

## Data standards for dynamic gene conservation units of forest trees to be included into the EUFGIS information system

November 2008

### UNIT level

No	Field name in DB	Data Standards (* indicates that this information is mandatory) and brief description	Data type (and options if appropriate)	Example
1.	<b>UnitCountry</b>	<b>Country of the unit *</b> Country in which the unit is located	Text	FIN
2. key	<b>UnitNumber</b>	<b>Unit number * (XXXNNNNN)</b> This number is the unique identifier of the unit described. This number should not be duplicated or reassigned to another unit	Text	FIN00001
3.	<b>UnitGeneNumber</b>	<b>National gene conservation unit number*</b> Unit number from the national registry	Free text	GR 19
4.	<b>UnitProvince</b>	<b>Province or state</b> Name of the primary administrative subdivision of the country where the unit is located	Free text	
5.	<b>UnitDepartment</b>	<b>Department or county</b> Name of the secondary administrative subdivision (within a province or state) of the country where the unit is located.	Free text	
6.	<b>UnitMunicipality</b>	<b>Municipality</b> Name of the lowest administrative subdivision	Free text	Rovaniemi

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7.	<b>UnitLocalName</b>	<b>Local name</b> Local name of the area or forest	Free text	Koiravaara
8.	<b>UnitLatitude</b>	<b>Latitude *</b> The latitude of the centre of the unit	3 separate numerical fields + 1 filed for N or S  If data will be provided in centesimal degrees, the DB will automatically convert to Sexagesimal	66° 31' 32.34" N
9.	<b>UnitLongitude</b>	<b>Longitude *</b> The longitude of the centre of the unit	3 separate numerical fields + 1 filed for E or W  If data will be provided in centesimal degrees, the DB will automatically convert to Sexagesimal	25° 31' 06.66" E
10.	<b>UnitCoordinatesRestriction</b>	<b>Restriction in making the geographical coordinates publically available</b> If "Yes" the accuracy of the geographic data will be modified when making the information available.	Yes-No Only one choice possible	Yes

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11.	<b>UnitGeodeticDatum</b>	<p><b>Datum</b> Indicate the Datum of the projection used to obtain the coordinates. If not provided 'WGS 1984' will be used.</p> <p>A horizontal geodetic datum based on an ellipsoid that has its origin at the earth's center of mass. Examples are the World Geodetic System of 1984, the North American Datum of 1983, and the Geodetic Datum of Australia of 1994. The first uses the WGS84 ellipsoid; the latter two use the GRS80 ellipsoid.</p>	From list Only one choice possible	WGS84
12.	<b>UnitPolygon</b>	<p><b>Polygon coordinates (if available)</b> A series of coordinate points describing the vertices of the polygon. (the projection to be used will be defined later)</p>	Memo field - A series of numbers can be entered indicating the vertex of the polygon	
13.	<b>UnitMinimumElevation</b>	<p><b>Minimum Elevation*</b> The minimum elevation of the unit expressed in meters above mean sea level. Negative values are allowed.</p>	number	129
14.	<b>UnitMaximumElevation</b>	<p><b>Maximum Elevation*</b> The maximum elevation of the unit expressed in meters above mean sea level. Negative values are allowed.</p>	number	180
15.	<b>UnitArea</b>	<p><b>Surface area of the unit *</b> Total surface area of the unit in hectares accuracy of 0.1 ha.</p>	Number with accuracy of 0.1	36.1

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16.	UnitOwnership	Ownership of the unit	Public/Private/others Only one choice possible	Private
17.	UnitType	Type and function of the unit	<ol style="list-style-type: none"> <li>1. Gene reserve forest</li> <li>2. Biodiversity conservation (habitats and/or species)</li> <li>3. Seed stand</li> <li>4. Protective forest area (soil, water, timber line, etc)</li> <li>5. Forest area managed for wood production and /or multiple uses and services</li> </ol> <p>Multiple choice</p> <p>Separate elements with semicolon</p>	1;3;5
18.		Monthly temperature (°C) [min, max, mean x 12]	OBTAINED FROM WorldClim	OBTAINED FROM WorldClim
19.		Total annual mean precipitation (mm)	OBTAINED FROM WorldClim	OBTAINED FROM WorldClim
20.		Heat sum and/or length of the growing season (in days)	OBTAINED FROM WorldClim	OBTAINED FROM WorldClim
21.		Accumulated moisture deficit	OBTAINED FROM WorldClim	OBTAINED FROM WorldClim
22. key	UnitDataCollectionYear	Year of collection of the field data entered* Year when the data on the unit was collected in the field.	Number	2004
23.	UnitLastVisitYear	Year of the most recent visit*	Number	2005

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24.	UnitSoilRemarks	Remarks on specific soil characteristics	Free Text	Calcareous
25.	UnitRemarks	Remarks on other specific characteristics of the unit	Free Text	Very low temperature during summer
26.	UnitSpecies	<b>All tree species growing in the unit*</b> List of target and non target species growing in the unit, give full Latin name (genus, species, sub-species as appropriate)	In Latin, Separate names with semicolon  Multiple choice	<i>Pinus sylvestris; Betula pendula</i>

## Species level

No	Field name in DB	Data Standards (Descriptor) (* indicates that this information is mandatory)	Data type (and options if appropriate)	
27. key	PopulationTargetSpecies	<b>Target Species*</b> Give full Latin name (genus, species, sub species as appropriate)	In Latin, Separate names with semicolon  Multiple choice	<i>Pinus sylvestris</i>
28. key	UnitNumber	<b>Unit number * (XXXNNNNN)</b> This number is the unique identifier of the unit described. This number should not be duplicated or reassigned to another unit	<b>From Unit table</b> <b>This field is needed to link the species table to the unit table, is a repetition of the field in the unit table - field No 2</b>	FIN00001
29. key	UnitDataCollectionYear	<b>Year of collection of the field data entered*</b> Year when the data on the unit was collected in the field.	<b>From Unit table</b> <b>This field is needed to link the species table to the unit table, is a repetition of the field in the unit table - field No 22</b>	2004
30.	PopulationUnitNumber	<b>National population unit number if existing</b>	Free Text	GR 19 Unit 3334TTT6-2
31.	PopulationEstablishmentYear	<b>Year of Establishment of the GCU for the species</b> Year when the gene conservation activities for the given species have started in the unit	Number	2001
32.	PopulationLastVisitYear	<b>Year of the most recent visit*</b>	Number	2005
33.	PopulationStatus	<b>Status of the target tree population regarding the EUFORGEN common action plans.</b>	1. Included 2. Not included 3. Pending  Only one choice possible	3

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34.	PopulationSitu	Category of the population*	<p>1. <i>In situ</i> 2. <i>Ex situ</i></p> <p>Only one choice possible</p>	1
35.	PopulationOrigin	Origin of the material*	<p>1. autochthonous 2. introduced 3. unknown</p> <p>Only one choice possible</p>	2
36.	PopulationSystem	Predominant silvicultural system	<p>1. Coppice 2. Clear-cutting with artificial regeneration (planting or seeding) 3. Clear-cutting with natural regeneration (seed trees or strips) 4. Shelterwood systems 5. Close-to-nature forestry (continuous cover forest, selective logging) 6. No silviculture</p> <p>Only one choice possible</p>	6
37.	PopulationManagement	Level of management allowed to favour the target species	<p>1. No intervention allowed 2. Minimum intervention allowed 3. Conservation through active intervention carried out.</p> <p>Only one choice possible</p>	3

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38.	<b>PopulationJustification</b>	<b>Main reason for carrying out gene conservation for this species*</b>	1) to maintain genetic diversity in large tree populations 2) to conserve specific adaptive and/or phenotypic traits in marginal or scattered tree populations which are often relatively small 3) to conserve rare or endangered tree species with populations consisting of a low number of remaining individuals  Only one choice possible	1
39.	<b>PopulationReproducingTrees</b>	<b>Total number of reproducing trees per unit*</b>	1) 15 - 50 2) 51 - 500 3) 501 - 5000 4) > 5001  Only one choice possible	3
40.	<b>PopulationSexRatio</b>	<b>Sex ratio, if appropriate</b>	1) predominately males 2) even sex ratio 3) predominately females  Only one choice possible	
41.	<b>PopulationRegeneration</b>	<b>Status of long-term viable regeneration</b>	1) continuous 2) sporadic 3) requires management intervention  Only one choice possible	1



No	Field name in DB	Data Standards (Descriptor) (* indicates that this information is mandatory)	Data type (and options if appropriate)	
42.	<b>PopulationDistribution</b>	<b>Distribution of the reproducing trees in the unit (multiple choice)</b>	1) in stands 2) scattered 3) in groups  Multiple choice  Separate elements by semicolon	1;3
43.	<b>PopulationShare</b>	<b>Estimated share of the total area within the unit in which the species is occurring (%)*</b>	Number	30.0
44.	<b>PopulationRemarks</b>	<b>Remarks on the population</b>	Free text	