine the effectiveness of the conservation investments, these being:

- Land prices rise when conservationist group invest significant sums in local land markets, thus making future investments more difficult.
- Conservation purchases displace development pressure, sometimes towards properties of high ecological value that would otherwise have gone unthreatened.
- Conservation purchases can even attract developers keen to capitalise on conservation amenity values.

The combined impacts of these land market feedbacks depend on the ecological value of the land outside the areas to be protected. When surrounding areas are important for species persistence, market feedbacks have a larger negative impact on the effectiveness of conservation efforts.

In order to avoid these counterproductive effects, the authors proposed the following practical considerations when designing land acquisition strategies for conservation purposes:

- Economic forces, land market dynamics in particular, need to be factored in to conservation planning so that the full suite of potential gains and costs can be accounted for.
- Improved inventories of biodiversity are needed to enable conservation buying to target areas where biodiversity is particularly in need of protection. Poor information on species' distributions will not only render conservation efforts less effective, they may even undermine future opportunities by increasing development pressure on the unprotected lands and raising the price of the land.

The current study provides new insights for biodiversity conservation planning, highlighting the importance of accounting land market dynamics for making effective investment decisions.

Source: Paul R. Armsworth, Gretchen C. Daily, Peter Kareiva, and James N. Sanchirico (2006) "Land market feedbacks can undermine biodiversity conservation", PNAS 103(14): 5403–5408

Contact: p.armsworth@sheffield.ac.uk

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