Land use indicator LAN (EUSALP)

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Summary Classification of land use categories according to their influence on ecological connectivity and based on principles of sustainability. It is one of the indicators belonging to the continuum suitability indices CSI (consisting of LAN, POP, FRA, TOP and ENV).

Legend

■ 10	■ 6	■ 2
■ 9	■ 5	■ 1
■ 8	■ 4	■ 0
■ 7	■ 3	

1 Introduction

Land use and land cover changes are so pervasive that they directly impact biotic diversity worldwide (Sala et al., 2000). They are seen as the most important driver with regard to biodiversity loss (Foley et al., 2005; Geneletti, 2013; Metzger et al., 2006). Taking into account that current rates of extinction are estimated at about 1000 times the likely background rate of extinction (Pimm et al., 2014), land use plays a key role with regard to ecological connectivity analyses. Ecological connectivity is usually defined as the "degree to which the landscape facilitates or impedes movement" (Taylor et al., 1993). A distinction is made between species-specific connectivity of habitats, connectivity of human-defined patterns of landcover or the connectedness of ecological processes (Lindenmayer and Fischer, 2007). With the land use indicator, land use and land cover categories are classified according to their influence on ecological connectivity.

2 Data

We collected spatial datasets on land use for six project working regions (Figure 1). The dataset categories were translated by region / project working region representatives. Translated land use classification with detailed description of the individual classes are provided in Annex A. , We used Corine Land Cover dataset 2012 (CLC2012) (EEA, 2016) with a spatial resolution of 100m where regional datasets were not available.. The CLC2012 contains 39 countries and covers the whole EUSALP perimeter. It was produced by interpreting satellite images and classifying land cover into 44 categories with a minimum mapping unit of 25 hectares. Height-dependent analyses were conducted with the ASTER Global Digital Elevation Model (NASA et al., 2011) with a spatial resolution of 30m. For forested areas, we consulted the map of Natural Vegetation of Europe (Bohn et al., 2003) .

Interreg Alpine Space

ALPBIONET 2030
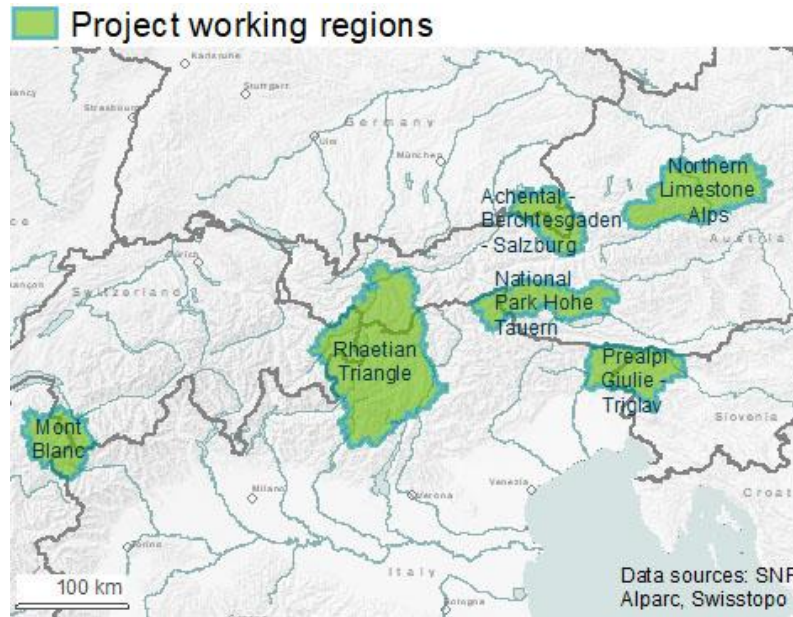
EUROPEAN REGIONAL DEVELOPMENT FUND

Figure 1: Map of the six ALPBIONET2030 project working regions in the Alps for which regional land use indicators were calculated and for which datasets are listed in Annex A.

3   Processing and classification

The regional land use indicator was created by a three-step procedure accounting for the relation between actual and native land cover.

1. Classification of land use classes according to their influence on ecological connectivity based on principles of sustainability.
2. Reclassification of coniferous forests (in regions where only CLC2012 data is available)
3. Reclassification of high-altitude forests (in regions without detailed forest information)

3.1   Classification of CLC2012 land cover classes

The land cover classes of CLC2012 were classified according to the classification scheme in Table 1. Indicator values for land cover classes are based on a literature review, the evaluation of questionnaires, former workshops and a workshop on The Continuum Suitability Index (CSI) within the framework of the Interreg IV project Alpbionet2030 held in Trenta (SI) in October 2017.

Table 1: Corine Land Cover 2012 classification scheme and indicator values for ecological connectivity.

	Land Cover Class	Indicator value (0 – 10)
1.1.1.	Continuous urban fabric	0
1.1.2.	Discontinuous urban fabric	0
1.2.1.	Industrial or commercial units	0
1.2.2.	Road and rail networks and associated land	1
1.2.3.	Port areas	1
1.2.4.	Airports	0
1.3.1.	Mineral extraction sites	2
1.3.2.	Dump sites	0
1.3.3.	Construction sites	0

	Land Cover Class	Indicator value (0 – 10)
1.4.1.	Green urban areas	2
1.4.2.	Sport and leisure facilities	2
2.1.1.	Non-irrigated arable land	4
2.1.2.	Permanently irrigated land	2
2.1.3.	Rice fields	4
2.2.1.	Vineyards	4
2.2.2.	Fruit trees and berry plantations	2
2.2.3.	Olive groves	4
2.3.1.	Pastures	5
2.4.1.	Annual crops associated with permanent crops	4
2.4.2.	Complex cultivation patterns	2
2.4.3.	Land principally occupied by agriculture, with significant areas of natural vegetation	6
2.4.4.	Agro-forestry areas	5
3.1.1.	Broad-leaved forest	7
3.1.2.	Coniferous forest	6
3.1.3.	Mixed forest	7
3.2.1.	Natural grasslands	8
3.2.2.	Moors and heathland	10
3.2.3.	Sclerophyllous vegetation	8
3.2.4.	Transitional woodland-shrub	9
3.3.1.	Beaches, dunes, sands	7
3.3.2.	Bare rocks	7
3.3.3.	Sparsely vegetated areas	8
3.3.4.	Burnt areas	8
3.3.5.	Glaciers and perpetual snow	7
4.1.1.	Inland marshes	10
4.1.2.	Peat bogs	10
4.2.1.	Salt marshes	10
4.2.2.	Salines	10
4.2.3.	Intertidal flats	10
5.1.1.	Water courses	8
5.1.2.	Water bodies	7
5.2.1.	Coastal lagoons	10
5.2.2.	Estuaries	10
5.2.3.	Sea and ocean	10

3.2 Reclassification of coniferous forests

Spruce monocultures and clear-cut areas are viewed as the main issues with regard to ecological connectivity in forests. For regions were no regional data is available therefore, an attempt was made to differentiate between coniferous forests being the natural vegetation of an area and those areas which would not naturally be vegetated by coniferous forests. Coniferous forests located within an area where

conifers would occur naturally (based on the map of natural vegetation of Europe) were classified as 7 and all other coniferous forests as 6.

3.3 Reclassification of high-altitude forests

In areas where regional land use datasets were available and detailed enough we did not apply any altitude dependent reclassification of forests.

Assuming that forests at higher altitude are in a more natural state than those at lower altitudes, the following procedure has been applied to forested areas: for every pixel, the altitude corresponding to the 70th percentile of the altitudes of the surrounding 5km (10x10km) was determined and taken as a threshold for forests at higher altitudes. For this purpose, the ASTER Global Digital Elevation Model was used and clipped to the extent of forested areas. We considered classes 3.1.1., 3.1.2 and 3.1.3 of the CLC2012 dataset (see Table 1). The statistical analyses of the raster data were performed with the statistical software R (R Development Core Team, 2008). All forested areas at altitudes above the 70th percentile were classified at a value of 8.

3.4 Overview of classification of regional datasets and land use / cover classes

Classification of the regional land use dataset classes according to their importance on ecological connectivity was based on expert opinion of representatives in each project working region. If project working region representatives did not assign indicator values, collaborators of Slovenia Forest Service (SFS) and Agricultural Institute of Slovenia (AIS) took over this task.

We aim to provide more informative maps on ecological connectivity in the project working regions by using regional datasets. We assumed that regional datasets provide geographically more accurate information on land use on the level of project working regions than CLC2012 data. The second advantage of using regional land use datasets is the possibility for more accurate estimation of conditions of some land cover classes which are not included in the CLC2012 dataset. For example, in CLC2012 dataset orchards are included as "Fruit trees and berry plantations (2.2.2.)"; however there is no possibility of distinguishing ecological connectivity potential of intensive orchards from meadow orchards (high-stemmed fruit trees that stand scattered on meadows or pastures). In some of the regional datasets, such distinction is possible and we therefore assigned different ecological connectivity values to the regional land use classes.

In CLC2012 **water courses** were assigned an indicator value of 8 and water bodies 7. In cases where regional datasets did not have detailed categorization of water areas, we assigned value 8 regardless of the type of water area. The artificial water areas such as fountains were assigned value 2 – corresponding to CLC2012 category 141 "green urban areas" (Table 1). Larger water areas with strong anthropogenic influence, such as canals, were assigned value 4.

We assigned an indicator value of 6 to **plantations of forest trees** which was the lowest value for forested areas (forested areas had values between 6 and 9; Table 1). The same value was assigned to **reforestation areas inside the forests** because it mostly represented artificial regeneration by planting. If reforestation was natural, we assigned the class the indicator value 9 - corresponding to CLC2012 category 332 "sparsely vegetated areas" (Table 1).

Even though the **marshes** have indicator value 10 (CLC2012 categories 411 "inland marches" and 412 "peat bog" in Table 1), the forested wetlands were assigned EC value 9 as we interpreted this class as natural forests.

To categories which do not exist in CLC2012 we assigned new indicator values. To **alpine pastures** we assigned value 6 since we assumed that they have better conditions for EC compared to pastures -

CLC2012 category 231 (Table 1). **Wooded pastures** were assigned indicator value 5 which is the same value as CLC2012 category 244 "agro – forestry areas". **Hedges** were assigned the indicator value 8. The different types of non-cultivated vegetation were assigned with the indicator value 6.

In the case of **forest land uses**, our intention was to evaluate forest structure, composition and naturalness. In most cases, the data sets did not enable in-depth analysis of forest structure and composition. We assigned indicator values between 6 and 9 for different forest types and categories. To plantations, spruce monocultures and artificial regeneration areas, we assigned indicator value 6. Natural forests among water bodies, for example, were assigned indicator value 9.

4   References

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Annex A: Regional land use indicators for six ALPBIONET2030 Project working regions

4.1 Project Working Region MONT BLANC

We used different data sources, proposed by project partners from the Project Working Region. If there was no appropriate data source, CLC2012 data was used instead which was the case for Aosta Valley.

Table 2: Regional GIS data sources for Project Working Region Mont Blanc

Name of the data set	Content	Region
OCS74 040812 (Landusefra)	Land use	Rhône-Alpes
CLC2012	Corine Land Cover	Aosta Valley
vs_arealstat_04_72_cl	Land use	Lake Geneva (Canton of Valais)
vs_reserves_forestieres_cl	Forest information	Lake Geneva (Canton of Valais)

Table 3: Land use for Rhone – Alpes classification scheme

	Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
1110	Espaces structures constitues d'immeubles accoles collectifs et/ou individuels. Concerne en particulier les centres historiques denses des villes importantes. La presence de surfaces vegetalisees est tres faible.	Continuous urban fabric	1
1121	Espaces structures par des habitations. Cette classe correspond aux zones d'habitations pavillonaires peripheriques aux centres des agglomerations et a certaines agglomerations des zones rurales et ne contient pas les informations liees	Residential areas	0
1122	Espaces structures par des grands ensembles d'immeubles d'habitation collectives comprenant des parkings et des espaces verts et eventuellement des commerces associes.	Public places	0
1123	Hameaux, ensemble de batiments de ferme et de petites installations agro-industrielles (elevage, production, conserveries, silos) avec e ventuellement petites prairies et boisements attenants, les maisons forestieres, les chateaux, les cou	Rural settlements	0
1131	Tous les cimetieres, y compris les cimetieres militaires.	Cemetery	0
1132	Ce poste contient toutes installations a caractere public casernes, hopitaux, groupes scolaires, campus universitaires, postes electriquese	Public equipment (hospitals, schools, university, stations…)	0
1133	Jardins potagers	Community garden	2
1134	Espaces vacants au sein de l'agglomeration	Unoccupied urban area	2
1211	Principales emprises industrielles et commerciales : zones industrielles et/ou artisanales, zones d'activites, grands centres commerciaux, hypermarches, grandes concessions automobiles	Industrial estate, shopping centre	0
1212	Emprises industrielles ou commerciales desaffectees, en cours de conversion ou laissees a l'abandon.	Industrial wasteland	2
1221	Axes a 2 x 2 voies, aires de repos, echangeurs, ronds points importants, routes nationales et departementales principales.	Arterial road	1
1222	Voies TGV, neuds ferroviaires, quais, gares, gares de triage, remblais.	Arterial railway network (high-speed train)	1
1230	Infrastructures des zones portuaires, y compris les quais, les digues, les chantiers navals et les ports de plaisance.	Port areas	1
1240	Infrastructures des aeroports : pistes, batiments et surfaces associees.	Airports	0
1311	Extraction de materiaux en activite a ciel ouvert correspondant a l'extraction de granulats alluvionaires.	Alluvial quarry	2
1312	Extraction de materiaux en activite a ciel ouvert correspondant a l'extraction de roches coherentes (autres que les granulats alluvionaires).	Rock quarry	2
1321	Toutes les decharges et depots identifiables (industries, collectivites publiques, sauvages).	Landfills	0

	Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
1322	Exclusivement les stockages de gaz et/ou hydrocarbures.	Storage areas	0
1330	Espaces en construction (batiments ou infrastructures de transport), excavations et sols remanies.	Construction sites	0
1410	Espaces verts urbains et peri-urbains, zones artificialisees non agricoles a vocation de loisirs. On y trouve les parcs urbains, les zones de loisirs, les squares, eventuellement certains parcs de chateaux accessibles au public,a Ne sont pa	Green urban areas	2
1421	Tous les golfs identifiables.	Golf areas	2
1422	Tous les equipements sportifs identifiables. Y sont inclus les tennis, piscines couvertes ou non, stades, gymnases, centres nautiques, circuits et pistes, terrains de cross, les centrres equestrese	Stadiums, sport and leisure facilities	2
1423	Campings caravanings en y incluant les batiments, emplacements, parking, piscine, aires de jeuxe stades, gymnases, centres nautiques, circuits et pistes, terrains de cross, les centrres equestrese	Camping, caravannings	2
2111	Terres arables hors perimetres d'irrigation. Cereales, legumineuses de plein champs, cultures fourrageres, plantes sarclees et jacheres. L'on peut aussi y trouver les prairires temporaires (retournees et semees chaque annee).	Annual crops	4
2112	Ce poste inclut l'arboriculture, l'horticulture, le maraechage, les pepinieres, les serres. Les vergers n'appartiennent pas a ce poste.	Marshes, greenhouses	0
2113	Zones manifestement a l'abandon ou non exploitees. Les espaces en friches regroupent differents types d'occupation du sol. On y integre les zones de deprise agricole laissant apparaetre un manque d'entretien evident mais non encore comple	Wasteland	7
2221	Parcelles plantees d'arbres fruitiers ou d'arbustes fruitiers : cultures pures ou melange d'especes fruitieres, arbres fruitiers en association avec des surfaces toujours en herbe. Y compris les chetaigneraies et les noiseraies.	Orchards and berries	2
2222	Toutes les surfaces plantees de vignes.	Vineyards	4
2310	Surfaces enherbees de composition floristique composees principalement de graminacees, non incluses dans un assolement. Principalement paturees, mais dont le fourrage peut etre recolte	Pastures	5
2410	On classe sous ce poste les entites paysageres qui caracterisent des structures agricoles complexes juxtaposant des parcelles de petites ou tres petites tailles associees a des occupations du sol diverses (prairies, cultures, vergers, bosquet	Annual crops associated with permanent crops	4
3111	Formations vegetales principalement constituees par des arbres ou dominent les especes forestieres feuillues.	Hard wood forests	8
3112	Surfaces boisees de composition mono-specifique (peupliers), le plus souvent en plantation (arboriculture) mais pouvant correspondre a des peuplements purs non cultives. Dans le cas des peupleraies cultivees, la structure du peuplement se car	Populous forest (plantations)	6
3120	Formations vegetales principalement constituees par des arbres ou dominent les especes forestieres de coniferes.	Coniferous forest	8
3212	Pelouses seches semi-naturelles et facies d'embuissonnement presents a des altitudes comprises entre 1200 metres et 1500 metres.	Dry grasslands between 1200 and 1500m altitude	8
3213	Pelouses seches semi-naturelles et facies d'embuissonnement presents a des altitudes superieures a 1500 metres.	Dry grasslands above 1500m altitude	8
3220	Formations vegetales basses et fermees, composees principalement de buissons, d'arbustes et de plantes herbacees (bruyeres, ronces, genets, ajoncs)	Moors and heathland	10
3231	Nouveaux boisements ou reboisements (jeunes peupleraies et plantations de resineux y compris). Arbres de taille modeste, non encore adultes.	Recent reforestation	6
3232	Coupes forestieres intervenues recemment. On y integre les coupes a blanc mais aussi les coupes d'eclaircies et de regeneration.	Recent forest cuts	6

	Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
3311	Tous les glaciers d'altitude.	Beaches, dunes, sands	7
3320	Depots morainiques recents (pas ou peu vegetalises) identifiables (moraines frontales, laterales et medianes).	Bare rocks	7
3331	Toutes les surfaces rocheuses autres que les eboulis (cretes, crets, lapiaz)	Rock outcrops, cliffs	7
3332	Tous les eboulis non vegetalises	Non-vegetated shrub aprons	8
3333	Bancs de sable et gravier des principaux cours d'eau	Sandbars and gravel	7
4110	Secteurs marecageux, le plus souvent gorges d'eau ou boisements humides, prairies et eau	Inland marshes	10
5110	Tous les cours d'eau naturels (rivieres, fleuves) ou artifiels (canaux) de largeur significative.	Watercourses	8
5120	Toutes etendues d'eau artificielles ou naturelles de taille suffisante (etangs, mares de chasse, plans d'eau e vocation de loisir, lacs de barrage).	Water bodies	7

Table 4: Land use for Canton of Valais classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Industrie- und Gewerbegebäude	Industrial buildings	0
Umschwung von Industrie- und Gewerbegebäuden	Areas surrounding industrial buildings	0
Ein- und Zweifamilienhäuser	One and two family houses	0
Umschwung von Ein- und Zweifamilienhäusern	Area surrounding one and two family houses	1
Reihen- und Terrassenhäuser	Row and terrace houses	0
Umschwung von Reihen- und Terrassenhäusern	Area surrounding row and terrace houses	1
Mehrfamilienhäuser	Apartment house	0
Umschwung von Mehrfamilienhäusern	Surroundings of apartment houses	1
Öffentliche Gebäude	Public building	0
Umschwung von öffentlichen Gebäuden	Surroundings of public buildings	1
Landwirtschaftliche Gebäude	Agricultural building	0
Umschwung von landwirtschaftlichen Gebäuden	Surroundings of agricultural building	2
Nicht spezifizierte Gebäude	not specified building	0
Umschwung von nicht spezifizierten Gebäuden	Surroundings of not specified building	1
Autobahnen	Highway	1
Autobahngrün	Highway greenery (?)	1
Strassen, Wege	Roads / paths	1
Strassengrün	Roads / green paths	1
Parkplatzareal	Parking area	1
Befestigtes Bahnareal	Railway area	1
Bahngrün	Railway green areas	1
Deponien	Disposal site / landfill	0
Baustellen	Construction sites	0
Bau- und Siedlungsbrachen	Fallow land of construction and settlements	2
Öffentliche Parkanlagen	Public parks	2
Sportanlagen	Sport facilities	2

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Golfplätze	Golf courses	2
Campingplätze	Camping site	2
Friedhöfe	Cemeteries	1
Gartenbauflächen	Horticultural land	4
Ackerland	Arable land	4
Alpwiesen	Alpine grasslands	8
Günstige Alp- und Juraweiden	Favourable alpine and jura pastures	7
Verbuschte Alp- und Juraweiden	Bushy alpine and jura pastures	7
Versteinte Alp- und Juraweiden	Rocky alpine and jura pastures	7
Schafalpen	Sheep alps (pastures)	7
Hochwasserverbauungen	Flood protection (dams etc.)	2
Unproduktive Gras- und Krautvegetation	Unproductive grasslands and shrubs	8
Lawinen- und Steinschlagverbauungen	Avalanche and rock fall protection	7
Landschaftseingriffe	Landscape interventions	1

Table 5: Forest classification for Canton of Valais

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Keine aktiven Eingriffe	Forest reserves with no intervention	9
Minimale Eingriffe	Forest reserves with minimal intervention	8
Biodiversitätsförderung durch gezielte Eingriffe	Forest reserves for promoting biodiversity through targeted interventions	8

4.2 Project Working Region PREALPI GIULIE - TRIGLAV

We used different data sources, proposed by project partners from the Project Working Region.

Table 6: Regional GIS data sources for Project Working Region Prealpi Giulie - Triglav

Name of the data set	Content	Region
LANDUSE_PilotArea	Land use	Friuli - Venezia Giulia
LandUse_SLO_wr	Land use	Western Slovenia

Table 7: Land use for Triglav National Park classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Njiva ali vrt	Field, garden	4
Hmeljišče	Hop areas	4
Trajne rastline na njivskih površinah	Perennial plants on fields	4
Rastlinjak	Green gardens	0
Vinograd	Vineyards	4

Intenzivni sadovnjak	Intensive orchard	2
Ekstenzivni sadovnjak	Extensive orchard	8
Ostali trajni nasadi	Other perennial plants	4
Trajni travnik	Continuous meadow	5
Kmetijsko zemljišče v zaraščanju	Afforested agricultural area	9
Plantaža gozdnega drevja	Plantation of forest trees	6
Drevesa in grmičevje	Trees and shrubs	9
Neobdelano kmetijsko zemljišče	Agricultural areas with no use	2
Kmetijsko zemljišče, poraslo z gozdnim drevjem	Agricultural area with forest trees	8
Gozd	Forests	8
Pozidano in sorodno zemljišče	Artificial areas	0
Barje	Moor	10
Trstičje	Reeds	10
Ostalo zamočvirjeno zemljišče	Flood areas	10
Suho, odprto zemljišče s posebnim rastlinskim pokrovom	Open area with vegetation	8
Odprto zemljišče brez ali z nepomembnim rastlinskim pokrovom	Open area without or very little vegetation	7
Voda	Water	8

Table 8: Land use for Parco Naturale delle Prealpi Giulie classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Terreni abbandonati	Abandoned land	5
Rocce nude, rupi, affioramenti	Bare rock	7
Spiagge, dune, sabbie	Beaches, dunes, sands	7
Boschi di latifoglie	Broad-leaved forests	8
Aree commerciali.	Commercial areas	0
Sistemi colturali e particellari complessi senza insediamenti sparsi	Complex cultivation patterns without settlement	2
Boschi di Conifere	Coniferous forests	8
Cantieri	Construction sites	0
Discariche	Dump sites	0
Strade a transito veloce e superfici annesse	Fast transit roads and associated land	1
Aree verdi urbane	Green urban areas	2
Aree industriali	Industrial areas	0
Aree prevalentemente occupate da colture agrarie con presenza di spazi naturali	Land principally occupied by agriculture (LPOA), with significant areas of natural vegetation (SANV)	6
Aree estrattive	Mineral extraction sites	2
Boschi misti	Mixed forests	8
Brughiere e Cespuglieti	Moors and heath land	10
Aree a pascolo naturale e praterie d'alta quota	Natural grassland	8
Bacini d'acqua naturali	Natural standing water	7
Seminativi in aree non irrigue	Non-irrigated arable land	4
Cimiteri non vegetati	Non-vegetated cemeteries	0
Altre strade e superfici annesse	Other roads and associated land	1
Parcheggi per veicoli privati	Parking sites for private vehicles	0

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Prati stabili	Pastures	5
Aree dei servizi pubblici e privati	Public and private services not related to the transport system	0
Ferrovie e superfici annesse	Railways and associated land	1
Tessuto residenziale continuo mediamente denso	Residential continuous medium dense urban fabric	0
Tessuto residenziale discontinuo sparso	Residential discontinuous sparse urban fabric	0
Tessuto residenziale discontinuo	Residential discontinuous urban fabric	0
Aree ad accesso limitato	Restricted access services	0
Fiumi	Rivers	8
Aree con vegetazione rada	Sparsely vegetated areas	8
Aree sportive e ricreative	Sport and leisure facilities	2
Infrastrutture tecnologiche di pubblica utilite	Technological infrastructures for public service	0
Aree a vegetazione boschiva e arbustiva in evoluzione	Transitional woodland/shrub	9
Vigneti	Vineyards	4

Forest reclassification for Slovenian part was conducted using Forest connectivity index (Slovenia Forest Service, unpublished). Data used to calculate this index includes tree species composition, naturalness and forest development phases collected by Slovenia Forest Service. Forest index has 4 categories, and gives EC values between 6 and 9. Sharp lines in forest area are consequences of procedure where information on forest compartment data was used.

4.3   Project Working Region ACHENTAL - BERCHTESGADEN – SALZBURG

We used different data sources, proposed by project partners from the Project Working Regions. If there was no appropriate data source available (as in Salzburg region), CLC2012 data was used instead.

Table 9: Regional GIS data sources for Project Working Region Achental - Berchtesgaden - Salzburg

Name of the data set	Content	Region
Atkis	Land use	Upper Bavaria
CLC2012	Corine Land Cover	Salzburg

Table 10: Land use for Upper Bavaria classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Ackerland	Farmland	4
Bahnhof	Train station	0
Bahnhofsfläche	Train station	0
Baumbestand, Laub- und Nadelholz	Mixed forest	8
Baumbestand, Laubholz	Broadleaves forest	8
Baumbestand, Nadelholz	Conifer forests	7
Baumschule	Tree nursery, tree plantation	6

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Bergbaubetrieb in Betrieb	Quarry, stone- pit	2
Brücke	Bridge	1
Campingplatz	Camping site	2
Deponie (oberirdisch oder untertegig)	Dump	0
Ehrenfriedhof, Soldatenfriedhof	Cemetery	0
Festplatz (Kontur der Straße sichtbar) (2014 neue KSN)	Festival area	0
Fläche besonderer funktionaler Praegung	Artificial areas	0
Fläche gemischter Nutzung	Mixed-use area	2
Fläche zwischen getrennten Fahrbahnen, Verkehrsbegleitflache Straße	Green areas between roads	1
Freizeitanlage, Safaripark, Wildpark, Freizeitpark, Freilichttheater, Freil	Entertainment areas	0
Friedhof christlich	Cemetery	0
Fügëngerzone (Kontur der Straße sichtbar)	Pedestrian area	0
Geholz (Nadelholz)	Conifer forests	8
Golfplatz	Golf site	2
Grűnland	Grassland	8
Gras (2014 neue KSN)	Grassland	8
Hafen, Sporthafen, Yachthafen	Sports and yacht harbor	2
Halde	Dump	0
Haltestelle, Haltepunkt	Station	0
Hochseilgarten (2014 neue KSN)	Climbing entertainment areas	0
Industrie- und Gewerbefläche, Raffinerie, Werft, F?rderanlage,Ausstellung	Industrial area	0
Kläranlage, Klerwerk (groβ, mit Absetzbecken)	Storehouse	0
Kläranlage, Klerwerk (klein, ohne Absetzbecken)	Storehouse	0
Klärbecken	Storehouse	0
Kraftwerk (alle PEG aer Sonne)	Power plant	0
Laub- und Nadelholz	Mixed forests	8
Laubholz	Broadleaves forest	8
Moor	Moor	10
Nadelholz	Conifer forests	7
Nasser Boden	Artificial area	0
Naturnahe Fläche (2014 neue KSN)	Natural patch	6
Nicht standig Wasser führend	Watercourses	8
Obstplantage	Fruit plantation	2
Ortslage	Settlement area	0
Parkplatz (Kontur der Straße sichtbar), Rastplatz	Parking lot	0
Raststatte	Rest area	0
Schwimmbad, Freibad, Hallenbad mit A?enanlagen	Pool	0
Schwimmbecken (> 625 qm)	Pool	0
Segelfluggelände	Airport	0
Solarkraftwerk (2014 neue KSN)	Solar power plant	0
Sommerrodelbahn (Fl?che) (2014 neue KSN)	Summer toboggan run	0
Spielfeld (doppellinig und oval)	Sports facility	0
Spielfeld (einlinig, oval, Rechteck bzw. Freihand)	Sports facility	0
Sportanlage	Sports facility	0

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Stadion, nicht ?berdacht	Stadium	0
Standig Wasser fuhrend	Standing water	7
Streuobstwiese (2014 neue KSN)	Orchard	2
Sumpf	Swamp	10
Tagebau, Grube, Steinbruch	Mining, quarry	2
Truppenbungsplatz, Standortbungsplatz	Military training area	0
Tunnel, Unterfuhrung (Fläche)	Tunnel	1
Umspannstation	Transformer station	0
verkehrsfläche an straße nur für den nahverkehr und Anliegerstraße	Area only for residents	0
Verkehrslandeplatz, Sonderlandeplatz	Traffic areas	1
waldverjüngung laub- und nadelholz	Forest rejuvenation hardwood and coniferous wood	6
waldverjüngung nadelholz	Forest rejuvenation coniferous wood	6
waldverjüngung laubholz	Forest rejuvenation broadleaves wood	6
Wasserwerk	Water power plant	0
Wildgehege (2014 neue KSN)	Fold for wild animals	2
Wohnbaufläche	Settlements area	0

4.4 Project Working Region RHAETIAN TRIANGLE

We use different data sources, proposed by project partners from the Project Working Regions.

Table 11. Regional GIS data sources for Project Working Region Rhaetian Triangle

Name of the data set	Content	Region
Landnutzung_Tirol_2013	Land use	Tyrol
reakart_codes	Land use	South Tyrol
usr urb 1	Land use	Trentino
Dusa5_uso_suolo	Land use	Lombardy
gr_lq_basisdaten_cl	Detailed information - mainly on artificial surfaces	Eastern Switzerland (Canton Graubünden)
gr_wep_cl	Forest information	Eastern Switzerland (Canton Graubünden)
gr_lq_gesamt_2016_cl	Detailed information – mainly on agriculture	Eastern Switzerland (Canton Graubünden)
gr_arealstat_04_72_cl	Land use	Eastern Switzerland (Canton Graubünden)

Table 12: Land use for Tyrol classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Acker	Field	4
Alm	Alpine pasture	6
andere Nutzfläche	Area of other usage	6
Aufforstung in Hochmoor	Afforestation in high moor	9
Bachbegleitende naturnahe Gehölze	Natural forest vegetation among streams	9

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Biotop der Nivalen Stufe	Nival biotopes	8
Biotopkomplex Feuchtgebiet	Different biotopes	6
Birken-Weidenbruch	Birch-willow forests	9
Eschen-Auwald	Ash tree forest (wetland)	9
Eschen-Pappel-Auwald	Ash tree poplar forest (wetland)	9
Eschen-Ulmen-Auwald	Ash tree - elm forest (wetland)	9
Feldgehölze	Bushes separating one field from another	8
Fichtenmoorbruch	Spruce „Break forest" (wetland)	9
Flugverkehrsanlage	Airport/airfield	0
Flüsse der planaren bis montanen Stufe	River	8
Forstliche Strauchflächen	Shrub areas	9
Freihaltefläche Landwirtschaft	Agricultural areas	4
Gehölzfreie Au	Floodplain (without trees)	10
Gemeinschaftsweide	Meadow	5
Geschützter Anbau	Agricultural areas	4
Gletscher, Eisfläche	Glacier	7
Grauerlenau	Grey alder (wetland)	9
Großröhrichte	Reed bed	9
Großseggenrieder	Wetland with Carex vegetation	9
Grünland	Grassland	8
Hartholz-Auwälder	Hardwood forests in wetlands	9
Hochmoorvegetation, gehölzfrei	Peatbog vegetation	10
Hochstaudenfluren	Tall forb areas	8
Hochwald	Timber forest	7
Hochwald nach DKM	Timber forest	7
Kalkquellflur	Special spring vegetation on limestone	6
Kalkreiche Niedermoore	Fen (lime)	10
Kiefern-Auwald	Pine forest (wetland)	9
Kleinseggenrieder	Grassland bog	10
Latschen-, Spirkenhochmoore	Mountain pine bog	10
Laubholz-Auwälder	Hardwood forests (Wetlands)	9
Lavendelweidenau	Hoary willow (wetland)	9
Moor	Bog/wetland	10
Moor- und Bruchwälder	Bog-forests	10
Nadelholz-Auwälder	Pinewood forests (wetlands)	9
öffentliche Anlagen: Friedhof	Cemetery	0
öffentliche Anlagen: öffentlicher Platz	Public square	0
öffentliche Anlagen: Parkanlage	River/lake (owned by state)	8
öffentliche Anlagen: Sonstige	Public area	0
öffentliches Wassergut	Public water (fountains)	2
Oligo- bis mesotrophe kalkhaltige Gewässer	Water	8
Parkplatz	Parking area	0

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Pfeifengraswiese	Special grassland with a lot of water	8
Purpurweidenau	Purple willow (wetland)	9
Quellfluren	Spring vegetation	6
Reifweidengebüsch	Violet willow shrubs	9
Schienenanlage, Bahn	Train	2
Schwarzerlenau	Common alder (wetland)	10
Schwarzerlenbruch	Common alder brunch	10
Schwarzweidengebüsch	Dark-leaved willow shrubs	9
Siedlungstyp: Anwesen	Settlement area	0
Siedlungstyp: Industrie und Gewerbe	Settlement area	0
Siedlungstyp: Mischnutzung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Andere Nutzung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Kultur, Freizeit, Bildung Gesundheit	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Religiöse Einrichtung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Verkehrs- und Nachrichtenwesen	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Verwaltungs- und Bürogebäude	Settlement area	0
Siedlungstyp: Wohnnutzung	Settlement area	0
Silberweidenau	Silver willow wetland	10
Silikatquellflur	Spring vegetation / silicate	6
Spezialkultur	Special culture areas	2
Sport und Erholung: Campingplatz	Sports infrastructure	2
Sport und Erholung: Erholung	Sports infrastructure	2
Sport und Erholung: Golfplatz	Sports infrastructure	2
Sport und Erholung: Schianlage	Sports infrastructure	2
Sport und Erholung: Sportanlage	Sports infrastructure	2
Straßenanlage: Typ Straßenordnung: Örtliches Straßennetz	Waste disposal facility	0
Straßenanlage: Typ Straßenordnung: regional	Areas with infrastructure for communication etc.	0
Straßenanlage: Typ Straßenordnung: übergeordnet	Areas with office buildings	0
Technische Infrastruktur: Abbauflaeche/ Deponie	Infrastructure: dump	0
Technische Infrastruktur: Ver-/ Entsorgungsanlage	Infrastructure: store house	0
Vegetation naturnaher Gewässer	Natural vegetation among water	10
Weichholzauen	Softwood forest (wetland)	9
Weichholz-Auwald	Softwood forest (wetland)	9
Weiden-Auengebüsche	Willow-shrubs in wetlands	9
Weiden-Faulbaum-Gebüsche	Willow-buckthorn shrubs	9
Weiden-Tamarisken-Gebüsch	Willow-tamarisks shrubs	9
Weingarten im Ertrag	Vineyard	4

Table 13: Land use for South Tyrol classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Dichte städtische Bebauung	Continuous urban fabric	0
Lockere städtische Bebauung	Discontinuous urban fabric	0
Dichte ländliche Bebauung	Continuous rural fabric	0

German	English	Value
Einzelhäuser, Streusiedlung	Scattered settlements	0
Grünflächen in Siedlungen	Green urban areas	0
Industrie- und Gewerbeflächen	Industrial areas	0
Straßen und funktionell zugeordnete Flächen	Road networks and associated land	1
Eisenbahn und funktionell zugeordnete Flächen	Rail networks and associated land	1
Lifte, Seilbahnen mit Zubehörflächen	Cable cars and associated land	1
Flughafen	Airports	0
Sport- und Freizeiteinrichtung	Sport and leisure facilities	2
Friedhof	Cemetery	0
Sonstige öffentliche Einrichtungen	Other public fabrics	0
Abbauflächen	Mineral extraction sites	2
Deponien und Abraumhalden	Dump sites	0
Entsorgungsanlagen	Disposal plant	0
Militärfläche	Military site	0
Nicht klassifizierbare Fläche	Not classifiable	0
Dämme	Dams	0
Ackerland	Arable land	4
Dauerkulturen	Permanent crops	4
Sonstige landwirtschaftliche Flächen	Other agricultural areas	4
Krummholz	Knee timber	8
Wald	Forests	8
Hecken und Flurgehölze	Shrubs and hedges	8
Grasland	Pastures	5
bestockte Grasland	Agro-forestry areas	5
Fels	Bare rocks	7
Vegetationsloses Lockermaterial	Bulk material	7
Gletscher	Glaciers and perpetual snow	7
Feuchtflächen	Inland wetland	10
Fließgewässer	Water courses	8
Stehende Gewässer	Water bodies	7

For canton Graubünden more data sources were included in defined order (from top to bottom layer): Detailed information - mainly on artificial surfaces, Forest information, Detailed information – mainly on agriculture, Land use.

4.5   Project Working Region HOHE TAUREN

We use different data sources, proposed by project partners from the Project Working Region.

Table 14: Regional GIS data sources for Project Working Region Hohe Tauren

Name of the data set	Content	Region
Landnutzung_Tirol_2013	Land use	Tyrol
realraumanalyse_ktn_2008	Land use	Carinthia
reakart_codes	Land use	South Tyrol

Table 15: Land use for Tyrol classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Acker	Field	4
Alm	Alpine pasture	6
andere Nutzfläche	Area of other usage	6
Aufforstung in Hochmoor	Afforestation in high moor	9
Bachbegleitende naturnahe Gehölze	Natural forest vegetation among streams	9
Biotop der Nivalen Stufe	Nival biotopes	8
Biotopkomplex Feuchtgebiet	Different biotopes	6
Birken-Weidenbruch	Birch-willow forests	9
Eschen-Auwald	Ash tree forest (wetland)	9
Eschen-Pappel-Auwald	Ash tree poplar forest (wetland)	9
Eschen-Ulmen-Auwald	Ash tree - elm forest (wetland)	9
Feldgehölze	Bushes separating one field from another	8
Fichtenmoorbruch	Spruce „Break forest" (wetland)	9
Flugverkehrsanlage	Airport/airfield	0
Flüsse der planaren bis montanen Stufe	River	8
Forstliche Strauchflächen	Shrub areas	9
Freihaltefläche Landwirtschaft	Agricultural areas	4
Gehölzfreie Au	Floodplain (without trees)	10
Gemeinschaftsweide	Meadow	5
Geschützter Anbau	Agricultural areas	4
Gletscher, Eisfläche	Glacier	7
Grauerlenau	Grey alder (wetland)	9
Großröhrichte	Reed bed	9
Großseggenrieder	Wetland with Carex vegetation	9
Grünland	Grassland	8
Hartholz-Auwälder	Hardwood forests in wetlands	9
Hochmoorvegetation, gehölzfrei	Peatbog vegetation	10
Hochstaudenfluren	Tall forb areas	8
Hochwald	Timber forest	7

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Hochwald nach DKM	Timber forest	7
Kalkquellflur	Special spring vegetation on limestone	6
Kalkreiche Niedermoore	Fen (lime)	10
Kiefern-Auwald	Pine forest (wetland)	9
Kleinseggenrieder	Grassland bog	10
Latschen-, Spirkenhochmoore	Mountain pine bog	10
Laubholz-Auwälder	Hardwood forests (Wetlands)	9
Lavendelweidenau	Hoary willow (wetland)	9
Moor	Bog/wetland	10
Moor- und Bruchwälder	Bog-forests	10
Nadelholz-Auwälder	Pinewood forests (wetlands)	9
öffentliche Anlagen: Friedhof	Cemetery	0
öffentliche Anlagen: öffentlicher Platz	Public square	0
öffentliche Anlagen: Parkanlage	River/lake (owned by state)	8
öffentliche Anlagen: Sonstige	Public area	0
öffentliches Wassergut	Public water (fountains)	2
Oligo- bis mesotrophe kalkhaltige Gewässer	Water	8
Parkplatz	Parking area	0
Pfeifengraswiese	Special grassland with a lot of water	8
Purpurweidenau	Purple willow (wetland)	9
Quellfluren	Spring vegetation	6
Reifweidengebüsch	Violet willow shrubs	9
Schienenanlage, Bahn	Train	2
Schwarzerlenau	Common alder (wetland)	10
Schwarzerlenbruch	Common alder brunch	10
Schwarzweidengebüsch	Dark-leaved willow shrubs	9
Siedlungstyp: Anwesen	Settlement area	0
Siedlungstyp: Industrie und Gewerbe	Settlement area	0
Siedlungstyp: Mischnutzung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Andere Nutzung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Kultur, Freizeit, Bildung Gesundheit	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Religiöse Einrichtung	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Verkehrs- und Nachrichtenwesen	Settlement area	0
Siedlungstyp: Sonstige Nutzung: Verwaltungs- und Bürogebäude	Settlement area	0
Siedlungstyp: Wohnnutzung	Settlement area	0
Silberweidenau	Silver willow wetland	10
Silikatquellflur	Spring vegetation / silicate	6
Spezialkultur	Special culture areas	2
Sport und Erholung: Campingplatz	Sports infrastructure	2
Sport und Erholung: Erholung	Sports infrastructure	2
Sport und Erholung: Golfplatz	Sports infrastructure	2
Sport und Erholung: Schianlage	Sports infrastructure	2
Sport und Erholung: Sportanlage	Sports infrastructure	2
Straßenanlage: Typ Straßenordnung: Örtliches Straßennetz	Waste disposal facility	0

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Straßenanlage: Typ Straßenordnung: regional	Areas with infrastructure for communication etc.	0
Straßenanlage: Typ Straßenordnung: übergeordnet	Areas with office buildings	0
Technische Infrastruktur: Abbauflaeche/ Deponie	Infrastructure: dump	0
Technische Infrastruktur: Ver-/ Entsorgungsanlage	Infrastructure: store house	0
Vegetation naturnaher Gewässer	Natural vegetation among water	10
Weichholzauen	Softwood forest (wetland)	9
Weichholz-Auwald	Softwood forest (wetland)	9
Weiden-Auengebüsche	Willow-shrubs in wetlands	9
Weiden-Faulbaum-Gebüsche	Willow-buckthorn shrubs	9
Weiden-Tamarisken-Gebüsch	Willow-tamarisks shrubs	9
Weingarten im Ertrag	Vineyard	4

Table 16: Land use for Carinthia classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Acker-Grünlandmengung (40<60%)	Agrarian and grassland mix (40% / 60%)	6
Ackernutzung dominant (>60% Acker)	Dominantly Agrarian use (>60% agrarian fields)	4
Alpine Rasen u. Heiden, geschlossene Deckung	Alpine meadows and pasture, closed cover	6
Alpine Rasen, offene Vegetation	Alpine meadows, open vegetation	8
Autobahn	Highway	1
Autobahn-Tunnel	Highway tunnel	1
Auwald, flußbegleitende Gehölze	Wetland Forest, river grove woody vegetation	10
Betriebsgelände	Company grounds	0
Felsgelände	Rocky grounds	7
Feuchtgebiete, Moore	Wetlands, marshes	10
Flughafen	Airport	0
Geschlossene bzw dichte Bebauung	Closed/dense development	0
Gewässer	Waterbody	8
Gletscher	Glacier	7
Grünland dominant (>60% Grünland)	Dominantly grassland (>60% grassland)	7
Historisches Erbe, Schloß- und Klosteranlagen	Historic site, palace- and monastery site	0
Krummholz, Latschen	Crippled woody vegetation, mountain pine	8
Laubwald, Laubgehölze dominant	Deciduous forest, dominantly deciduous	8
Mengung von Krummholz mit alpinen Rasen	Crippled woody vegetation with alpine meadows	8
Misch- u. Laubwald, felsdurchsetzt	Mixed- and deciduous forest, rocky	8
Montan - subalpines Laubbuschwerk	Mountain to subalpine deciduous brushes	8
Nadelwald	Coniferous forest	8
Nadelwald, daneben Laubgehölze	Coniferous forest, aside deciduous brushes	8
Nadelwald, felsdurchsetzt	Coniferous forest, rocky	8

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Offene Bebauung, unterschiedlicher Art	Open development, different types	0
Schutt, Geröll, z. T. felsig, Vegetationsansätze	Debris, rubble, partly rocky, beginning vegetation	7
Sportflächen (Golfplätze, etc.)	Sports area	2
Städtisches Grün und diverse Sportflächen	Urban green and different sports areas	2
Vor- und Zwischenalmen	Alpine pastures	6
Wintersportgelände	Winter sport area	2

Table 17: Land use for South Tyrol classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
Dichte städtische Bebauung	Continuous urban fabric	0
Lockere städtische Bebauung	Discontinuous urban fabric	0
Dichte ländliche Bebauung	Continuous rural fabric	0
Einzelhäuser, Streusiedlung	Scattered settlements	0
Grünflächen in Siedlungen	Green urban areas	0
Industrie- und Gewerbeflächen	Industrial areas	0
Straßen und funktionell zugeordnete Flächen	Road networks and associated land	1
Eisenbahn und funktionell zugeordnete Flächen	Rail networks and associated land	1
Lifte, Seilbahnen mit Zubehörflächen	Cable cars and associated land	1
Flughafen	Airports	0
Sport- und Freizeiteinrichtung	Sport and leisure facilities	2
Friedhof	Cemetery	0
Sonstige öffentliche Einrichtungen	Other public fabrics	0
Abbauflächen	Mineral extraction sites	2
Deponien und Abraumhalden	Dump sites	0
Entsorgungsanlagen	Disposal plant	0
Militärfläche	Military site	0
Nicht klassifizierbare Fläche	Not classifiable	0
Dämme	Dams	0
Ackerland	Arable land	4
Dauerkulturen	Permanent crops	4
Sonstige landwirtschaftliche Flächen	Other agricultural areas	4
Krummholz	Knee timber	8
Wald	Forests	8
Hecken und Flurgehölze	Shrubs and hedges	8
Grasland	Pastures	5
bestockte Grasland	Agro-forestry areas	5
Fels	Bare rocks	7
Vegetationsloses Lockermaterial	Bulk material	7
Gletscher	Glaciers and perpetual snow	7
Feuchtflächen	Inland wetland	10
Fließgewässer	Water courses	8
Stehende Gewässer	Water bodies	7

4.6 Project Working Region NORTHERN LIMESTONE ALPS

We use different data sources, proposed by project partner from Project Working Regions For Styria and Lower Austria no actual land use source is available, so CLC2012 land use was used instead.

Table 18: Regional GIS data sources for Project Working Region Northern Limestone Alps (Data source: Umweltbundesamt (http://www.umweltbundesamt.at/), Land OÖ and Kalkalpen National Park)

Name of the data set	Content	Region
EUNIS NPK	Land use (for park area)	Upper Austria
CLC2012	Corine Land Cover	Styria
CLC2012	Corine Land Cover	Lower Austria

Table 19: Land use for Upper Austria (only for the park area) classification scheme

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
J4	Transport networks and other constructed hard-surfaced areas	1
J3.2	Active opencast mineral extraction sites, including quarries	2
J3	Extractive industrial sites	0
J2	Low density buildings	0
J1	Buildings of cities, towns and villages	0
I2.2	Small-scale ornamental and domestic garden areas	2
I2	Cultivated areas of gardens and parks	2
I1.1	Intensive unmixed crops	2
I1	Arable land and market gardens	2
H5	Miscellaneous inland habitats with very sparse or no vegetation	7
H3.5	Almost bare rock pavements, including limestone pavements	7
H3.2	Basic and ultra-basic inland cliffs	7
H3	Inland cliffs, rock pavements and outcrops	7
H2.6	Calcareous and ultra-basic screes of warm exposures	7
H2.4	Temperate-montane calcareous and ultra-basic screes	7
G5.8	Recently felled areas	6
G5.7	Coppice and early-stage plantations	6
G5.6	Early-stage natural and semi-natural woodlands and regrowth	7
G5.1	Lines of trees	7
G5	Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice	7
G4	Mixed deciduous and coniferous woodland	8
G3.F	Highly artificial coniferous plantations	6
G3.D	Boreal bog conifer woodland	9
G3.4	Scots pine woodland south of the taiga	9
G3.2	Alpine larch - Arolla woodland	9
G3.1	Fir and spruce woodland	8
G3	Coniferous woodland	8
G1.D	Fruit and nut tree orchards	4
G1.C	Highly artificial broadleaved deciduous forestry plantations	6
G1.A	Meso- and eutrophic oak, hornbeam, ash, sycamore, lime, elm and related woodland	9
G1.6	Beech woodland	9
G1.5	Broadleaved swamp woodland on acid peat	9
G1.3	Mediterranean riparian woodland	9
G1.2	Mixed riparian floodplain and gallery woodland	9
G1.1	Riparian and gallery woodland, with dominant alder, birch, poplar or willow	9
G1	Broadleaved deciduous woodland	8

Land Cover Class (original language)	Land Cover Class (English translation)	Indicator value (0-10)
FB.3	Shrub plantations for ornamental purposes or for fruit, other than vineyards	2
F9.1	Riverine scrub	9
F3.1	Temperate thickets and scrub	9
F3	Temperate and Mediterranean-montane scrub	9
F2.4	Conifer scrub close to the tree limit	9
F2.3	Subalpine deciduous scrub	9
F2.2	Evergreen alpine and subalpine heath and scrub	9
F2	Arctic, alpine and subalpine scrub	9
E7	Sparsely wooded grasslands	8
E5.5	Subalpine moist or wet tall-herb and fern stands	8
E5.4	Moist or wet tall-herb and fern fringes and meadows	6
E5.2	Thermophile woodland fringes	7
E5.1	Anthropogenic herb stands	4
E4.5	Alpine and subalpine enriched grassland	8
E4.4	Calcareous alpine and subalpine grassland	8
E4.3	Acid alpine and subalpine grassland	8
E4	Alpine and subalpine grasslands	8
E3.5	Moist or wet oligotrophic grassland	8
E3.4	Moist or wet eutrophic and mesotrophic grassland	8
E2.7	Unmanaged mesic grassland	8
E2.6	Agriculturally-improved, re-seeded and heavily fertilised grassland, including sports fields and grass lawns	3
E2.3	Mountain hay meadows	6
E2.2	Low and medium altitude hay meadows	4
E2.13		
E2.1	Permanent mesotrophic pastures and aftermath-grazed meadows	4
E2	Mesic grasslands	8
E1.831	Closed Mediterranean dry acid and neutral grassland	8
E1.7	Closed non-Mediterranean dry acid and neutral grassland	8
E1.2	Perennial calcareous grassland and basic steppes	8
E1.1	Inland sand and rock with open vegetation	7
E1	Dry grasslands	8
E.2.3	Mountain hay meadows	8
D5	Sedge and reed beds, normally without free-standing water	10
D4.2	Basic mountain flushes and streamsides, with a rich arctic-montane flora	8
D4.1	Rich fens, including eutrophic tall-herb fens and calcareous flushes and soaks	10
D4	Base-rich fens and calcareous spring mires	10
D2.3	Transition mires and quaking bogs	10
D2	Valley mires, poor fens and transition mires	10
D1.2	Blanket bogs	10
D1.1	Raised bogs	10
C3.5	Periodically inundated shores with pioneer and ephemeral vegetation	10
C3.2	Water-fringing reed beds and tall helophytes other than canes	10
C3	Littoral zone of inland surface waterbodies	7
C2.2	Permanent non-tidal, fast, turbulent watercourses	8
C2.1	Springs, spring brooks and geysers	8
C2	Surface running waters	8
C1	Surface standing waters	7
X09	Pasture woods (with a tree layer overlying pasture)	5