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ARTICLE FEED

Ecotope

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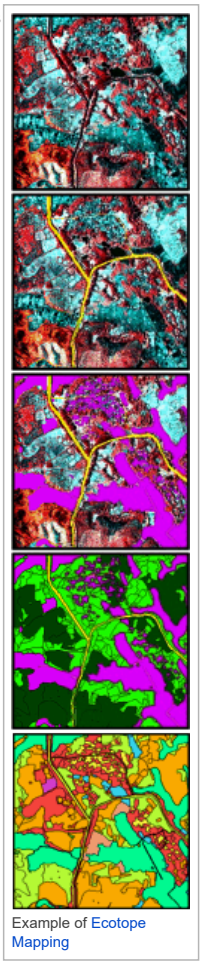
Introduction



Example of Ecotope Mapping

Ecotopes are the smallest ecologically-distinct features in a landscape mapping and classification system. As such, they represent relatively homogeneous, spatially-explicit landscape functional units that are useful for stratifying landscapes into ecologically distinct parts that can be used in mapping and measuring landscape structure, function and change.

Arthur Tansley, originator of the ecosystem concept, introduced the term ecotope in 1939, to give a more spatially-explicit defintion to the ecosystem concept by joining the term *eco-* (from the Greek "oikos" ; house, household) with *-tope (*Greek topos; place, locality). Carl Troll, founder of landscape ecology, first used the term to define landscape units in 1945. The term has had other uses in ecology, but these are rare today.

Ecotope Mapping & Classification

Like ecosystems, ecotopes are identified using relatively flexible criteria. In the case of ecotopes, by criteria defined within a specific ecological mapping and classification system. However, just as ecosystems are defined by the interaction of biotic and abiotic components, ecotope classification systems should stratify landscapes using a combination of both biotic and abiotic factors, including vegetation, soils, hydrology, and other factors.

Other parameters that must be considered in the classification of ecotopes include their period of stability (such as the number of years that a feature might persist), and their spatial scale (minimum mapping unit).

A variety of ecotope mapping and classification systems now exist, and are tailored to specific purposes, ranging from regional studies of fine-scale habitat types to mapping ecologically-distinct anthropogenic land units within small samples of landscapes.

Further Reading

- Different definitions of ecotope. Ecotope.org
- Bastian, O., C. Beierkuhlein, H. J. Klink, J. Löfffler, U. Steinhardt, M. Volk, and M. Wilmking. 2003. Landscape structures and processes. Pages 49-112 in O. Bastian and U. Steinhardt, eds. *Development and Perspectives of Landscape Ecology*. Kluwer Academic Publishers.
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- Klijn, F., and H. A. Udo De Haes. 1994. A hierarchical approach to ecosystems and its implications for ecological land classification. *Landscape Ecology* 9: 89-104.

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