

# Ecological Continuum Initiative

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## GLOSSARY ON ECOLOGICAL NETWORKS

Version December 12<sup>th</sup> 2008



### **The Ecological Continuum Initiative: restoring the web of life**

The Ecological Continuum Initiative aims to maintain or restore ecological connectivity in the Alps by facilitating and catalyzing relevant projects and initiatives. The Initiative partners (Alpine Network of Protected Areas ALPARC, International Commission for the Protection of the Alps CIPRA, International Scientific Committee Alpine Research ISCAR and the European Alpine Programme of WWF) provide an interface between policy, practise and science to allow the exchange and pooling of knowledge, lessons learned and expertise. The work of the Ecological Continuum Initiative is supported by the Swiss MAVA Foundation for Nature.

## 1. Introduction

The alpine arc spans eight countries and therefore consists of a variety of cultures and languages. Cross-border co-operation or i.e. the realization of multilingual events is sometimes difficult due to language barriers or misunderstandings. For this reason the Consortium of the Continuum Project prepared a glossary on the topic of ecological networks, which should function as a tool to facilitate communication throughout the Alps. Stakeholders, active involved people or translators could use it as a basis for their work when collaborating with foreign-language persons. The glossary includes relevant terms in English and their translations to the four main Alpine languages. A short explanation of the term in English should facilitate the understanding, but has in the most cases no scientific reference. The document is a work in progress and will be extended by time or if necessary. Other by the Consortium known glossaries, dictionaries or i.e. the LexALP Information System (<http://lexalp.eurac.edu:8080/termbank/LexALP.po>) which meets the need for clear and coherent terminology in supranational communication and cooperation within the Alps, will be checked regularly. If you have any suggestions (mistakes, terms to be added etc) regarding the glossary you are welcome to send them to [aurelia.ullrich@cipra.org](mailto:aurelia.ullrich@cipra.org)

## 2. Glossary

Terms	Definition	German	Italian	French	Slovenian
<i>barrier</i>	An area of unfavorable habitat, or other physical obstacle, that separates two areas of favorable habitat, e.g. oceans in the case of terrestrial organisms, or a cereal monoculture in the case of woodland organisms.	Barriere	barriera	barrière	bariera
<i>biodiversity</i>	Variation of life at all levels of biological organization. Biodiversity is a measure of the relative diversity among organisms present in different ecosystems. "Diversity" in this definition includes diversity within a species and among species, and comparative diversity among ecosystems.	Biodiversität	biodiversità	biodiversité	biološka raznovrstnost
<i>biotope</i>	A biotope is an area of uniform environmental conditions providing a living place for a specific assemblage of plants and animals.	Biotop	biotopo	biotope	biotop
<i>biotope network</i>	The target of biotope network is the protection, regeneration and development of functioning ecological interactions in the territory. Thereby the ecological and spatial-functional requirements of native species to their living space are in the foreground. Network systems shall provide genetic exchange between populations, animal migration as well as natural spread and recolonisation. <sup>1</sup>	Biotopvernetzung	rete di biotopi	réseau de biotopes	mreža biotopov
<i>buffer zone</i>	The buffer zone surrounds the core area and is intended to protect the strictly protected core area against immediate outside influences.	Pufferzone	zona cuscinetto	zone tampon	tamponsko območje
<i>bypass flume</i>	Bypass flumes are built to avoid a obstruction in a river or a waterway, like a dam in a relative wide-ranging way. They are designed as near-natural waterways to ensure the migration of fishes and other water animals.	Umgehungsgerinne	canale d'aggiramento	canal de contournement, canal de dérivation	prehodni kanal
<i>climate change</i>	Climate change refers to the variation in the Earth's global climate or in regional climates over time. It describes changes in the variability or average state of the atmosphere over time scales	Klimawandel	cambiamento climatico	changement climatique	podnebna sprememba

<sup>1</sup> [http://www.bfn.de/0311\\_biotopverbund.html#c4927](http://www.bfn.de/0311_biotopverbund.html#c4927)

	<p>ranging from decades to millions of years. These changes can be caused by processes internal to the Earth, external forces (e.g. variations in sunlight intensity) or, more recently, human activities.</p> <p>In recent usage, especially in the context of environmental policy, the term "climate change" often refers to changes in modern climate which according to the IPCC are 90-95% likely to have been in part caused by human action. Consequently the term anthropogenic climate change is frequently adopted; this phenomenon is also referred to in the mainstream media as global warming. In some cases, the term is also used with a presumption of human causation, as in the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC uses "climate variability" for non-human caused variations.</p>				
<i>climatic zones shift</i>	A change in the geographic distribution (in the Alps also altitudinal location) of a climate zone brought about by climate change.	Klimazonenverschiebung	spostamento delle zone climatiche	déplacement de zones climatiques	premiki podnebnih con
<i>climate, climatic zone</i>	An area with a prevailing climate that distinguishes it from other areas due to temperature, rainfall, etc.	Klima, Klimazone	zona climatica	zone climatique	podnebna cona
<i>continuum</i>	A continuum is a unit of living spaces which allow the deployment of an ecological group. It consists of several connected unobstructed elements. <sup>2</sup>	Kontinuum	continuum	continuum	kontinuum
<i>core area, zone</i>	Innermost section of a protected area, enjoying especially strict protection.	Kernzone	zona, area centrale	zone nodale, zone centrale	osrednje območje, cona
<i>corridor (ecological)</i>	A corridor is a generally linear landscape element allowing the dispersal of animal or plant species.	Korridor	corridoio ecologico	corridor (biologique, écologique)	ekološki koridor
<i>ecological continuum</i>	See continuum	Ökologisches Kontinuum	continuum ecologico	continuum écologique	ekološki kontinuum

<sup>2</sup> Nationales ökologisches Netzwerk REN, Schriftenreihe Umwelt Nr. 373, Bundesamt für Umwelt, Wald und Landschaft, S. 25

<i>ecostabilization</i>	Spatial planning which assists the ecological balance of the landscape. This concept proposes a division of the landscape into natural and intensive cultivated areas. The principles are a clear delimitation of natural zones, restoration zones and regeneration zones on the one hand and of agricultural, industrial and urban areas on the other hand. <sup>3</sup>	Ökostabilisierung	superficie di compensazione ecologica area di compensazione ecologica (IT)	éco-stabilisation	ekostabilizacija
<i>endemic species</i>	Endemism is the ecological state of being unique to a place. Endemic species are not naturally found elsewhere. The place must be a discrete geographical unit, such as an island, habitat type, or other defined area or zone. For example, <i>Trechus strasseri</i> is endemic to the Southern Alps and alpine foothills, meaning it is exclusively found in that area.	Endemische Art	specie endemica	espèce endémique	endemične vrsta
<i>fish pass</i>	A series of pools arranged like ascending steps or an artificial passage at the side of a stream, enabling migrating fish to swim upstream around a dam or other obstruction. <sup>4</sup>	Fischtreppe	scala di risalita, scale di rimonta, scale di monta	échelle à poissons	ribji prehod
<i>fragmentation</i>	(also Habitat Fragmentation) Habitat fragmentation is a process of environmental change important in evolution and conservation biology. As the name implies, it describes the emergence of discontinuities (fragmentation) in an organism's preferred environment (habitat). Habitat fragmentation can be caused by geological processes that slowly alter the layout of the physical environment or by human activity such as land conversion, which can alter the environment on a much faster time scale. The former is suspected of being one of the major causes of speciation. The latter is causative in extinctions of many species. Habitat fragmentation is frequently caused by humans when native vegetation is cleared for human activities such as agriculture, rural development or urbanization. Habitats which were once continuous become divided into separate fragments. After intensive clearing, the separate fragments tend to be very small islands isolated from each other by crop land, pasture, pavement, or even barren land. The term habitat fragmentation includes six discrete phenomena: Reduction in the total area of the habitat ;Increase in the amount of edge; Decrease in the amount of interior habitat; Isolation of one habitat fragment from other areas of habitat; Breaking up of one patch of habitat into several smaller patches; Decrease in the average size of each patch of habitat	Lebensraumzer- schneidung	frammentazione	fragmentation	fragmentacija

<sup>3</sup> Nationales ökologisches Netzwerk REN, Schriftenreihe Umwelt Nr. 373, Bundesamt für Umwelt, Wald und Landschaft, S. 131

<sup>4</sup> Wörterbuch Hochwasser, Roberto Loat & Elmar Meier, S. 264

<i>functional connectivity</i>	Functional connectivity measures how well habitat patches are connected and depends on both the degree of physical separation between habitat patches and on the ease of species movement and dispersal between patches. It is possible to have high functional connectivity of patches in a physically fragmented habitat, depending on the ease with which species can move through the surrounding landscape. <sup>5</sup>	funktioneller Zusammenhang	connettività funzionale	connectivité fonctionnelle	funkcionalna povezanost
<i>genetic impoverishment</i>	Loss of genetic diversity within a species	genetische Verarmung	impoverimento genetico	appauvrissement génétique, perte de diversité génétique	genetsko osiromašenje
<i>habitat</i>	The area or natural environment in which an organism or population normally lives. A habitat is made up of physical factors such as soil, moisture, range of temperature, and availability of light as well as biotic factors such as the availability of food and the presence of predators. A habitat is not necessarily a geographic area: for a parasitic organism it is the body of its host or even a cell within the host's body	Habitat (Lebensraum)	habitat	habitat	habitat
<i>invasive species</i>	Invasive or Non-native species are those that have been introduced to a special ecosystem by accidental or deliberate action and are outside their natural range.	invasive (gebietsfremde) Art	specie invasiva, specie aliena	espèce invasive	invazivne vrsta
<i>land use</i>	Exploitation of land for agricultural, industrial, residential, recreational, or other purposes.	Landnutzung	uso del territorio	occupation du sol	izkoriščanje (raba) prostra
<i>land use planning</i>	The scientific, aesthetic, and orderly disposition of land, resources, facilities and services with a view to securing the physical, economic and social efficiency, health and well-being of urban and rural communities. In the English speaking world, the terms <i>land use planning</i> , <i>town and country planning</i> , <i>regional planning</i> , <i>town planning</i> , <i>urban planning</i> , and <i>urban design</i> are often used interchangeably, and will depend on the country in question. In Australia, the United Kingdom, and New Zealand, the term <i>town planning</i> is common, although <i>regional planning</i> and <i>land use planning</i> are also used. In the United States and Canada, the terms <i>urban planning</i> and <i>regional planning</i> are more commonly used. In Europe the preferred term is increasingly <i>spatial planning</i> or more recently <i>territorial cohesion</i> (for regional and trans-national planning).	Landnutzungsplanung	pianificazione dell'utilizzo del territorio	aménagement du territoire	prostorsko planiranje

<sup>5</sup> <http://www.jncc.gov.uk/page-4249>

<i>level of intervention</i>	Level of intervention could be i.e. local, regional, national, international depending on the activity and involvement of relevant actors	Eingriffsebene	livello d'intervento	niveau d'intervention	nivo intervencije
<i>life cycle</i>	A life cycle is a period involving 1 generation of an organism and marks the time from the fecundation of the ovule (respectively seed with plants) to the adult form.	Lebenszyklus	ciclo vitale	cycle de vie	življenjski krog
<i>living space</i>	See habitat	Lebensraum	spazio vitale	espace vital	življenjski prostor
<i>migration</i>	<p>Migration is defined as the regular, usually seasonal, movement of all or part of a population of animals. Many different animals migrate, including birds, hoofed animals, bats, whales, seals, and salmon. One-way movement of animals that do not return is called emigration. Emigration is due to different causes and is not considered migration. Also, the regular daily movements that many animals undertake are not considered migration.</p> <p>Most birds and mammals that migrate follow an annual or seasonal pattern related to cyclic variations in temperature, vegetation, or precipitation. In some parts of the world, animals will suddenly move into a new area temporarily. These sudden and temporary movements are called irruptions. Irregular movements, such as irruptions, are generally due to population growth during periods of abundant food followed by dispersal when food supplies diminish.</p> <p>Most migrations involve horizontal movement. Animals move north and south with the seasons or move in a circular pattern to take advantage of cyclic rain patterns or new forage growth. Some animals, however, migrate by changing elevation. Aquatic animals may move from deeper water to the surface according to the season. Many birds, mammals, and insects migrate to higher or lower elevations in mountainous areas. This kind of migration produces the same kind of change in the environment as horizontal migration but involves only small horizontal displacements.</p>	Migration/ Wanderung	migrazione	migration animale	migracije (selitve)
<i>mosaic (landscape)</i>	Mosaic describes the pattern of patches, corridors and matrix that form a landscape in its entirety.	Mosaik	mosaico (paesaggio a)	mosaïque	(pokrajinski ) mozaik
<i>near-natural</i>	Condition of an area of land, even after human intervention, has the variety of flora and fauna and the structure appropriate to the location. <sup>6</sup>	naturnah	conforme alla natura	proche de l'état naturel	v sozvočju z naravo

<sup>6</sup> Wörterbuch Hochwasserschutz, Roberto Loat & Elmar Meier, S. 258

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<i>nodal point, node</i>	A nodal point is an area where several elements of biodiversity get together, e.g. the overlapping of several habitats or the conjuncture of important migration-routes.	Knotenpunkt	punto nodale	nœud	vozišče
<i>overdevelopment, urban sprawl</i>	A process by which natural resources are impacted by urbanization and/or road construction, at a rate significantly harmful to the ecosystem	Zersiedelung	città diffusa	étalement urbain	pretirana razvitost
<i>Pan European Ecological Network</i>	The Pan-European Ecological Network (PEEN) is one of the most important implementation tools of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). PEEN aims to link the different European and national protected areas and ecological networks with the goal of ensuring the favorable conservation status of Europe's key ecosystems, habitats, species and landscapes.	Pan-Europäisches Ökologisches Netzwerk	rete ecologica paneuropea	réseau écologique paneuropéen	panevropsko ekološko omrežje
<i>population</i>	A population is the collection of inter-breeding organisms of a particular species. A population shares a particular characteristic of interest most often that of living in a given geographic area. In taxonomy population is a low-level taxonomic rank.	Population	popolazione	population	populacija
<i>regional planning</i>	Regional planning is a branch of land use planning and deals with the efficient placement of land use activities, infrastructure and settlement growth across a significantly larger area of land than an individual city or town. See land use Planning	Regionalplanung	pianificazione territoriale	aménagement du territoire, planification régionale	regionalno planiranje
<i>REN</i>	The project REN proposes a vision for habitat interconnectedness on a national scale in Switzerland. The results are based on existing data, their processing within a computer model, as well as on the verification and completion of the dataset. <sup>7</sup>	Nationales ökologisches Netzwerk	rete ecologica nazionale	réseau écologique national	nacionalno ekološko omrežje
<i>spatial planning</i>	Coordination and long-term control of activities with spatial impact <sup>8</sup> , see land use Planning	Raumplanung	pianificazione spaziale	aménagement du territoire	prostorsko planiranje
<i>stepping stone</i>	Stepping stones are smaller, unconnected areas of preserved or restored habitat, originally intended to promote bird and insect movement. Scientists are surprised to find that large animals, like endangered pumas, are using the stepping stones too.	Trittstein	punto di collegamento ("stepping stone")	élément relais, biotope relais	vmesni zaščiten biotop ("stepping stone")
<i>stopover site</i>	Stopover sites are sites found along migration routes used by birds for rest and feeding. For some species, migration success depends on the availability of certain key food resources at stopover points	Zwischenlan-	luogo di sosta,	halte migratoire, zone de halte,	selitvene

<sup>7</sup> Nationales ökologisches Netzwerk REN, Schriftenreihe Umwelt Nr. 373, Bundesamt für Umwelt, Wald und Landschaft, S. 5

<sup>8</sup> Wörterbuch Hochwasser, Roberto Loat & Elmar Meier, S. 247

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	along the migration route. This gives the migrants an opportunity to "refuel" for the next leg of the voyage. Hunting along the migration routes, and structures such as power lines, wind farms and offshore oil-rigs have been known to affect migratory birds. Habitat destruction by land use changes is however the biggest threat and shallow wetlands which are stopover and wintering sites for migratory birds are particularly threatened by draining and reclamation for human use.	dungsstelle	quartiere di sosta	zone de repos	postojanke
<i>structural connectivity</i>	Structural connectivity is often equated with the spatial contagion of habitat, and is measured by analyzing landscape structure without any requisite reference to the movement of organisms or processes across the landscape. <sup>9</sup>	struktureller Zusammenhang	connettività strutturale	connectivité structurelle	strukturne postojanke
<i>sustainable use area</i>	Sustainable use areas are remaining areas of the landscape outside the continuum that can come under more intensive land use. But they should still take full account of the successful provision of ecosystem goods and services. <sup>10</sup>	nachhaltig genutztes Gebiet	area ad uso sostenibile	espace exploité de façon durable	območje s trajnostno rabo
<i>territorial cohesion</i>	See Landuse Planning	territorialer Zusammenhalt	coesione territoriale	cohésion territoriale	teritorialna kohezija (povezanost)
<i>urban planning</i>	See Landuse Planning	Stadtplanung	urbanistica	urbanisme	urbanistično planiranje
<i>wilderness</i>	Geographically, wilderness may be defined as those regions or locations that are remote, devoid of human features and with natural or near-natural ecosystems.	Wildnis	"Wilderness", area incontaminata, territorio completamente naturale	« wilderness », espaces sauvages	divjina, neokrnjena območja
<i>wildlife corridor</i>	A wildlife corridor or green corridor is a strip of habitat connecting wildlife populations separated by human activities (such as roads, development, or logging). This allows an exchange of individuals between populations, lowering inbreeding within populations, so increasing effective population size, and facilitating re-establishment of populations that have been decimated or eliminated due to	Korridor (nach Wikipedia: Biotopverbund)	corridoio ecologico	corridor (biologique, écologique)	ekološki koridor

<sup>9</sup> Cambridge University Press - Connectivity Conservation - by Kevin R. Crooks and M. Sanjayan

<sup>10</sup> <http://www.countdown2010.net/archive/paneuropean.html#integrating>

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	random events. This may potentially moderate some of the worst effects of habitat fragmentation. <sup>11</sup> See corridor				
<i>wildlife crossing</i>	Wildlife crossings are artificial over- or underpasses which enable migrating animals to cross roads or highways.	Grünbrücke	ponte verde	passage à faune	zeleni most
<i>zoning regulation</i>	Zoning is a term used in urban planning for a system of land-use regulation in various parts of the world, including North America, the United Kingdom (where it is normally known as town and country planning) and Australia. The word is derived from the practice of designating permitted uses of land based on mapped zones which separate one set of land uses from another.	Bebauungsvor- schrift	piano regolatore (in Svizzera: piano direttore (cantons), piano regolatore (municipalities))	zonage	pravilo coniranja

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<sup>11</sup> [http://en.wikipedia.org/wiki/Wildlife\\_corridor](http://en.wikipedia.org/wiki/Wildlife_corridor)