



Geodiversity, biodiversity and landscape – key elements in modern nature management strategies

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Nature consists of a diversity of systems of both abiotic and biotic character interlinked with each other. Often geodiversity provides fundamental elements for biodiversity in forming major ecosystem attributes. Bedrock geology and sediments contribute to nutrient and substrate conditions and terrain to drainage and moisture differences. But we also find the opposite relation, for example in formation of biogenetic sediments. Truly we are talking of nature diversity consisting of biodiversity and geodiversity in a variety of blends. This close scientific relationship should also be reflected in nature conservation practices to the benefit of both geodiversity and biodiversity. But as biodiversity has dominated the nature conservation debate for the last decades, geodiversity has had a tendency to be overlooked. This is unfortunate both for the sake of biodiversity as major parts of ecosystems that is not treated properly and geodiversity that does not get the recognition it deserves.

Nature diversity can be described in a range of scale from the very small to the very great. A lot of management attention is put on a fairly detailed scale such as species (protection of species, red-listing of species etc.). The well-established imperative to look at different scales (from genes via species to ecosystems) is often too complicated for many management systems. The same can be the case in geoconservation were the focus on geosites (for scientific purposes) may favour the same detailed scale approach. On these scales the relation between geo- and biodiversity is easier to overlook. These detailed conservation efforts are sensible and necessary, but need to be supplemented by supplementary strategies that covers other scales.

Exploring the relation between geodiversity and biodiversity makes the understanding and integration of geoconservation within nature management easier especially on a landscape scale. The landscapes have the potential to supplement the detailed conservation strategies both with respect to eco- and geosystem attributes, its interdisciplinary nature and its link to many management systems. Landscape management can also link local management with national and international conservation systems. Examples from recent development of nature classification systems in Norway both on a detailed (habitat) scale as well as on a landscape scale will be presented. These examples are linked to a need for new and updated systems after Norway got a new environmental legislation in 2009. In this legislation (the nature diversity act) the link between biodiversity, geodiversity and landscape are clearly stated and has given new possibilities for geoconservation within an overall nature management perspective.