



## **Attachment 1**

To the "Report on the implementation status of the Alpine Convention Soil Conservation Protocol based on Alpine-wide surveys in Austria, France, Germany, Italy, Slovenia, and Switzerland".

## **Full Results**

## Section A: Personal Information

All questions will be evaluated anonymously and will not be traceable back to you. However, your input greatly helps us with our analysis.

### A1. My country (place of work):

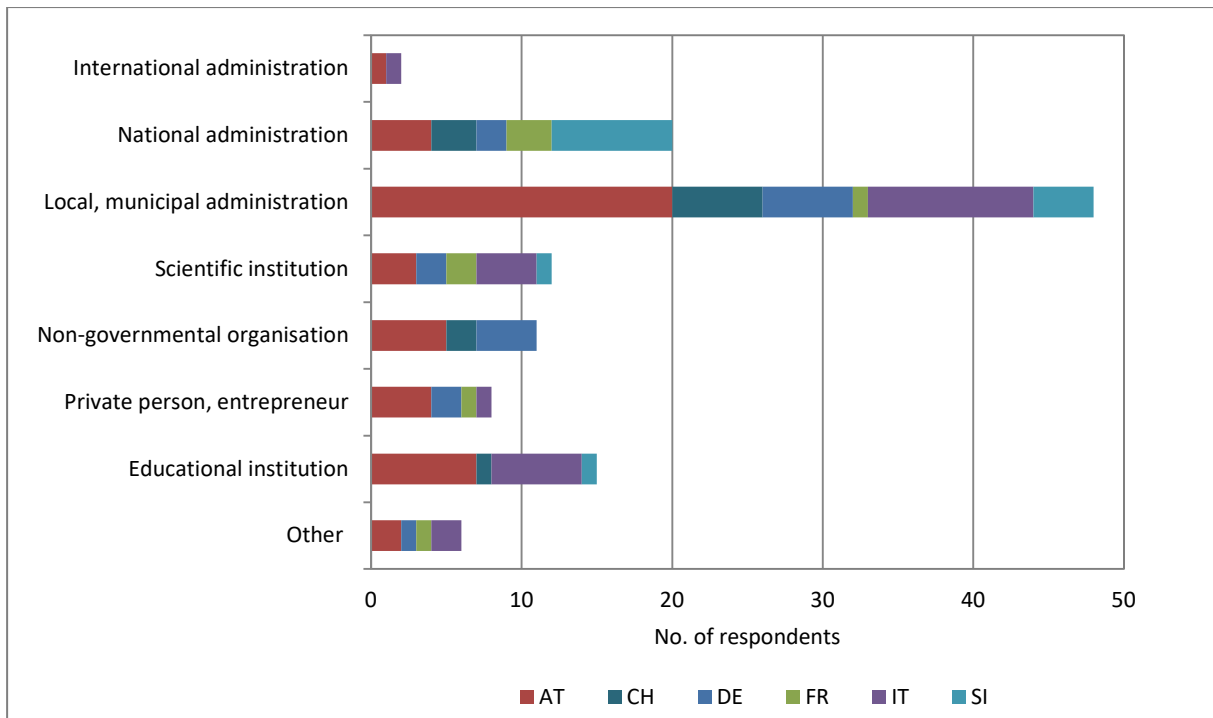
	No. of respondents	Share [%]
AT - Austria	48	35,3
CH- Switzerland	12	8,8
DE – Germany	19	14,0
FR - France	9	6,6
IT – Italy	25	18,4
SI - Slovenia	14	10,3
No answer	9	6,6
<b>Total</b>	<b>136</b>	<b>100,0</b>

### A2. My work level:

	No. of respondents	Share [%]
International administration	2	1,5
National administration	21	15,4
Local, municipal administration	49	36,0
Scientific institution	12	8,8
Non-governmental organisation (NGO)	11	8,1
Private person, entrepreneur	8	5,9
Educational institution	15	11,0
other (please specify)	6	4,4
No answer	12	8,8
<b>Total</b>	<b>136</b>	<b>100,0</b>

### Work level per country [No. of respondents]

		Country						Total
		AT	CH	DE	FR	IT	SI	
Work level	International administration	1	0	0	0	1	0	2
	National administration	4	3	2	3	0	8	20
	Local, municipal administration	20	6	6	1	11	4	48
	Scientific institution	3	0	2	2	4	1	12
	NGO	5	2	4	0	0	0	11
	Private person, entrepreneur	4	0	2	1	1	0	8
	Educational institution	7	1	0	0	6	1	15
	Other	2	0	1	1	2	0	6
<b>Total</b>	<b>46</b>	<b>12</b>	<b>17</b>	<b>8</b>	<b>25</b>	<b>14</b>	<b>122</b>	

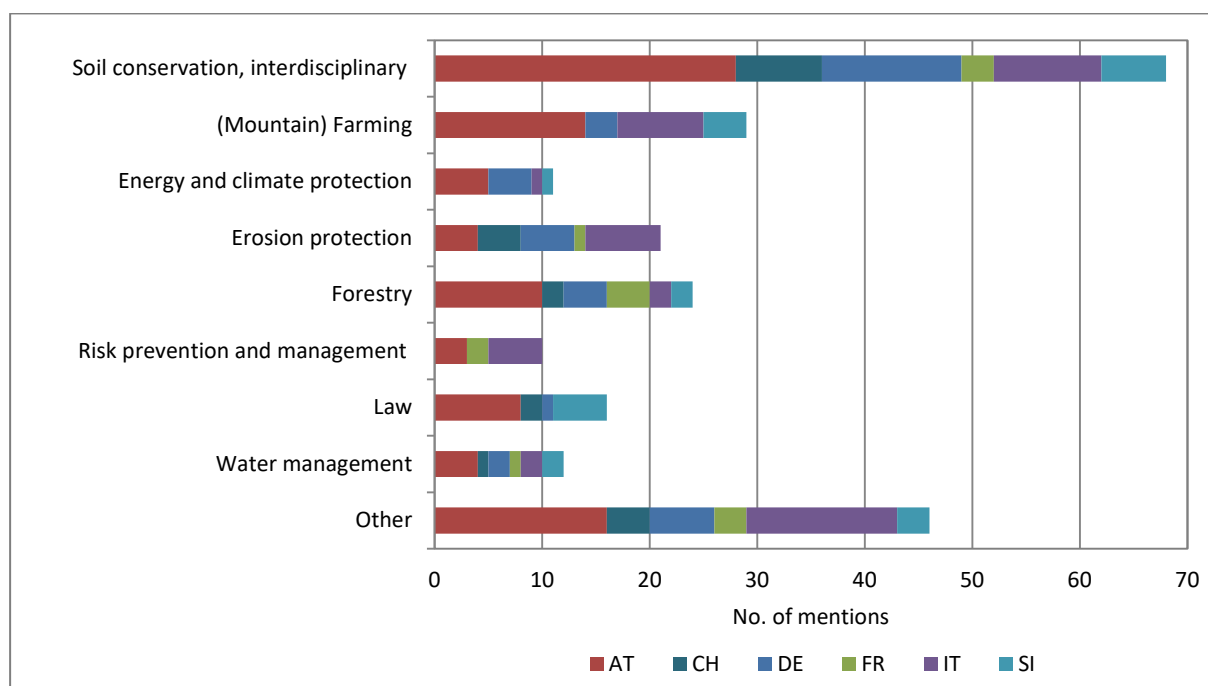


### A3. My sectoral expertise: [multiple selection]

	No. of mentions	Share [%]
Soil conservation, interdisciplinary	68	29,0
(Mountain) Farming	29	12,2
Energy and climate protection	11	4,6
Erosion protection	21	8,8
Forestry	24	10,1
Risk prevention and management	10	4,2
Law	16	6,7
Water management	12	5,0
Other	46	19,3
<b>Total</b>	<b>237</b>	<b>100,0</b>

**Sectoral expertise per country**

		Country						Total	
		AT	CH	DE	FR	IT	SI		
Sectoral expertise	Soil conservation, interdisciplinary	No. of mentions	28	8	13	3	10	6	68
		Share per country [%]	41,2	11,8	19,1	4,4	14,7	8,8	
	(Mountain) Farming	No. of mentions	14	0	3	0	8	4	29
		Share per country [%]	48,3	0,0	10,3	0,0	27,6	13,8	
	Energy and climate protection	No. of mentions	5	0	4	0	1	1	11
		Share per country [%]	45,5	0,0	36,4	0,0	9,1	9,1	
	Erosion protection	No. of mentions	4	4	5	1	7	0	21
		Share per country [%]	19,0	19,0	23,8	4,8	33,3	0,0	
	Forestry	No. of mentions	10	2	4	4	2	2	24
		Share per country [%]	41,7	8,3	16,7	16,7	8,3	8,3	
	Risk prevention and management	No. of mentions	3	0	0	2	5	0	10
		Share per country [%]	30,0	0,0	0,0	20,0	50,0	0,0	
	Law	No. of mentions	8	2	1	0	0	5	16
		Share per country [%]	50,0	12,5	6,3	0,0	0,0	31,3	
	Water management	No. of mentions	4	1	2	1	2	2	12
		Share per country [%]	33,3	8,3	16,7	8,3	16,7	16,7	
	Other (please specify)	No. of mentions	16	4	6	3	14	3	46
		Share per country [%]	34,8	8,7	13,0	6,5	30,4	6,5	
Total	No. of mentions	92	21	38	14	49	23	237	



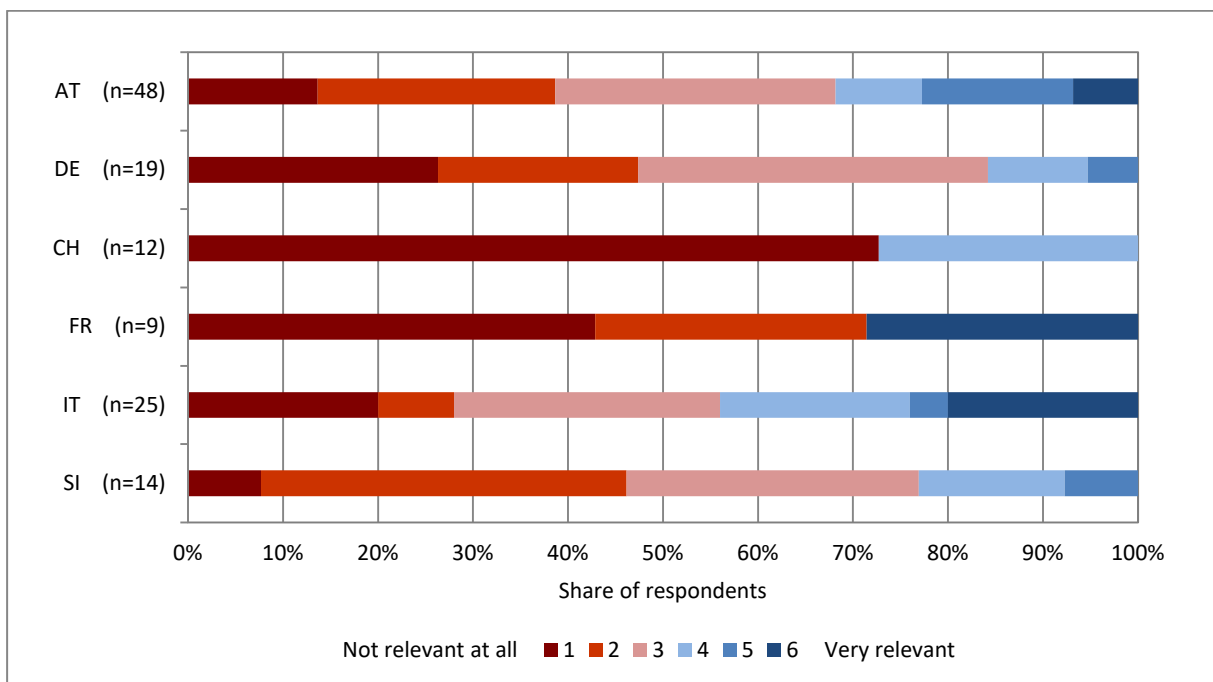
**A4. How relevant is the Soil Conservation Protocol in your daily work? 1 = Not at all relevant 6 = Very relevant**

	No. of respondents	Share [%]
1	28	20,6
2	24	17,6
3	31	22,8
4	16	11,8
5	10	7,4
6	10	7,4
No answer	17	12,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

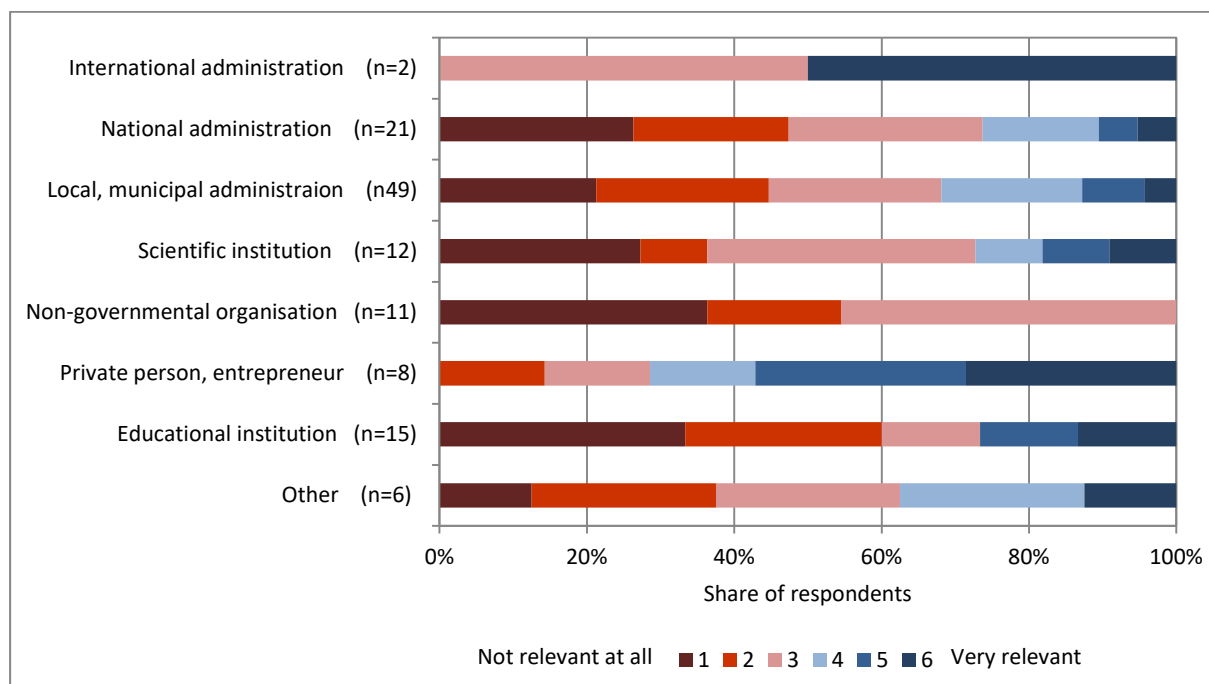
**SCP relevancy in daily work per country [No. of respondents]**

		Relevancy							Total
		No answer	1	2	3	4	5	6	
Country	AT	4	6	11	13	4	7	3	48
	CH	1	8	0	0	3	0	0	12
	DE	0	5	4	7	2	1	0	19
	FR	2	3	2	0	0	0	2	9
	IT	0	5	2	7	5	1	5	25
	SI	1	1	5	4	2	1	0	14
<b>Total</b>		<b>8</b>	<b>28</b>	<b>24</b>	<b>31</b>	<b>16</b>	<b>10</b>	<b>10</b>	<b>127</b>

Note: 9 persons did not mention their country, hence the total number of respondents are 127 instead of 136



SCP relevancy in daily work per work level



A5. Are you familiar with the Soil Conservation Protocol?

	No. of respondents	Share [%]
Yes	26	19,1
No	26	19,1
Partly	57	41,9
No answer	27	19,9
<b>Total</b>	<b>136</b>	<b>100,0</b>

SCP familiarity per country [No. of respondents]

		No answer	Yes	No	Partly	Total
Country	AT	11	12	5	20	48
	CH	3	1	2	6	12
	DE	4	3	5	7	19
	FR	1	1	5	2	9
	IT	0	5	7	13	25
	SI	1	3	2	8	14
<b>Total</b>		<b>20</b>	<b>25</b>	<b>26</b>	<b>56</b>	<b>127</b>

## Section B: Part 1) Legal implementation

The Soil Conservation Protocol of the Alpine Convention is an international treaty which has been ratified by all Contracting Parties, including the EU, but with the exception of Switzerland. This means it has full legal effect on the territories of all Contracting Parties except Switzerland and is part of the EU law.

### B1. Does this part belong to your area of professional expertise? If not, please continue with Part 2)

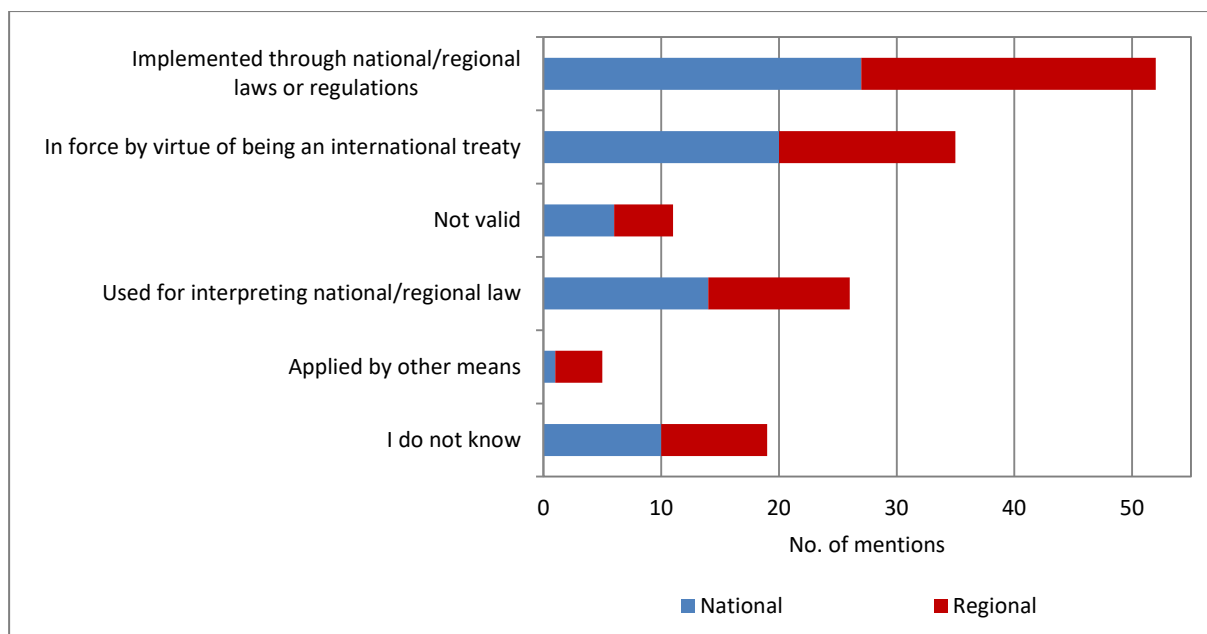
#### "Thematic Implementation"

	No. of respondents	Share [%]
Yes	62	34,1
No	51	28,0
No answer	23	37,9
<b>Total</b>	<b>136</b>	<b>100,0</b>

### B2. Is the Soil Conservation Protocol as an international treaty being applied in your national or regional legislation? [multiple selection]

	SCP applied in <u>national</u> law	
	No. of mentions	Share [%]
It is predominantly implemented through national laws or regulations	27	34,6
It is in force by virtue of being an international treaty	20	25,6
It is not valid	6	7,7
It is used for interpreting national law	14	17,9
It is applied by other means	1	1,3
I do not know	10	12,8
<b>Total</b>	<b>78</b>	<b>100,0</b>

	SCP applied in <u>regional</u> law	
	No. of mentions	Share [%]
It is predominantly implemented through national laws or regulations	25	35,7
It is in force by virtue of being an international treaty	15	21,4
It is not valid	5	7,1
It is used for interpreting national law	12	17,1
It is applied by other means	4	5,7
I do not know	9	12,9
<b>Total</b>	<b>70</b>	<b>100,0</b>



**B3. Has the Soil Conservation Protocol (SCP) influenced the legislation you are familiar with?**

	No. of respondents	Share [%]
No answer	79	58,1
Yes	22	16,2
No	18	13,2
I cannot judge	17	12,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

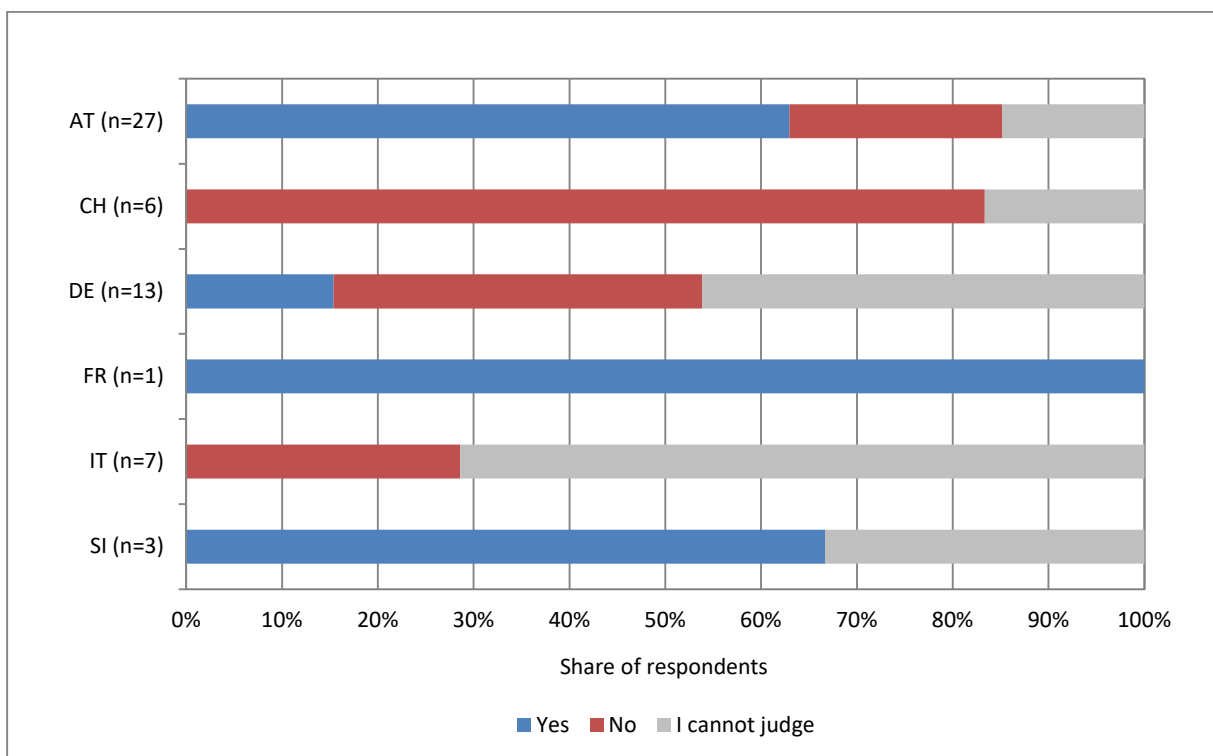
**Influence of SCP on legislation per country [No. of respondents]**

		Influence of SCP on legislation				Total
		No answer	Yes	No	I cannot judge	
Country	AT	21	17	6	4	48
	CH	6	0	5	1	12
	DE	6	2	5	6	19
	FR	8	1	0	0	9
	IT	18	0	2	5	25
	SI	11	2	0	1	14
	No answer	9	0	0	0	9
<b>Total</b>	<b>79</b>	<b>22</b>	<b>18</b>	<b>17</b>	<b>136</b>	



**Influence of SCP on legislation per country [Share of respondents [%]]**

		Influence of SCP on legislation		
		Yes	No	I cannot judge
Country	AT	63,0	22,2	14,8
	CH	0,0	83,3	16,7
	DE	15,4	38,5	46,2
	FR	1100,0	0,0	0,0
	IT	0,0	28,6	71,4
	SI	66,7	0,0	33,3



**B4. Based on your experience, is the Soil Conservation Protocol taken as a legal basis in your country or region for administrative actions (such as planning processes or individual regulatory decisions)?**

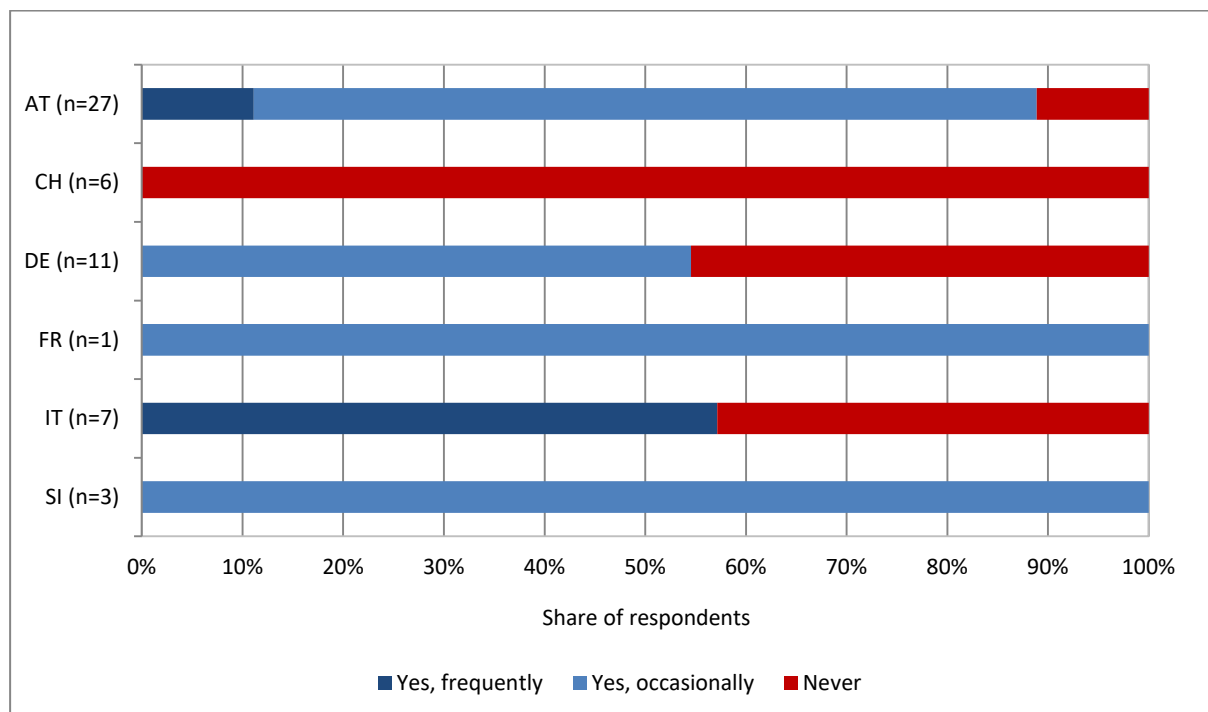
	No. of respondents	Share [%]
No answer	81	59,6
Yes, frequently	7	5,1
Yes, occasionally	31	22,8
Never	17	12,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

SCP as basis for administrative action per country [No. of respondents]

		SCP as basis for administrative action			Total
		Yes, frequently	Yes, occasionally	Never	
Country	AT	3	21	3	27
	CH	0	0	6	6
	DE	0	6	5	11
	FR	0	1	0	1
	IT	4	0	3	7
	SI	0	3	0	3
Total		7	31	17	55

SCP as basis for administrative action per country [Share of respondents [%]]

		SCP as basis for administrative action		
		Yes, frequently	Yes, occasionally	Never
Country	AT	11,1	77,8	11,1
	CH	0,0	0,0	100,0
	DE	0,0	54,5	45,5
	FR	0,0	100,0	0,0
	IT	57,1	0,0	42,9
	SI	0,0	100,0	0,0



### B5. If yes, what does it concern?

No. of mentions	Political/ administrative planning	Legal planning processes	Individual regulatory decisions	Other	Total
Yes, frequently	1	4	2	0	7
Yes, occasionally	4	8	17	1	30
<b>Total</b>	<b>5</b>	<b>12</b>	<b>19</b>	<b>1</b>	<b>37</b>

### B6. If no, what are the reasons for the non-application or the limited application of the Soil Conservation Protocol according to your opinion?

	No. of respondents	Share [%]
No answer	120	88,2
Unclear definitions (content, time frame) in SCP cause poor obligation	2	1,5
Insufficient implementation into national legislation	1	0,7
No ratification of SCP (Switzerland)	4	2,9
Insufficient competence of decision makers	1	0,7
Weak lobby	1	0,7
others (please name)	7	5,1
<b>Total</b>	<b>136</b>	<b>100,0</b>

### Reasons for non-application of SCP per country [No. of respondents]

		Reasons for non-application of SCP						
		Unclear definitions (content, time frame) in SCP cause poor obligation	Insufficient implementation into national legislation	No ratification of SCP (Switzerland)	Insufficient competence of decision makers	Weak lobby	Others	Total
Country	AT	0	1	0	0	1	1	3
	CH	0	0	4	0	0	2	6
	DE	1	0	0	1	0	2	4
	IT	1	0	0	0	0	2	3
<b>Total</b>		<b>2</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>16</b>

**Other:**

*All statements are based on the original wording but were translated into English.*

- (Still) too little known, i.e. because Lower Austria is not a typical alpine country
- Application of state and regional laws
- SCP too unknown at the lower administrative authorities
- The soil protection protocol has not been ratified by Switzerland.
- De facto a beautiful paper without legal force in the procedure, authority always refers to alleged implementation in national legal norms, quantitative soil protection over the (very political) regional planning law does not work
- It is a programmatically strategic instrument that has become standard practice. This does not mean that everything works perfectly. However, improvements are more necessary in the form of technical guidelines and frameworks and less in the form of a political protocol.
- Ignorance, arrogance and statute of autonomy :-)
- In Switzerland, the protocols of the Alpine Convention are hardly known at cantonal level. I know them because I worked in the Convention Review Committee.
- No legally binding effect in execution
- No liability
- Lack of interest
- Too little awareness of the legal relevance and the actual objectives

## Section C: Part 2) Thematic implementation: a) Risk assessment / erosion

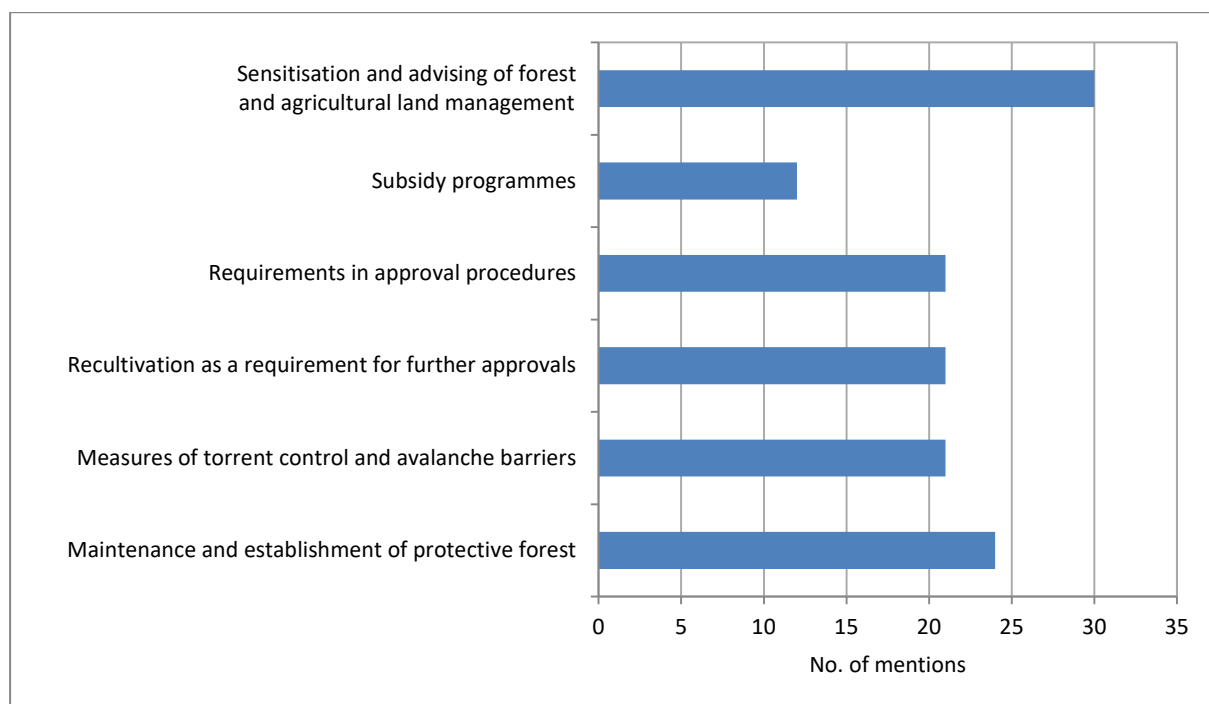
In the Soil Conservation Protocol the control of erosion is expressed in the preamble as one of four central measures. In article 1 – “Objectives” the prevention of erosion is related to the measures to be taken. In article 11 - “Designation and management of Alpine areas threatened by erosion” special attention is given to the topic of erosion.

### C1. Does this part belong to your area of professional expertise? If not, please continue with theme block b) "Qualitative soil protection and soil functions"

	No. of respondents	Share [%]
Yes	56	41,2
No	57	41,9
No answer	23	16,9
<b>Total</b>	<b>136</b>	<b>100,0</b>

### C2. What are the measures you know to reach the goal of limiting soil erosion until an inevitable degree? (Art. 11(2) SCP) [multiple selection]

	No. of mentions	Share [%]
Sensitisation and advising of forest and agricultural land management	30	23,3
Subsidy programmes	12	9,3
Requirements in approval procedures	21	16,3
Recultivation as a requirement for further approvals	21	16,3
Measures of torrent control and avalanche barriers	21	16,3
Maintenance and establishment of protective forests	24	18,6
<b>Total</b>	<b>129</b>	<b>100,0</b>



### C3. Do maps or other spatial information exist in the region of your responsibility/interest regarding to erosion?

	No. of respondents	Share [%]
Yes	29	21,3
No	22	16,2
No answer	85	62,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

### C4. If yes, where is the information published?

	No. of respondents	Share [%]
Internet	12	8,8
Intranet	6	4,4
Scientific journals	5	3,7
Specialist journals for practitioners	1	0,7
Other	2	1,5
No answer	110	80,9
<b>Total</b>	<b>136</b>	<b>100,0</b>

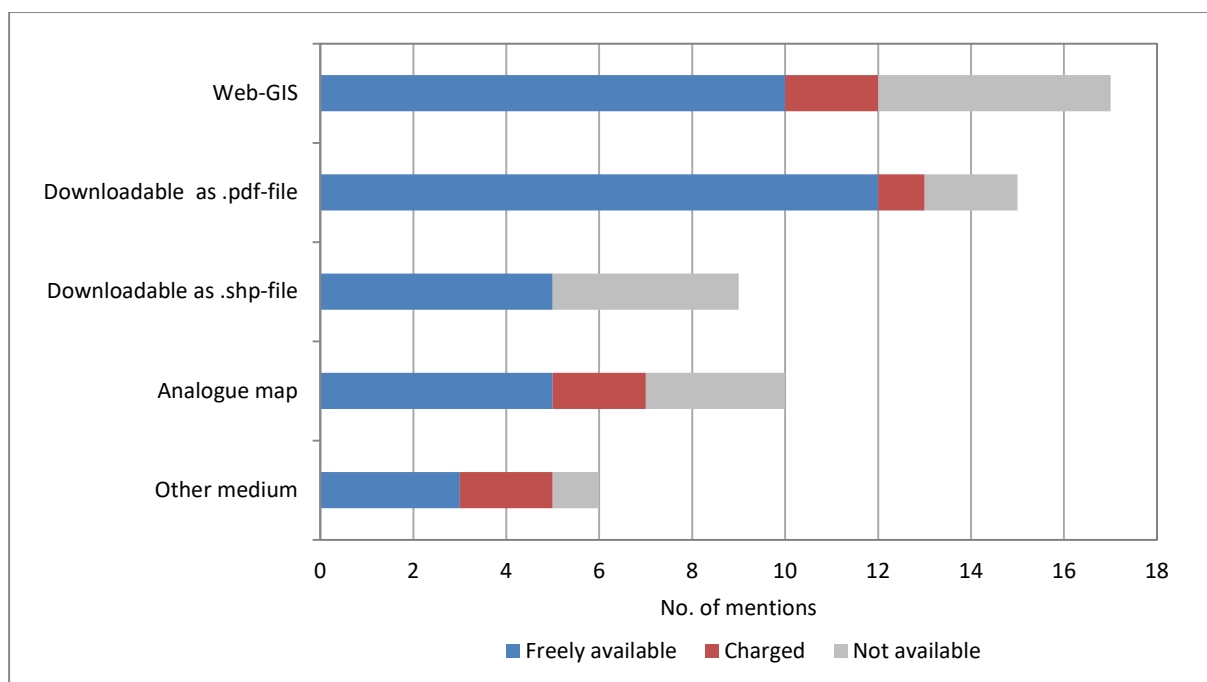
### C5. If yes, in what form is the spatial information available? How is the spatial information accessible?

	Form of freely available spatial data	
	No. of mentions	Share [%]
WebGIS-application	10	28,6
Downloadable as *.pdf-file	12	34,3
Downloadable as *.shp-file	5	14,3
Analogue map	5	14,3
Other medium	3	8,6
<b>Total</b>	<b>35</b>	<b>100,0</b>

	Accessibility of spatial data	
	No. of mentions	Share [%]
Freely available	35	61,4
Charged	7	12,3
Not available	15	26,3
<b>Total</b>	<b>57</b>	<b>100,0</b>

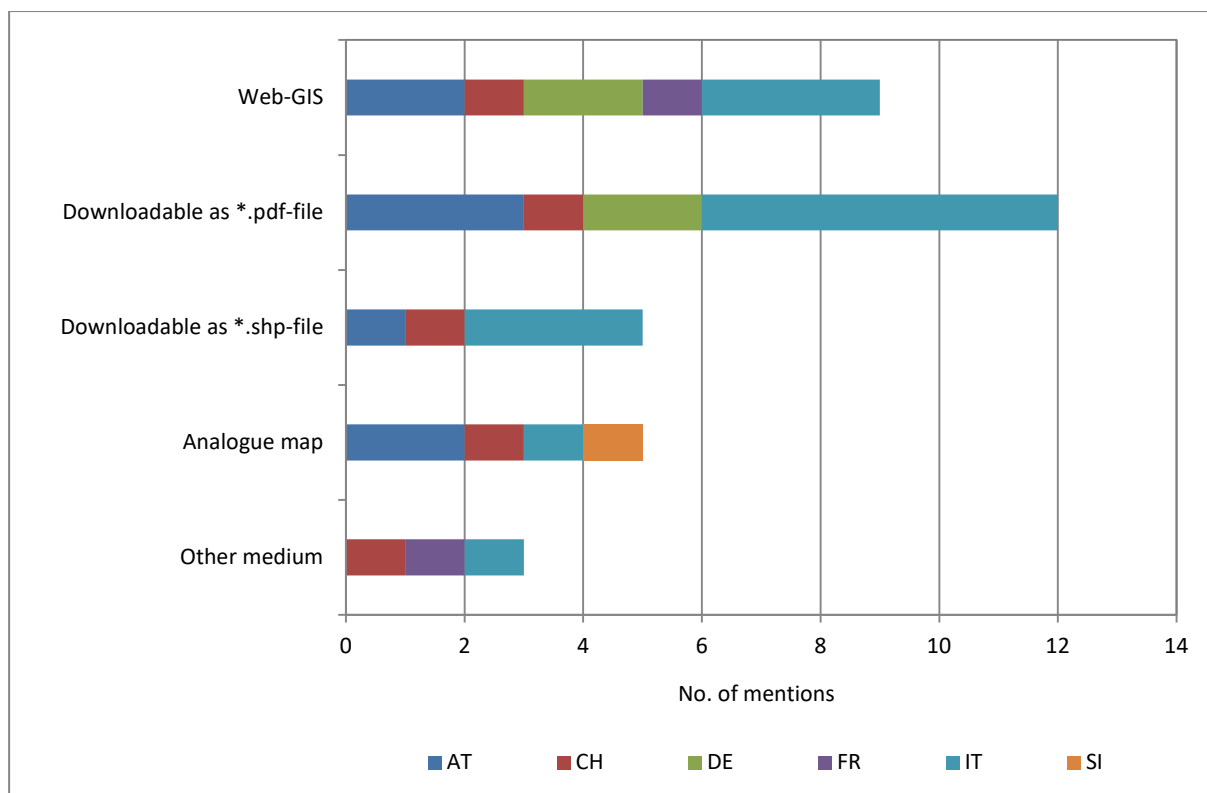
### Access form per form of spatial information [No. of mentions]

		Form of spatial information				
		Web-GIS	Downloadable as *.pdf-file	Downloadable as *.shp-file	Analogue map	Other
Access	Freely available	10	12	5	5	3
	Charged	2	1	0	2	2
	Not available	5	2	4	3	1
Total		17	15	9	10	6



### Freely available erosion-related spatial information per country [No. of mentions]

		Form of freely available spatial information				
		Web-GIS	Downloadable as *.pdf-file	Downloadable as *.shp-file	Analogue map	Other
Country	AT	2	1	3	2	0
	CH	1	1	1	1	1
	DE	2	0	2	0	0
	FR	1	0	0	0	1
	IT	3	3	6	1	1
	SI	0	0	0	1	0
Total		10	12	5	5	3



**C6. Do you use spatial information on erosion regularly?**

	No. of respondents	Share [%]
Yes	14	10,3
No	22	16,2
No answer	100	73,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

**Use of erosion-related spatial information per country [No. of respondents]**

		Yes	No	Total
Country	AT	3	10	13
	CH	2	1	3
	DE	3	2	5
	FR	2	1	3
	IT	3	5	8
	SI	0	2	2
<b>Total</b>	<b>13</b>	<b>21</b>	<b>34</b>	

**C7. If yes, what is the spatial information used for? [multiple selection]**

	No. of mentions
Reports	6
Official (expert) statements	10
<b>Total</b>	<b>16</b>



**C8. Are you aware of regions with measures to reduce water erosion? (Art.11(3) SCP)**

	No. of respondents	Share [%]
Yes	34	25,0
No	16	11,8
No answer	86	63,2
<b>Total</b>	<b>136</b>	<b>100,0</b>

**C9. If yes, what kind of measures? [multiple selection]**

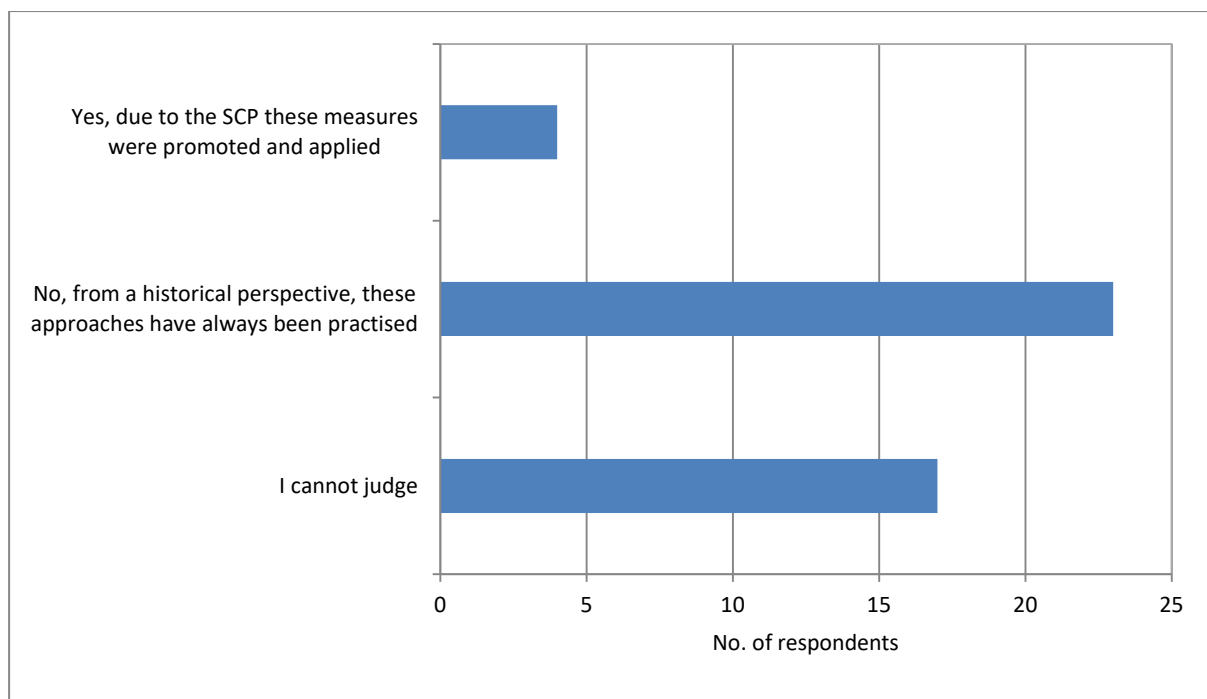
	No. of mentions	Share [%]
Water management (e.g. runoff harvesting)	25	35,7
Hydraulic-engineering measures (e.g. channel stabilisation)	7	10,0
Other civil engineering measures (e.g. slope stabilisation)	17	24,3
Silvicultural measures (forestry)	21	30,0
<b>Total</b>	<b>70</b>	<b>100,0</b>

**C10. Which of the following measures do you know, that are adopted in any region in order to protect from soil erosion in utilised forests? (Art. 13(2) SCP) [multiple selection]**

	No. of mentions	Share [%]
I am not aware of measures applied in any regions	7	4,3
Silvicultural measures adapted to local conditions	34	21,0
Natural forest rejuvenation	23	14,2
Promotion of the biological diversity of forest habitats	24	14,8
Preservation of historical factors of cultivation	9	5,6
Adjustment of wild stocks to forest habitats	19	11,7
Path construction adapted to local conditions	20	12,3
Reforestation of areas at risk	26	16,0
<b>Total</b>	<b>162</b>	<b>100,0</b>

**C11. Were these measures applied due to the Soil Conservation Protocol?**

	No. of respondents	Share [%]
Yes, due to the SCP these measures were promoted and applied	4	2,9
No, from a historical perspective, these approaches have always been practised	23	16,9
I cannot judge	17	12,5
No answer	92	67,6
<b>Total</b>	<b>136</b>	<b>100,0</b>

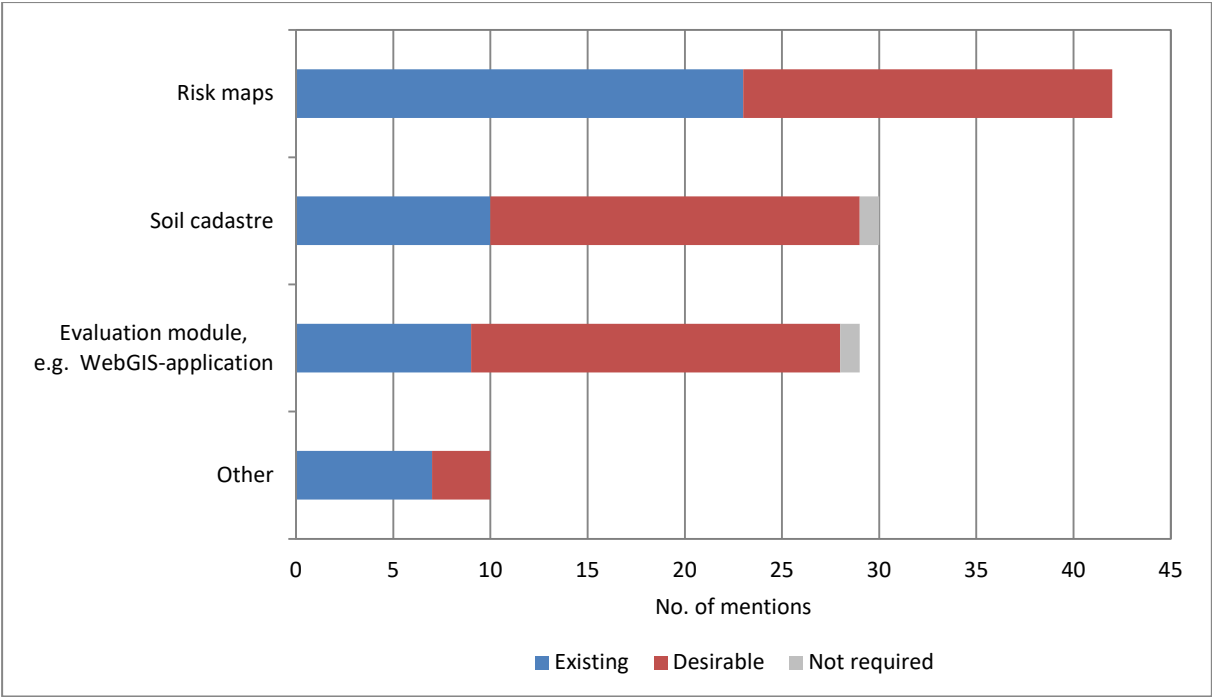


**C12. Which of the following methodological bases for the assessment of soils sensitivity to erosion do exist in any region you are aware of and which would you desire? [multiple selection]**

Which of the following methodological bases for the assessment of soils sensitivity to erosion do <b>exist</b> ?		
	No. of mentions	Share [%]
Risk maps	23	46,9
Soil cadastre	10	20,4
Evaluation module, e.g. in form of a Web-GIS-application	9	18,4
Other	7	14,3
<b>Total</b>	<b>49</b>	<b>100,0</b>

Which of the following methodological bases for the assessment of soils sensitivity to erosion are <b>desirable</b> ?		
	No. of mentions	Share [%]
Risk maps	19	31,7
Soil cadastre	19	31,7
Evaluation module, e.g. in form of a Web-GIS-application	19	31,7
Other	3	5,0
<b>Total</b>	<b>60</b>	<b>100,0</b>

Which following methodological bases are <b>not required</b> ?		
	No. of mentions	Share [%]
Soil cadastre	1	50,0
Evaluation module, e.g. in form of a Web-GIS-application	1	50,0
<b>Total</b>	<b>2</b>	<b>100,0</b>



## Section D: Part 2) Thematic implementation: b) Qualitative soil protection and soil functions

The preservation of ecological soil functions are explicitly mentioned as objectives of the SCP (Art. 1 (2)). Soil as an ecosystem performs a multitude of functions: it is a habitat for soil organisms and natural plant communities, regulates the water flow, preserves natural soil fertility, functions as a carbon sink and filters and buffers contaminants, contributes to groundwater recharge, thermal balancing and much more. Soil functions become immediately visible in the areas of water management (flood protection, drinking water protection, thermal balancing function) and carbon sinks (soil organic matter content).

### D1. Does this part belong to your area of professional expertise? If not, please continue with theme block c) "Mountain farming, forestry, wetlands and moors"

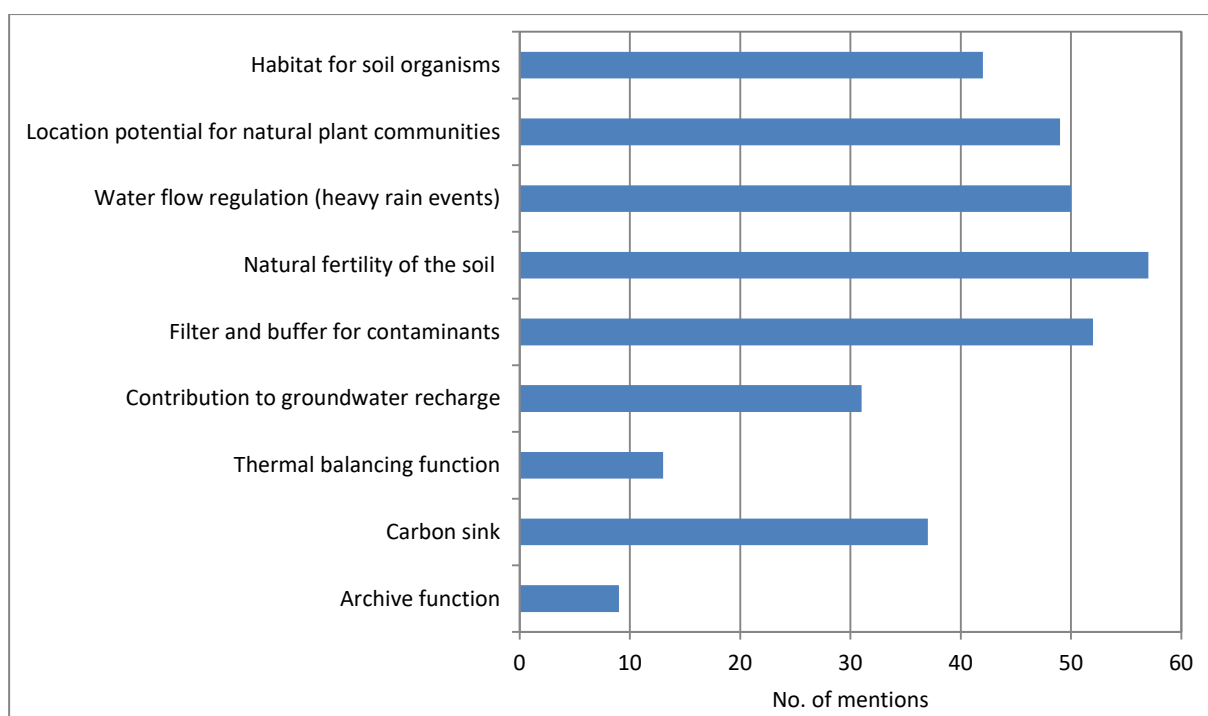
	No. of respondents	Share [%]
Yes	82	60,3
No	29	21,3
No answer	25	18,4
Total	136	100,0

### D2. Does the topic of soil functions play a role in your daily work?

	No. of respondents	Share [%]
Yes	76	55,9
No	2	1,4
I cannot judge	1	0,7
No answer	57	41,9
Total	136	100,0

### D3. If yes, which soil functions play a role in your daily work? [multiple selection]

	No. of mentions	Share [%]
Habitat for soil organisms	42	12,4
Location potential for natural plant communities	49	14,4
Water flow regulation for water of heavy rain events	50	14,7
Natural fertility of the soil (production capacity of the soil)	57	16,8
Filter and buffer for contaminants	52	15,3
Contribution to groundwater recharge	31	9,1
Thermal balancing function	13	3,8
Carbon sink	37	10,9
Archive function	9	2,6
Total	340	100,0



**D4. Are you aware of regions where concrete measures assure qualitative and quantitative ecological soil functions? (Art.1 (3) SCP)**

	No. of respondents	Share [%]
Yes	40	22,3
No	31	17,3
No answer	65	60,3
<b>Total</b>	<b>136</b>	<b>100,0</b>

**D5. Were these measures applied due to the Soil Conservation Protocol?**

	No. of respondents	Share [%]
Yes, due to the SCP these measures were applied and promoted	9	6,6
No, the measures have been implemented independently	28	20,6
I cannot judge	20	14,7
No answer	79	58,1
<b>Total</b>	<b>136</b>	<b>100,0</b>

**D6. Is the "preservation of the ecological soil functions" of soil defined as a target objective for national soil management by other legal regulations? (Art.1(2) SCP)**

	No. of respondents	Share [%]
Yes	34	25,0
No	13	9,6
I cannot judge	30	22,1
No answer	59	43,4
<b>Total</b>	<b>136</b>	<b>100,0</b>

**Comments to: Is the "preservation of the ecological soil functions" of soil defined as a target objective for national soil management by other legal regulations? (Art.1(2) SCP)**

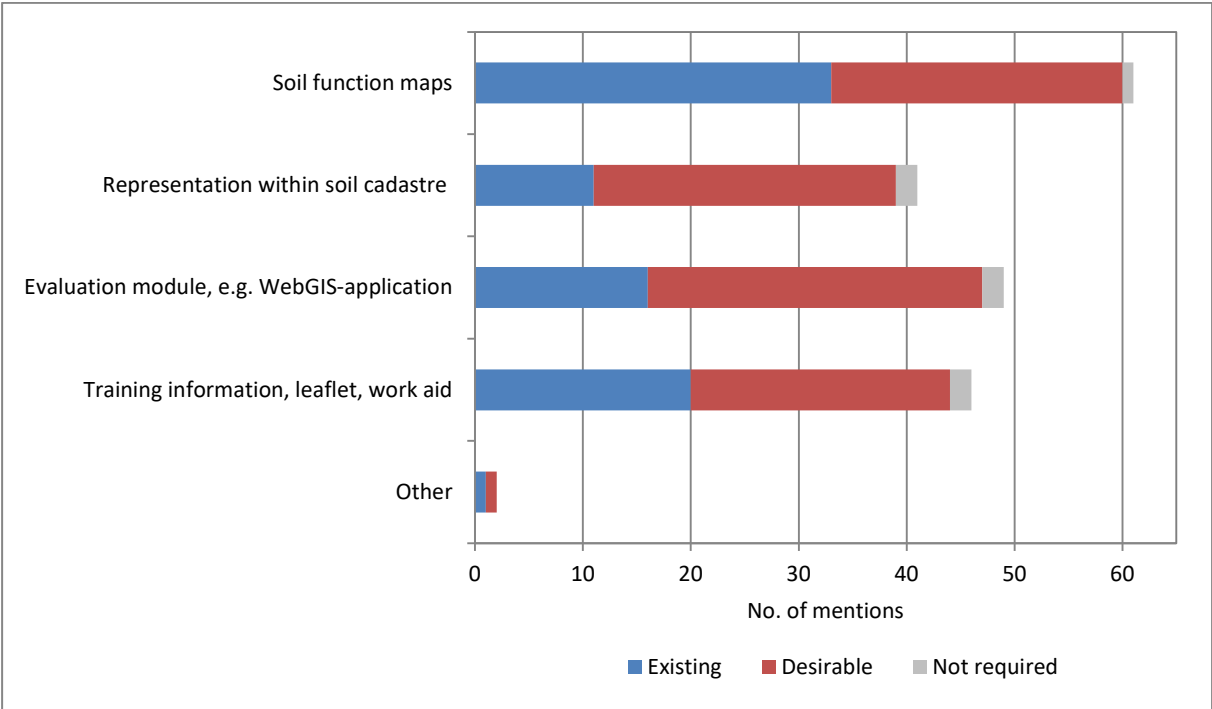
*All statements are based on the original wording but were translated into English.*

Country	Comment
AT	<ul style="list-style-type: none"> <li>• Soil protection law, nature protection law (Bodenschutzgesetz, Naturschutzrecht)</li> <li>• Landfill Ordinance 2008, Fertilizers Act 1994, (Deponieverordnung 2008, Düngemittelgesetz 1994)</li> <li>• There is no nationwide regulation on soil protection in Austria. Soil protection is country competence in Austria. Only the province of Salzburg has explicitly defined the protection of soil functions in its Soil Protection Act. The ÖNORM L1076 "Fundamentals of Soil Functional Assessment" as well as the associated regulations "Soil Functional Assessment - Instructions for the Implementation of the L1076" serve as rules for implementation according to the state of the art.</li> <li>• Upper Austrian Soil Protection Act 1993 (Oberösterreichisches Bodenschutzgesetz 1993)</li> <li>• Regional spatial planning programm (Regionales Raumordnungsprogramm Eferding), Regional spatial planning programm Linz (Regionales Raumordnungsprogramm Linz-Umland 2)</li> <li>• Salzburger Soil protection Act (Bodenschutzgesetz)</li> <li>• Salzburg Soil Protection Act 2001, but only applies to the state of Salzburg and does not apply to soils used for forestry (Salzburger Bodenschutzgesetz 2001)</li> <li>• Salzburg Soil Protection Act, Spatial Planning Act, Ordinance on Strategic Environmental Assessment (Salzburger Bodenschutzgesetz 2001, Salzburger Raumordnungsgesetz 2009, Salzburger Naturschutzgesetz)</li> <li>• E.g. forestry law, nature conservation law (moorland protection ...), national park law</li> <li>• Not all countries have soil protection laws in Austria, it is on state level not national level.</li> <li>• Indirectly in the nature protection law</li> <li>• Nature protection law</li> </ul>
CH	<ul style="list-style-type: none"> <li>• Regulation about the pollution of soil (Art. 2 VBBo)</li> <li>• Environmental Protection Act (Umweltschutzgesetz, USG), Regulation about the pollution of soil (VBBo)</li> <li>• The USG and VBBo aim at preserving soil fertility, which essentially means preserving the ecological soil functions.</li> <li>• There is a focus on soil functions in virtually all Swiss "green" legislation.</li> <li>• Swiss ordinance on pollution of the soil and environmental protection law (Schweizer Verordnung zur Belastung des Bodens und Umweltschutzgesetz)</li> </ul>
DE	<ul style="list-style-type: none"> <li>• Act to protect against harmful soil changes and remediation of contaminated sites (BBodSchG)</li> <li>• German soil protection law (Deutsches Bodenschutzrecht)</li> <li>• Indirectly in the Building law, protection of the topsoil (BauGB § 202: Schutz des Mutterboden)</li> <li>• Various regulations for good agricultural practice (diverse Regelungen für gute landwirtschaftliche Praxis)</li> </ul>
FR	n.a.
IT	n.a.
SI	<ul style="list-style-type: none"> <li>• The current environmental legislation does not explicitly specify this objective. It is also not explicitly foreseen in agricultural regulations</li> </ul>

**D7. Due to their specific characteristics, soils have different natural capacities with regard to soil functions. Are you aware of methodological and data bases existing to evaluate and present positive/negative effects on natural capacities of soil functions? If not, what would be desirable? (preamble SCP, Art. 1 (3) SCP, Art. 8 (2) SCP) [multiple selection]**

**Existence and desirability of methodological databases [No. of mentions]**

	Existing	Desirable	Not required
Soil functions maps	33	27	1
Representation within soil cadastre	11	28	2
Evaluation module, e.g. in form of a WebGIS-application	16	31	2
Training information, leaflet, work aid	20	24	2
Other	1	1	0
<b>Total</b>	<b>81</b>	<b>111</b>	<b>7</b>



**D8. Comments regarding regions or methodologic or data base: (open question)**

All statements are based on the original wording but were translated into English.

Country	Comment
AT	<ul style="list-style-type: none"> <li>• Soil function map is existing in Ö-Norm L1076, Salzburg, would be desirable for whole of Austria or the whole Alpine area.</li> <li>• Soil function maps e.g. in the state of Salzburg; Assessment modules, e.g. as a WebGIS-application, first approaches in the eBOD Austria, Training, Info-Flyer, Work help; There are trainings for spatial planners. Soil function maps are a good basis for planning. Evaluation modules are (only) for experts with sufficient understanding of the topic soil. Training is needed because the soil is the largely unknown element in nature conservation.</li> <li>• The instruments exist for the provinces of Salzburg and Upper Austria as GIS maps for use in planning procedures (SEA, UVP ...), maps for Vienna are currently not published, for Carinthia soil functional maps are in progress.</li> <li>• The biotope mapping available for the entire country contains location data (including soil typology) and estimations of the hazard potential for each recorded area.</li> </ul>
CH	<ul style="list-style-type: none"> <li>• Without a soil map in a precise scale, one cannot do any function evaluation.</li> <li>• Data bases are only partially precise (crop rotation areas), but weak for most soils.</li> <li>• Soil functions as basis for decision making in land use change through spatial planning desirable</li> </ul>
DE	<ul style="list-style-type: none"> <li>• Soil function maps LfU (Landesamt für Umwelt Bayern) 1:25000; Training, Info-Flyer, Work help "Subject of protection soil in planning (Schutzgut Boden in der Planung)" State Office for the Environment Bavaria</li> <li>• Soil function maps in different areas of Bavaria</li> <li>• Living forest soil Educational path Fuchstal</li> <li>• Fast retrieval of information is possible if valuation baselines are displayed in the cadastre or by means of WebGIS applications.</li> <li>• The survey and evaluation of soils with their soil functions is carried out, if at all, very superficially by the regional planning offices. Only a few offices specializing in soil carry out a comprehensive assessment of the soil as a protected asset.</li> </ul>
FR	n.a.
IT	n.a.
SI	n.a.



## Section E: Part 2) Thematic implementation: c) Mountain farming, forestry, wetlands and moors

The Alpine Convention heads for preserving and promoting mountain farming which suits local conditions and is environmentally compatible (Art. 12). This includes the maintenance of the population in remote and rural areas and the safeguarding of sustainable economic activities, particularly by means of producing typical high-quality products.

The natural environment will be conserved (with particular protection of wetlands and moors (Art. 9), emission of pesticides and nutrients will be restricted as much as possible, natural risks will be prevented and the beauty of landscape and recreational value of nature and the countryside as well as of cultural life will be secured. It also promotes solidarity and responsibility among the people and communities. Mountain forestry (Art.13) wants to preserve the mountain forests as a near-natural habitat and, whenever necessary, to develop them or increase their extent and improve their stability. This is to be achieved by a mountain forest system that is managed in a careful and sustainable fashion, compliant with nature.

### E1. Does this part belong to your area of professional expertise? If not, please continue with theme block d) "Quantitative soil protection / reducing land take"

	No. of respondents	Share [%]
Yes	71	52,2
No	39	28,7
No answer	26	19,1
<b>Total</b>	<b>136</b>	<b>100,0</b>

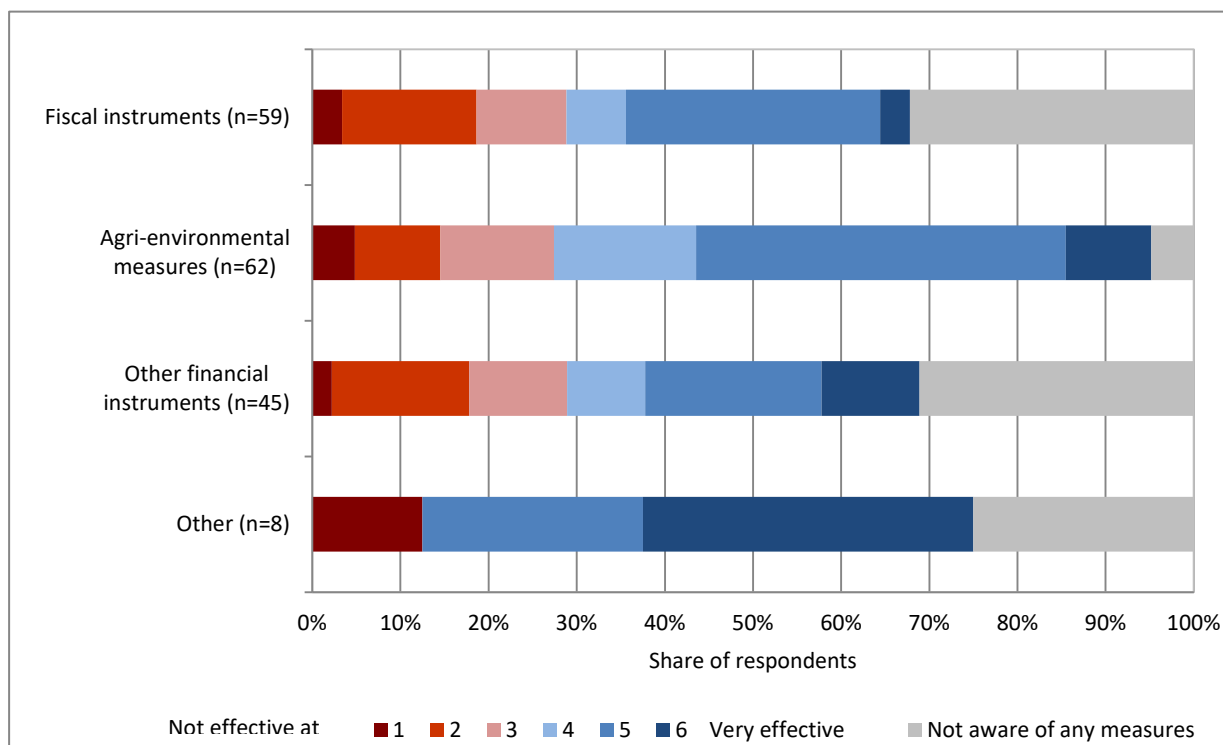
### E2. In your opinion, how effective are financial or fiscal instruments/incentives to promote actions in favour of soil conservation in your region? For instance specific soil-conserving silvicultural and agricultural practices, supported by agri-environmental measures? (Art. 2(3) SCP) 1 = Not at all effective to 6 = Very effective)

#### Effectiveness of instruments [No. of respondents]

	Fiscal instruments	Agri-environmental measures	Other financial instruments	Other
1	2	3	1	1
2	9	6	7	0
3	6	8	5	0
4	4	10	4	0
5	17	26	9	2
6	2	6	5	3
Not aware of any measures	19	3	14	2
<b>Total</b>	<b>59</b>	<b>62</b>	<b>45</b>	<b>8</b>

**Effectiveness of instruments [Share of respondents [%]]**

	Fiscal instruments	Agri-environmental measures	Other financial instruments	Other
1	3,4	4,8	2,2	12,5
2	15,3	9,7	15,6	0,0
3	10,2	12,9	11,1	0,0
4	6,8	19,1	8,9	0,0
5	28,8	41,9	20,0	25,0
6	3,4	9,7	11,1	37,5
Not aware of any measures	32,2	4,8	31,1	25,0
Total	100,0	100,0	100,0	100,0



### E3. Please name programmes/measures you are aware of (open question)

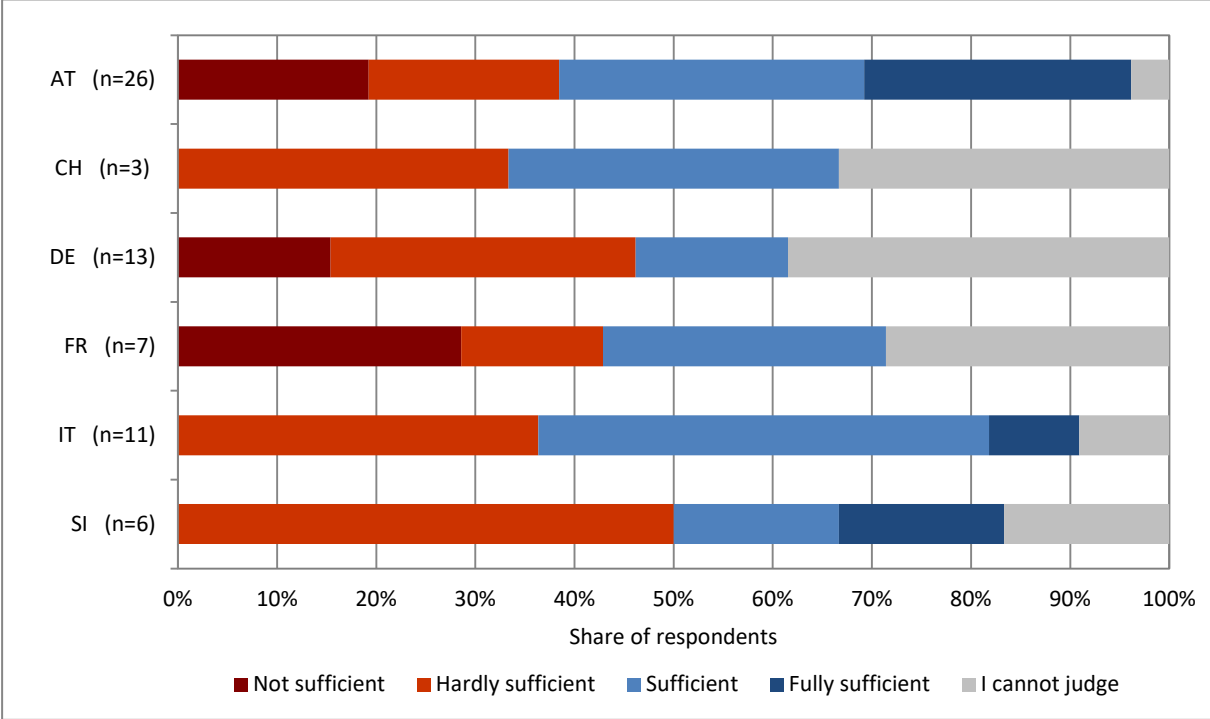
All statements are based on the original wording but were translated into English. If an answer was given by more than one person, it is indicated in brackets and the wording might be changed slightly.

Country	Comment
AT	<ul style="list-style-type: none"> <li>• Agri-environmental programme (ÖPUL) (8 mentions)</li> <li>• Consultancy to soil-water-protection issues in Upper Austria (Boden.Wasser.Schutz.Beratung in Oberösterreich)</li> <li>• Counterproductive: Subsidies for new forestry roads and lack of no-gos regarding zoning plans (Kontraproduktiv: Forststraßenförderung und fehlende No-Gos bei Flächenwidmungen)</li> <li>• Water legislation (Wasserrechtliche Vorschriften)</li> </ul>
CH	<ul style="list-style-type: none"> <li>• Proof of Ecological Performance – PEP (Ökologischer Leistungsnachweis – ÖLN (Direktzahlungen))</li> </ul>
DE	<ul style="list-style-type: none"> <li>• Bavarian cultural landscaping programme (KULAP) (4 mentions)</li> <li>• Regulatory law (Ordnungsrecht; die fiskalischen Anreize und Fördermaßnahmen fördern bisher die Zerstörung von Böden, z.B. Zuschusswesen Straßenbau für Kommunen und Kreise, Zuschusswesen Forst- und Alpwegebau, Gewerbesteuer)</li> <li>• Support of protection forest improvement and preservation (Förderung der Schutzwaldverbesserung/-erhaltung)</li> </ul>
FR	<ul style="list-style-type: none"> <li>• EAFRD (European Agricultural Fund for Rural Development) of the Rhône-Alpes région</li> <li>• Territorial Agri-Environmental Measures of the 2030 Agenda for Sustainable Development (MAET du Programme de Dévpt Durable) – EAFRD measures that have become too complex and inapplicable in terms of tools =&gt; loss of effectiveness of these measures</li> <li>• French programmes: "prairies fleuries" ("flowered meadows") and "4pour1000" ("4 per 1000", carbon storage)</li> <li>• French measures: agri-environmental climate measures (MAEC) dedicated to herb and pastoral systems (SHP) (MAEC autour de la SHP) (2 mentions)</li> </ul>
IT	<ul style="list-style-type: none"> <li>• Natura 2000</li> <li>• Piano Sviluppo Rurale (PSR) (Italian funding programme for agriculture)</li> <li>• Cross-Compliance measures; PSR (2 mentions)</li> <li>• Agro-environmental measures within the framework of PSR in Valle d'Aosta</li> <li>• Landscape conservation payments and environmental bonus according to the provincial legislation (Landschaftspflegeprämien und Umweltprämien gemäß Landesgesetzen)</li> </ul>
SI	<ul style="list-style-type: none"> <li>• Rural Development Programme of the Republic of Slovenia (PRP) 2014-2020, LIFE Programme (EU), HORIZON 2020 (EU), COSME Programme (EU)</li> <li>• Increased resources and greater decentralization of funds for CLLD (Community-led local development) purpose; More funds should be dedicated to direct actions and less for the overheads</li> </ul>

### E4. In your opinion, are the existing legal instruments sufficient to preserve soils in wetlands? (Art. 9 SCP)

	No. of respondents	Share [%]
Not sufficient	9	6,6
Hardly sufficient	18	13,2
Sufficient	19	14,0
Fully sufficient	9	6,6
I cannot judge	11	8,1
No answer	70	51,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

Estimated sufficiency per country



**E5. If legal instruments are not fully sufficient to preserve soils, please explain briefly why not and name these legal instruments.**

*All statements are based on the original wording but were translated into English.*

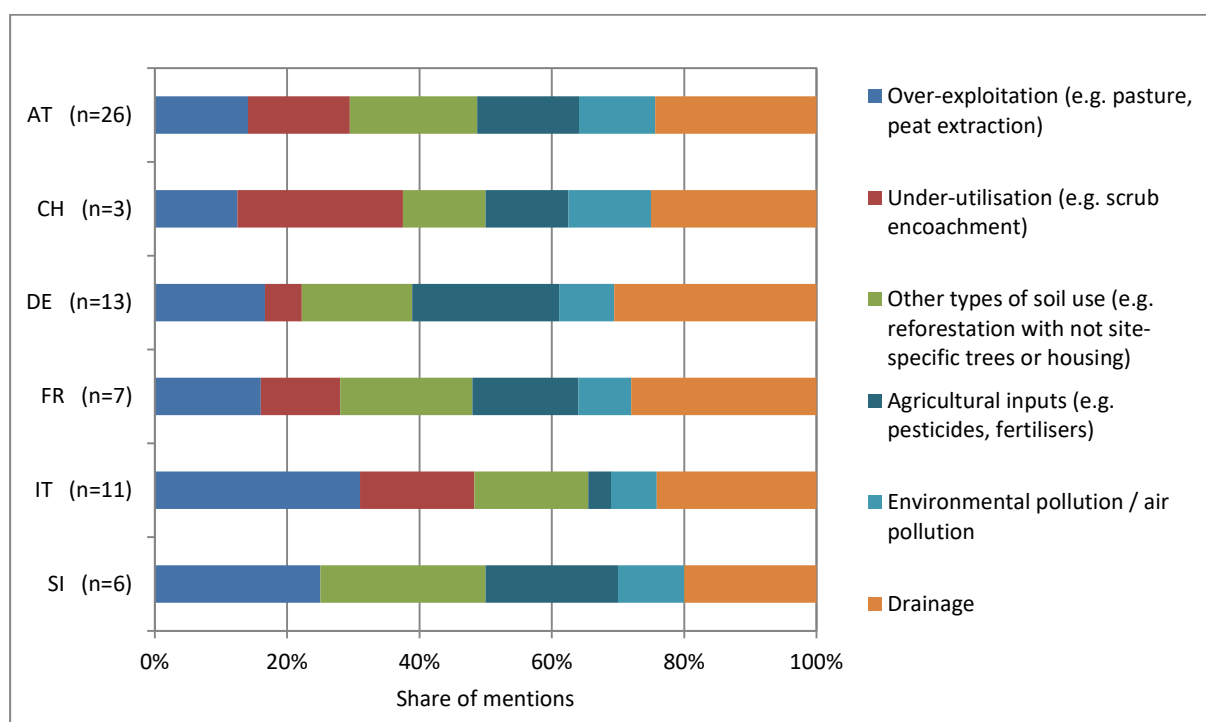
Country	Comment
AT	<ul style="list-style-type: none"> <li>• The SCP alone would not be sufficient, but the protection of wet biotopes and bogs is ensured by the state nature conservation law.</li> <li>• Other economical values are seen as more important.</li> <li>• The problem in Austria is that the SCP is often not correctly applied by the authorities.</li> <li>• As a rule, Art. 9 SCP in Austria is interpreted as meaning that only functional moors enjoy protection. However, their protection is hardly questioned today (nature protection law, etc.). Widespread peat soils under agricultural use (especially drained fens) are usually not recognized as moors and therefore, not protected under Art. 9 SCP.</li> <li>• Regional planning act of Upper Austria (OÖ Raumordnungsgesetz) and soil protection act of Upper Austria (OÖ. Bodenschutzgesetz)</li> <li>• Nature protection law</li> <li>• Although moors in nature conservation are considered as highly protective, they are repeatedly destroyed by ski infrastructure projects, land use and technical foresight closures. In Austria there is a lack of direct wetland protection.</li> <li>• Problem of different interests; Political pressure on the authorities</li> <li>• Too strong federalism, too strong individual interests</li> <li>• Excessive exceptions for agricultural management and insufficient options to monitor the administration</li> </ul>
CH	n.a.
DE	<ul style="list-style-type: none"> <li>• Maintenance and protection of soils are hardly in the heads of cultivators. Preservation of soils is not an important topic on a political level.</li> <li>• Justification: comprehensive protection of moors in national soil protection legislation is not provided; possible legal instruments: anchoring the climate protection function of soils in BbodSchG</li> <li>• There are too many and too easily applicable exceptions to the basic conservation objectives so that in many cases no decision is made in favour of soil protection. Agricultural and environmental law and agricultural subsidies lead to a further intensification of agriculture on wetlands (drainage, type of use, type of management).</li> <li>• Drainage promotes the mineralization of organic matter in peat soils. For non-drained sites, the protection is sufficient. Rewetting is necessary for already drained sites.</li> <li>• Apparently hardly sufficient, since otherwise the agricultural use of low wetlands in the foothills of the Alps, usually accompanied by drainage measures, would not have had such an extension.</li> <li>• There are always exceptions to the protection regulations, which are usually used in the case of a conflict and thus lead to the destruction of wetlands.</li> </ul>
FR	<ul style="list-style-type: none"> <li>• Wetland destruction is one of the sections of the Water Act. Is only possible if subject to compensation with equivalent functionality; Thresholds: 1000-10000 m<sup>2</sup> = declaration; &gt; 10000 m<sup>2</sup> authorization water law → regulatory tool for the protection of heritage wetlands in Isère (peatlands) = biotope protection orders</li> <li>• Lack of resources for monitoring the impact of developments; Threshold surfaces too high for declarations and authorizations; Derogation scheme too frequent</li> </ul>
IT	n.a.
SI	n.a.

**E6. Which practices are most likely to harm wetlands and moors in your region? [multiple selection]**

	No. of mentions	Share [%]
Over-exploitation (e.g. pasture, peat extraction, arable land)	36	18,4
Under-utilisation (e.g. scrub encroachment)	24	12,2
Other types of soil use (e.g. reforestation with not site-specific trees, housing and traffic development, touristic development)	37	18,9
Agricultural inputs (e.g. pesticides, fertilisers)	30	15,3
Environmental pollution / air pollution	19	9,7
Drainage	50	25,5
<b>Total</b>	<b>196</b>	<b>100,0</b>

**Harmful practices for wetlands and moors per country [No. of mentions]**

Practices	Country						Total No. of mentions
	AT	CH	DE	FR	IT	SI	
Over-exploitation (e.g. pasture, peat extraction, arable land)	11	1	6	4	9	5	36
Under-utilisation (e.g. scrub encroachment)	12	2	2	3	5	0	24
Other types of soil use (e.g. reforestation with not site-specific trees, housing and traffic development, touristic development)	15	1	6	5	5	5	37
Agricultural inputs (e.g. pesticides, fertilisers)	12	1	8	4	1	4	30
Environmental pollution / air pollution	9	1	3	2	2	2	19
Drainage	19	2	11	7	7	4	50
<b>Total No. of mentions</b>	<b>78</b>	<b>8</b>	<b>36</b>	<b>25</b>	<b>29</b>	<b>20</b>	
<b>Total No. of respondents</b>	<b>26</b>	<b>3</b>	<b>13</b>	<b>7</b>	<b>11</b>	<b>6</b>	



**E7. In your opinion, how effective are current legal regulations to reduce substance infiltration (e.g. sewage sludge ordinance, fertiliser ordinance, plant protection products, etc.)? 1 = Not at all effective 6 = Very effective**

	No. of respondents	Share [%]
1	1	1,6
2	7	11,1
3	16	25,4
4	13	20,6
5	10	15,9
6	3	4,8
I cannot judge	13	20,6
<b>Total</b>	<b>63</b>	<b>100,0</b>

**E8. Are stakeholders (farmers, forestry) sufficiently informed about the current regulatory framework? [Written information, training, local press, information within the scope of cross-compliance, other measures] 1 = Not sufficient 6 = Fully sufficient**

<b>Written Information</b>		
	No. of respondents	Share [%]
1	1	1,9
2	11	21,2
3	10	19,2
4	15	28,8
5	6	11,5
6	3	5,8
I cannot judge	6	11,5
<b>Total</b>	<b>52</b>	<b>100,0</b>

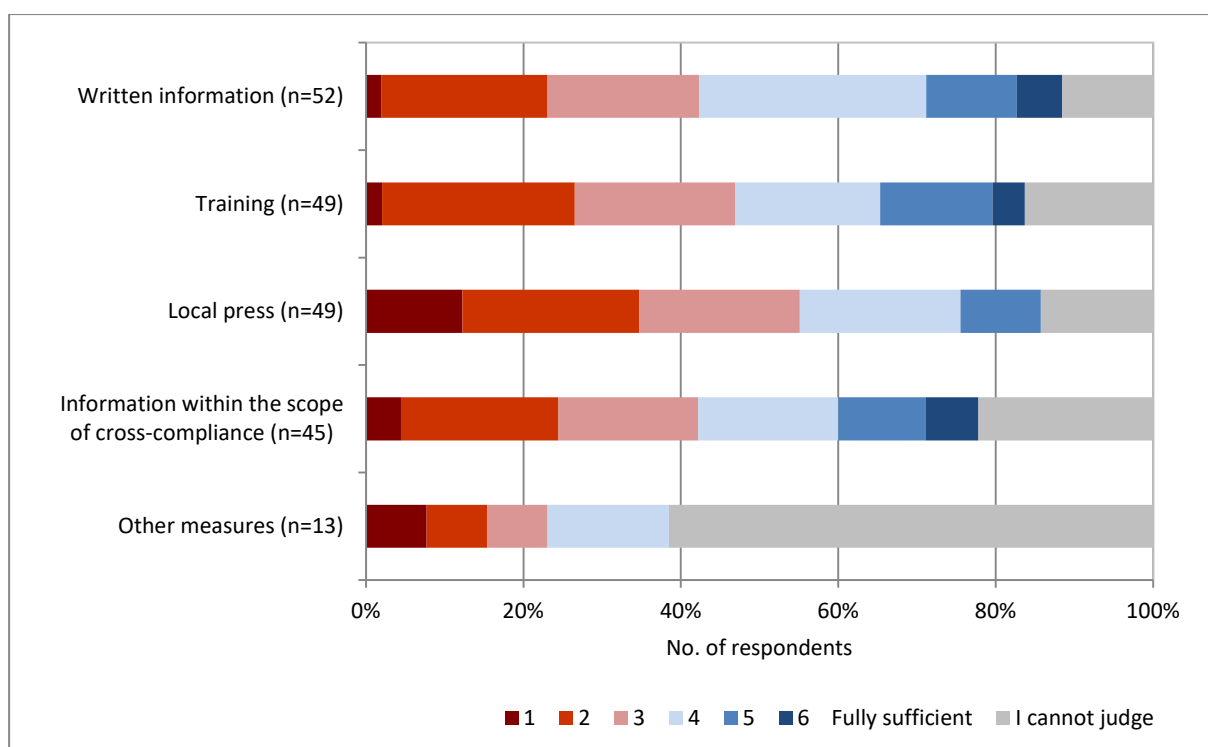
<b>Training</b>		
	No. of respondents	Share [%]
1	1	2,0
2	12	24,5
3	10	20,4
4	9	18,4
5	7	14,3
6	2	4,1
I cannot judge	8	16,3
<b>Total</b>	<b>49</b>	<b>100,0</b>

<b>Local press</b>		
	No. of respondents	Share [%]
1	6	12,2
2	11	22,4
3	10	20,4
4	10	20,4
5	5	10,2
6	0	0,0
I cannot judge	7	14,3
<b>Total</b>	<b>49</b>	<b>100,0</b>

<b>Information within the scope of cross-compliance</b>		
	No. of respondents	Share [%]
1	2	4,4
2	9	20,0
3	8	17,8
4	8	17,8
5	5	11,1
6	3	6,7
I cannot judge	10	22,2
<b>Total</b>	<b>45</b>	<b>100,0</b>

<b>Other measures</b>		
	No. of respondents	Share [%]
1	1	7,7
2	1	7,7
3	1	7,7
4	2	15,4
5	0	0,0
6	0	0,0
I cannot judge	8	61,5
<b>Total</b>	<b>13</b>	<b>100,0</b>





**E9. How effective is the obligation for actors to provide evidence? 1 = Not at all effective 6 = Very effective [multiple selection]**

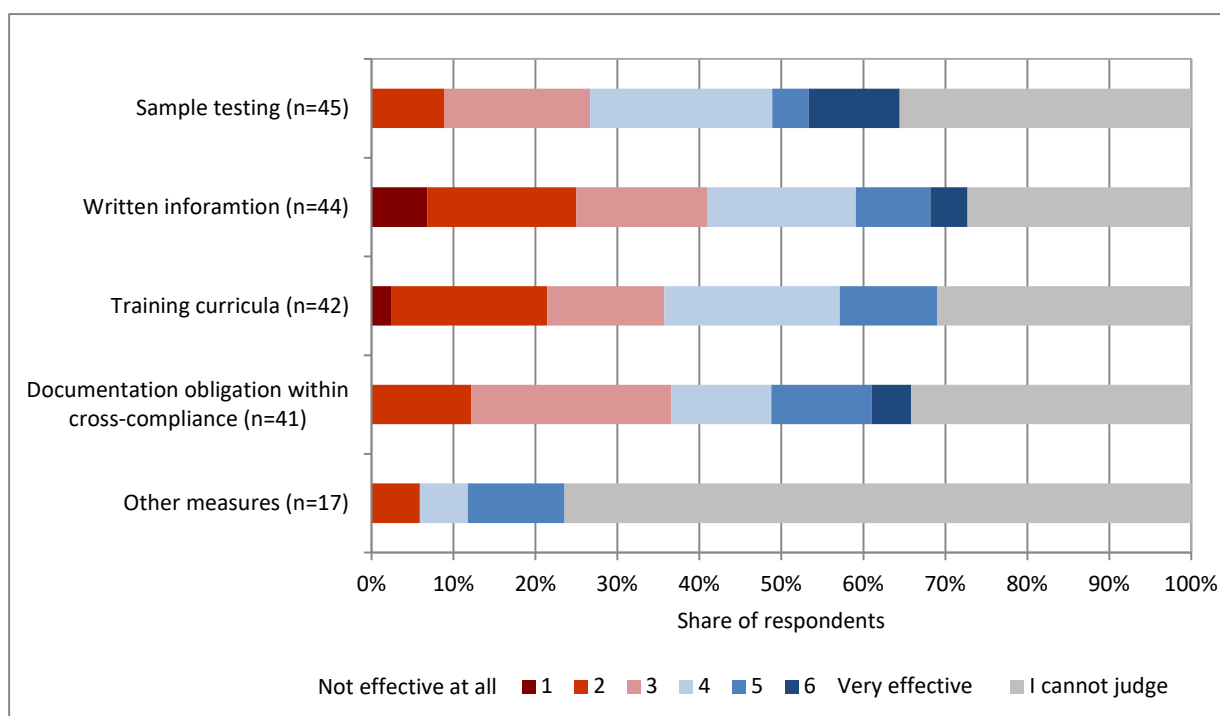
Sample testing		
	No. of respondents	Share [%]
1	0	0,0
2	4	8,9
3	8	17,8
4	10	22,2
5	2	4,4
6	5	11,1
I cannot judge	16	35,6
<b>Total</b>	<b>45</b>	<b>100,0</b>

Written information		
	No. of respondents	Share [%]
1	3	6,8
2	8	18,2
3	7	15,9
4	8	18,2
5	4	9,1
6	2	4,5
I cannot judge	12	27,3
<b>Total</b>	<b>44</b>	<b>100,0</b>

<b>Training curricula</b>		
	No. of respondents	Share [%]
1	1	2,4
2	8	19,0
3	6	14,3
4	9	21,4
5	5	11,9
6	0	0,0
I cannot judge	13	31,0
<b>Total</b>	<b>42</b>	<b>100,0</b>

<b>Documentation obligation within the scope of cross-compliance</b>		
	No. of respondents	Share [%]
1	0	0,0
2	5	12,2
3	10	24,4
4	5	12,2
5	5	12,2
6	2	4,9
I cannot judge	14	34,1
<b>Total</b>	<b>41</b>	<b>100,0</b>

<b>Other measures</b>		
	No. of respondents	Share [%]
1	0	0,0
2	5	5,9
3	10	0,0
4	5	5,9
5	5	11,8
6	2	0,0
I cannot judge	14	76,5
<b>Total</b>	<b>17</b>	<b>100,0</b>



## Section F: Part 2) Thematic implementation: d) Quantitative soil protection / reduction of land take

Soil consumption describes the irreversible utilisation of unsealed soils for settlement purposes, commercial usages and transportation as well as for disposal and energy production.

It leads to a striking competition for the usage of the limited Alpine spaces and therefore to a severe decrease in agricultural production sites, wildlife habitats and biodiversity. Article 7, 8, 14 and 19 of the Soil Conservation Protocol aim at the limitation of the loss of surface area. The Alpine Convention, together with the Land Carinthia leads the Action Group 6 of the EUSALP dealing with the topic "Preservation and valorisation of natural resources, including water and cultural resources". This Action Group (AG) focuses its activities in one sub-topic on spatial development and soil conservation. This theme block was developed in cooperation between EUSALP AG6 and Links4Soils.

**F1. Does this part of the questionnaire belong to your area of professional expertise? If not, please continue with theme-block e) "International cooperation"**

	No. of respondents	Share [%]
Yes	62	45,6
No	40	29,4
No answer	34	25,0
Total	136	100,0

## F2. Please assign the spatial planning instruments you are aware of according to the importance of soil protection or the required level (national, regional, local) of soil assessment within those instruments.

If an answer was given by more than one person, it is indicated in brackets and the wording might be changed slightly.

National				
	No consideration	Specified targets include soil protection	General soil assessment	Spatially explicit in-depth soil assessment
AT	n.a.	<ul style="list-style-type: none"> <li>• Yes (3 mentions)</li> </ul>	<ul style="list-style-type: none"> <li>• Forestry laws</li> <li>• Yes</li> </ul>	n.a.
CH	n.a.	n.a.	n.a.	<ul style="list-style-type: none"> <li>• The crop rotation plan is playing a big role</li> </ul>
IT	n.a.	<ul style="list-style-type: none"> <li>• Laws</li> </ul>	n.a.	n.a.
SI	n.a.	<ul style="list-style-type: none"> <li>• Spatial Development Strategy of Slovenia (SPRS)</li> </ul>	<ul style="list-style-type: none"> <li>• National spatial plan (DPN)</li> <li>• Yes</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic spatial plan (SPN)</li> </ul>
Regional				
	No consideration	Specified targets include soil protection	General soil assessment	Spatially explicit in-depth soil assessment
AT	n.a.	<ul style="list-style-type: none"> <li>• Spatial planning law</li> <li>• Yes (3 mentions)</li> </ul>	<ul style="list-style-type: none"> <li>• Yes</li> </ul>	n.a.
CH	n.a.	<ul style="list-style-type: none"> <li>• Soil sealing is with the new „Raumplanungsgesetz“ extremely limited</li> </ul>	<ul style="list-style-type: none"> <li>• Especially for large projects, soil issues have to be dealt with</li> </ul>	n.a.
DE	<ul style="list-style-type: none"> <li>• Strategic environmental assessment, Soil Protection Act (ineffective), measures to restrict traffic</li> </ul>	<ul style="list-style-type: none"> <li>• Land use plan, soil-saving development plans</li> <li>• Connection requirement of the Bavarian state development program</li> </ul>	<ul style="list-style-type: none"> <li>• Re-compaction, restoration obligations of abandoned mining and industrial areas</li> </ul>	n.a.
IT	n.a.	<ul style="list-style-type: none"> <li>• Law</li> </ul>	<ul style="list-style-type: none"> <li>• planning measures</li> <li>• Environmental impact assessment procedure (2 mentions)</li> <li>• Application of regional law 11/1998 - Standard construction manual</li> </ul>	n.a.
Local				
	No consideration	Specified targets include soil protection	General soil assessment	Spatially explicit in-depth soil assessment
AT	<ul style="list-style-type: none"> <li>• Building law</li> <li>• Yes</li> </ul>	<ul style="list-style-type: none"> <li>• Yes (2 mentions)</li> </ul>	<ul style="list-style-type: none"> <li>• Regional spatial planning concept</li> </ul>	n.a.
SI	n.a.	<ul style="list-style-type: none"> <li>• Municipal Spatial Development Strategy (SPRO), municipal spatial plan (OPN)</li> </ul>	<ul style="list-style-type: none"> <li>• Municipal spatial plan (OPN)</li> </ul>	<ul style="list-style-type: none"> <li>• Municipal detailed spatial plan (OPPN)</li> <li>• Yes</li> </ul>

## F3. Is soil consumption (buildings/infrastructures/depots) systematically registered in your country?

	No. of respondents	Share [%]
Yes	43	31,6
No	8	5,9
No answer	85	62,5
Total	136	100,0

#### Soil consumption registration per country [No. of respondents]

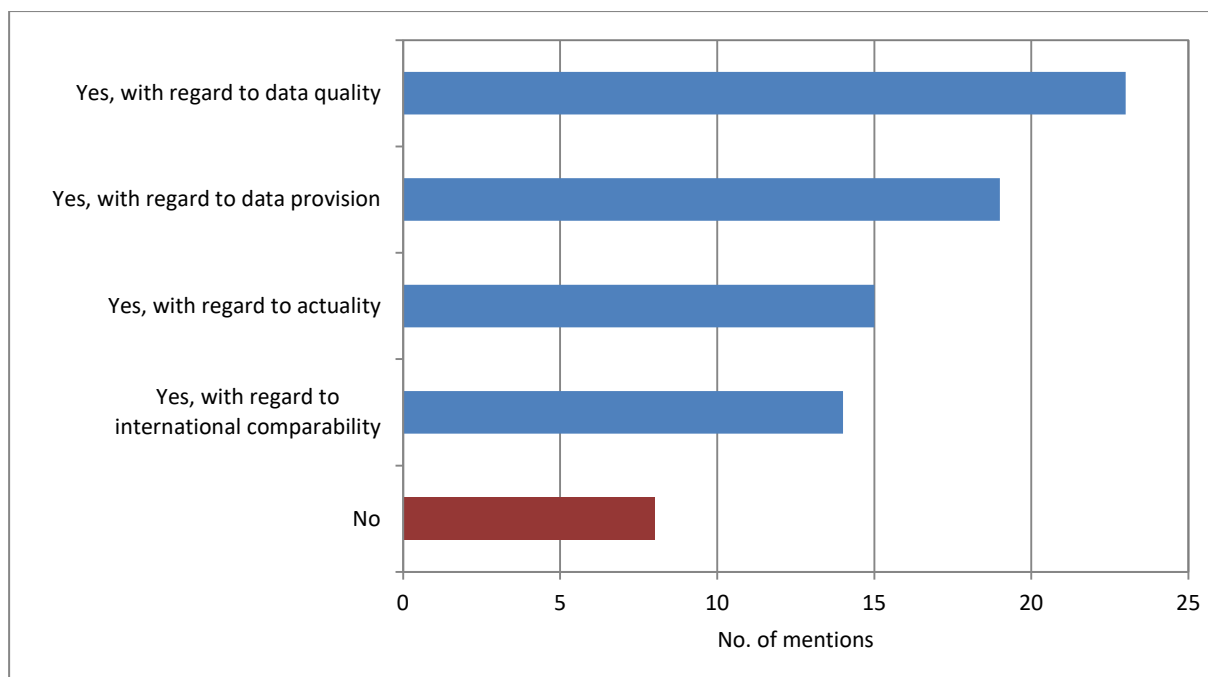
	Country						Total
	AT	CH	DE	FR	IT	SI	
Yes	20	5	9	1	4	1	40
No	3	0	0	0	3	2	8
Total	23	5	9	1	7	3	48

#### F4. If yes, which specific parameters and analysis methods (data basis, time interval) are used at which administrative level?

	National			Regional			Local		
	Parameters with unit	Data basis	Time interval analysis	Parameters with unit	Data basis	Time interval analysis	Parameters with unit	Data basis	Time interval analysis
AT	Area consumption ha/day	n.a.	Annual	Balance of reserve of land	Orthophoto	5 Years	n.a.	n.a.	n.a.
				Area consumption ha/day	n.a.	Annual (planned)			
CH	Geographical survey of the federal government with ha sealing per year	Areal statistics Switzerland (Arealstatistik)	Annual	The canton's observation of sealing in ha per year, with additional buildings, etc.	Construction plans, aerial photographs, building applications, etc.	Annual	Hardly any	n.a.	n.a.
IT	n.a.	n.a.	Annual report of soil consumption (ISPRA)	n.a.	Digitalization of soil consumption areas	n.a.	n.a.	n.a.	n.a.
	ha/day		n.a.	ha/day					
FR	Registration of land use by statistical offices	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SI	n.a.	Information on actual and purposed land use	When plan is changed	n.a.	n.a.	n.a.	n.a.	Information on actual and purposed land use	When plan is changed

#### F5. If yes, do you think improvements with regard to land consumption registration are needed in your country? If you choose other please name. [multiple selection]

	No. of mentions	Share [%]
Yes, with regard to data quality	23	29,1
Yes, with regard to data provision	19	24,1
Yes, with regard to actuality	15	19,0
Yes, with regard to international comparability	14	17,7
No	8	10,1
<b>Total</b>	<b>79</b>	<b>100,0</b>

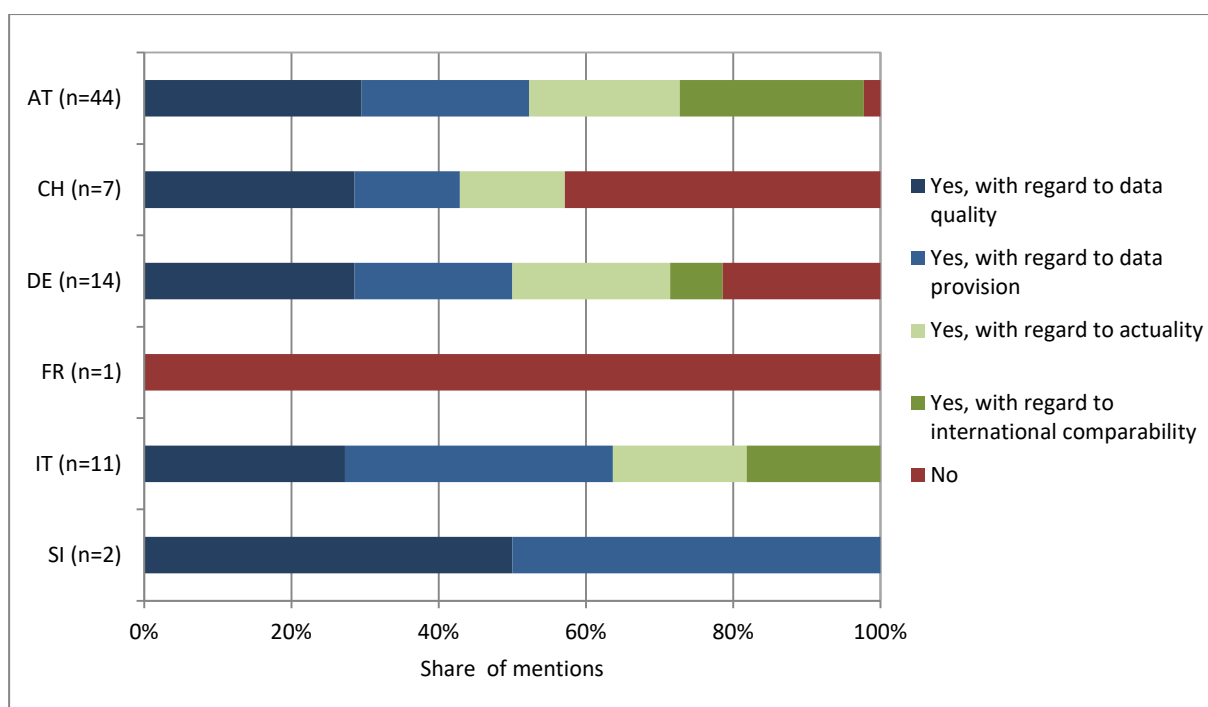


**Estimated requirement for improvements regarding land consumption registration per country [No. of mentions]**

	Country						Total
	AT	CH	DE	FR	IT	SI	
Yes, with regard to data quality	13	2	4	0	3	1	23
Yes, with regard to data provision	10	1	3	0	4	1	19
Yes, with regard to actuality	9	1	3	0	2	0	15
Yes, with regard to international comparability	11	0	1	0	2	0	14
No	1	3	3	1	0	0	8
<b>Total</b>	<b>44</b>	<b>7</b>	<b>14</b>	<b>1</b>	<b>11</b>	<b>2</b>	<b>79</b>

**Estimated requirement for improvements regarding land consumption registration per country [Share of mentions [%]]**

	Country					
	AT	CH	DE	FR	IT	SI
Yes, with regard to data quality	29,5	28,6	28,6	0,0	27,3	50,0
Yes, with regard to data provision	22,7	14,3	21,4	0,0	36,4	50,0
Yes, with regard to actuality	20,5	14,3	21,4	0,0	18,2	0,0
Yes, with regard to international comparability	25,0	0,0	7,1	0,0	18,2	0,0
No	2,3	42,9	21,4	100,0	0,0	0,0



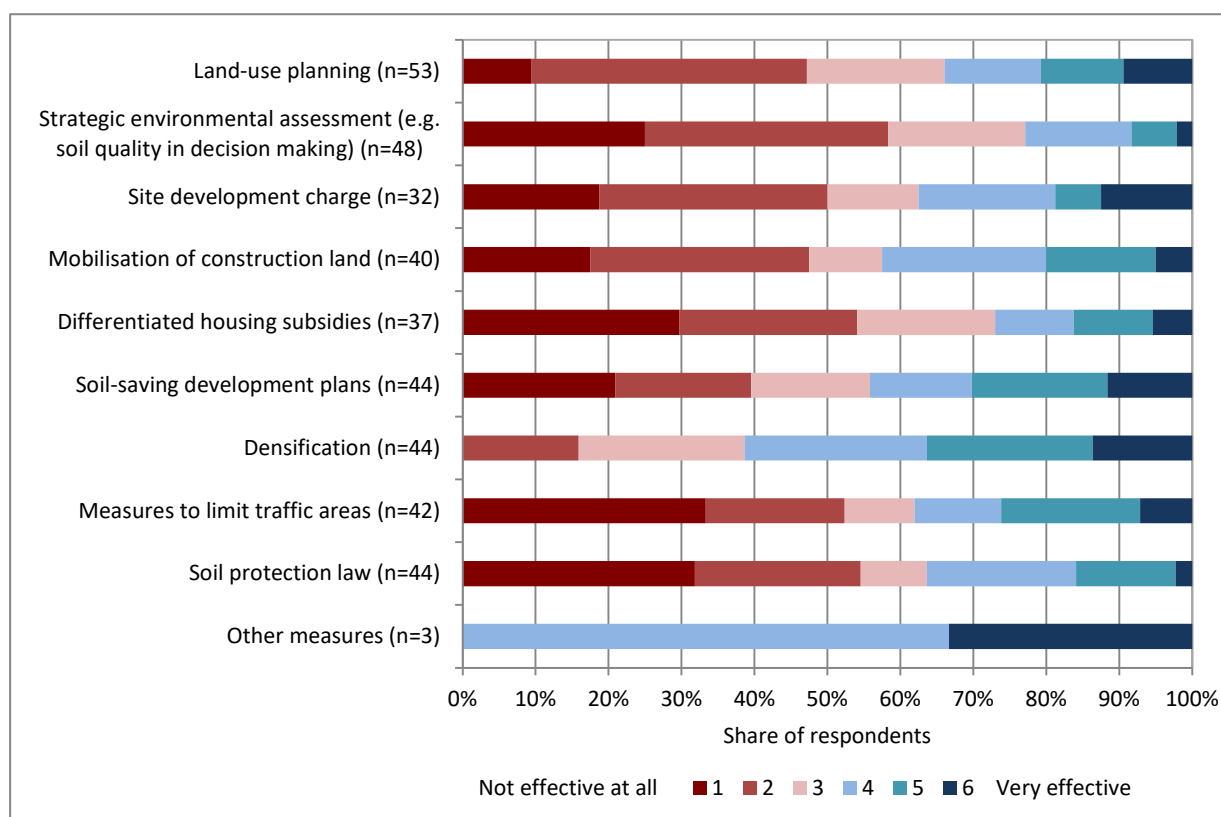
**F6. Please estimate the effectiveness of the regulatory measures to reduce soil consumption in your region: (Art. 7 (1) and (2) SCP) 1 = Not effective at all 6 = Very effective**

**Effectiveness of measures [Number of respondents]**

	Effectiveness						Total
	1	2	3	4	5	6	
Land-use planning	5	20	10	7	6	5	53
Strategic environmental assessment	12	16	9	7	3	1	48
Site development charge	6	10	4	6	2	4	32
Mobilisation of construction land	7	12	4	9	6	2	40
Differentiated housing subsidies	11	9	7	4	4	2	37
Soil-saving development plans	9	8	7	6	8	5	43
Densification	0	7	10	11	10	6	42
Measures to limit traffic areas	14	8	4	5	8	3	44
Soil protection law	14	10	4	9	6	1	53
Other measures	0	0	0	2	0	1	53

**Effectiveness of measures [Share of respondents [%]]**

	Effectiveness						Total
	1	2	3	4	5	6	
Land-use planning	5	20	10	7	6	5	53
Strategic environmental assessment	12	16	9	7	3	1	48
Site development charge	6	10	4	6	2	4	32
Mobilisation of construction land	7	12	4	9	6	2	40
Differentiated housing subsidies	11	9	7	4	4	2	37
Soil saving development plans	9	8	7	6	8	5	44
Densification	0	7	10	11	10	6	42
Measures to limit traffic areas	14	8	4	5	8	3	44
Soil protection law	14	10	4	9	6	1	3
Other measures	0	0	0	2	0	1	53



**F7. Is the particularly limited amount of space in Alpine regions explicitly taken into account, when assessing spatial and environmental compatibility of large-scale projects? (Art. 7 (3) SCP)**

	No. of respondents	Share [%]
Yes	14	10,3
No	29	21,3
No answer	93	68,4
<b>Total</b>	<b>136</b>	<b>100,0</b>



**F8. Are there any official requirements for compensatory measures in connection with soil consuming projects in your region? (Art. 7 (1) and (2) SCP)**

	No. of respondents	Share [%]
Yes	25	18,4
No	12	8,8
No answer	99	72,8
<b>Total</b>	<b>136</b>	<b>100,0</b>

**Official requirements per country [No. of respondents]**

		Yes	No	Total
Country	AT	9	9	18
	DE	7	0	7
	CH	3	1	4
	FR	1	0	1
	IT	3	2	5
	SI	1	0	1
<b>Total</b>		<b>24</b>	<b>12</b>	<b>36</b>

**F9. If yes, which exist? (open question)**

*All statements are based on the original wording but were translated into English. If an answer was given by more than one person, it is indicated in brackets and the wording might be changed slightly.*

- In the case of large-scale projects: Compensatory compulsory of good, arable soils - Improvement measures of degraded soils
- Attribution of greater scores for building restoration (M 4.1.1 PSR (Piano Sviluppo Rurale) 14-20, Italy)
- These are only nature conservation laws, but they do not address soil protection.
- Compensation by money (7 mentions)
- Compensation by ecological compensatory measures (10 mentions)
- B.V.F. - Procedure (Restriction Index of Sealed Surfaces) (Beschränkungsindex der versiegelten Flächen)
- Other: Anti-intervention pads to protect the soil in official permits
- Other: trough improvement of soils
- Measures for the protection of the soil in the construction or operating phase (3 mentions)
- Compensation obligation for new sealing (e.g. by unsealing in inner-city areas) (3 mentions)
- Alleviation and substitutive measures
- Compensatory measures and in case of different interests focus of public interests (replacement benefits)
- Provision of replacement surfaces
- Extension of protected areas

**F10. Is the renaturation/recultivation obligation implemented in your region? (Art. 7 (4) SCP)**

	No. of respondents	Share [%]
Yes	38	27,9
No	2	1,5
No answer	96	70,6
Total	136	100,0

**F11. Are there any positive examples in your region? (open question)**

All statements are based on the original wording but were translated into English.

- But only scattered, e.g. Weidmoos or Wasenmoos in Austira)
- Old unused landfill area, abandoned quarrying area / quarry, closed industrial/commercial area, irrelevant landfill area, abandoned leisure facility (e.g. ski area), abandoned traffic area, abandoned settlement area, not relevant, unused agricultural areas
- Application of the recommendation of the Advisory Council on the recultivation of agricultural soils
- Village renewal Silz
- The new Spatial Planning Act of Switzerland is actually changing the paradigm. The settlement development is massively limited. Interior development is clearly ahead of external development. The cantons are now in the process of implementing the requirements. It will certainly take another 2 to 3 years until all measures take effect.
- Approval certificates for recultivation and reforestation are usually required in decrees granting approval for nature conservation approval for subsequent decommissioning.
- Yes, e.g. the Provincial Spatial Planning Act, which stipulates that in the individual construction zones the building density may not be less than 1.30 cubic meters per square meter and the utilization coefficient 0.8 must reach the maximum permissible construction density for each individual zone. The implementation takes place in the planning practice.
- Recultivation of landfills (after abandonment and after securing), renaturation of gravel pits after complete refilling
- Renaturation of the pulp mining area Pulgarn in the municipality of Steyregg near Linz
- De facto, the Spatial Planning Act offers the possibility of expropriation of areas for settlement activities (and traffic) to act in the sense of a flat-saving, compact spatial planning. In fact, this possibility has not been used for years (in the 70s and 80s).

**F12. Do good practice examples regarding quantitative soil protection exist? (Please name examples) (open question)**

All statements are based on the original wording but were translated into English.

- Yes, various spatial development concepts and development plans in which appropriate soil protection measures are implemented (Austria).
- Yes, recovering historic buildings, e.g. in Glurns (Bolzano), which reduces the development of new building land (Italy)
- Rural Development Programme (Piano di Sviluppo Rurale, PSR) (Italy)
- Sector plan for crop rotation areas (Switzerland)

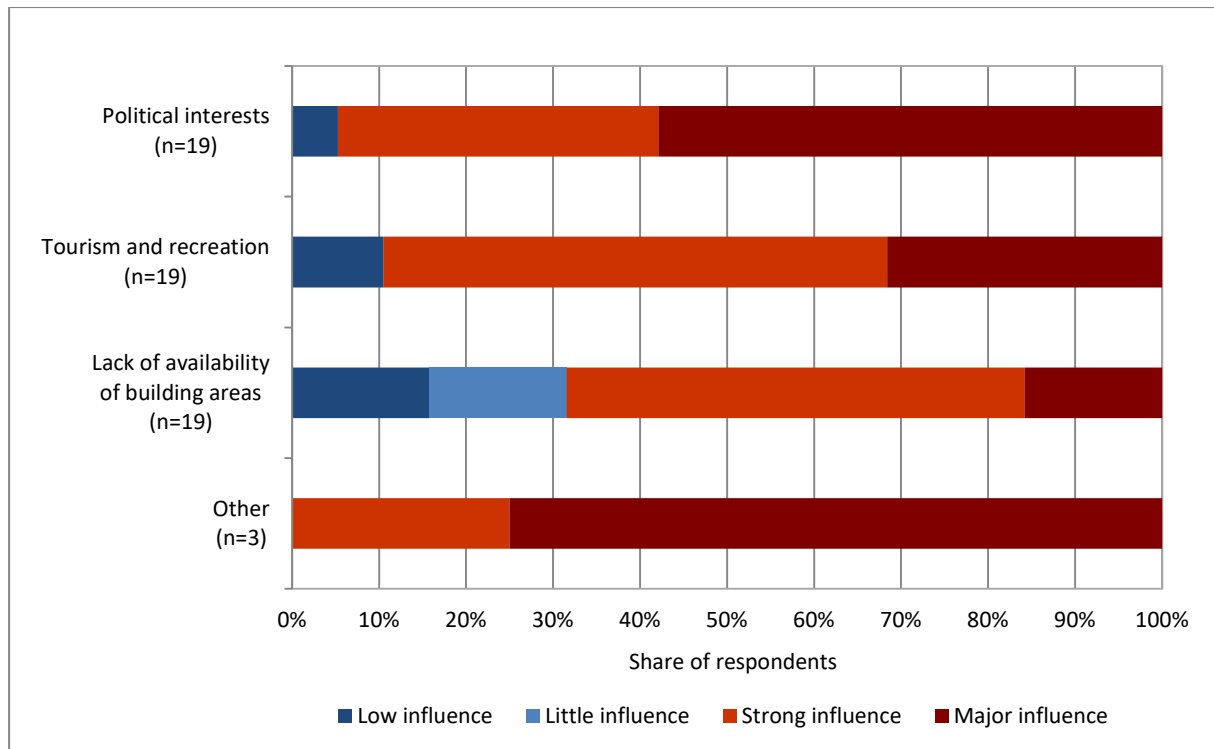
**F13. What are the main driving forces for soil consumption? (Please mark the driving forces and their influence)**

<b>Political interests</b>		
	No. of respondents	Share [%]
Low influence	1	5,3
Strong influence	7	36,8
Major influence	11	57,9
<b>Total</b>	<b>19</b>	<b>100,0</b>

<b>Tourism and recreation</b>		
	No. of respondents	Share [%]
Little influence	2	10,5
Strong influence	11	57,9
Major influence	6	31,6
<b>Total</b>	<b>19</b>	<b>100,0</b>

<b>Lack of availability of building areas</b>		
	No. of respondents	Share [%]
Low influence	3	15,8
Little influence	3	15,8
Strong influence	10	52,6
Major influence	3	15,8
<b>Total</b>	<b>19</b>	<b>100,0</b>

<b>Other</b>		
	No. of respondents	Share [%]
Strong influence	1	25,0
Major influence	3	75,0
<b>Total</b>	<b>4</b>	<b>100,0</b>



**F14. If you choose "other", please name: (open question)**

All statements are based on the original wording but were translated into English.

- The named causes are insufficiently responsive to the complex dynamics around building land. Logically, the policy is the decision-making power. Basically, you will have to allow "land use" in the future as well, if and only if all already populated areas are meaningful and moderately exploited. Proportionality has to be continuously discussed. Basically, the following applies: Recovery before new designation. Hard enough to implement, since the ownership with more intensive use complicated.
- Profit striving through sale of building land
- Higher demands on living quality, speculative hoarding of building vacancies, desire for the most favourable production conditions of business enterprises, mobility preferences of consumers (MIV) and economy (HGV)
- Local planning sovereignty in connection with local constellations of interests
- Economic interest (for example from agriculture) speculation interests

## Section G: Part 2) Thematic implementation: e) International/Alpine-wide cooperation

Article 5 of the Soil Conservation Protocol intends to increase the international cooperation of the contracting parties, especially in the areas of drawing up soil registers, soil monitoring, the designation and monitoring of protected and impaired areas and danger zones, as well as the provision and harmonisation of databases, the coordination of Alpine specific soil conservation research and mutual reporting.

**G1. Does this part of the questionnaire belong to your area of professional expertise? If not please continue with Part 3) Outlook.**

	No. of respondents	Share [%]
Yes	58	42,6
No	42	30,9
No answer	36	26,5
<b>Total</b>	<b>136</b>	<b>100,0</b>

**G2. From your point of view, what are the most important topics in the international/Alpine-wide cooperation that lead to an effective implementation of the Soil Conservation Protocol?**

<b>Economical and prudent use of soils</b>		
	No. of respondents	Share [%]
Less important	0	0,0
Moderate important	8	14,0
Very important	49	86,0
<b>Total</b>	<b>57</b>	<b>100,0</b>

<b>Conservation of soils in wetlands and moors</b>		
	No. of respondents	Share [%]
Less important	3	5,4
Moderate important	15	26,8
Very important	38	67,9
<b>Total</b>	<b>56</b>	<b>100,0</b>

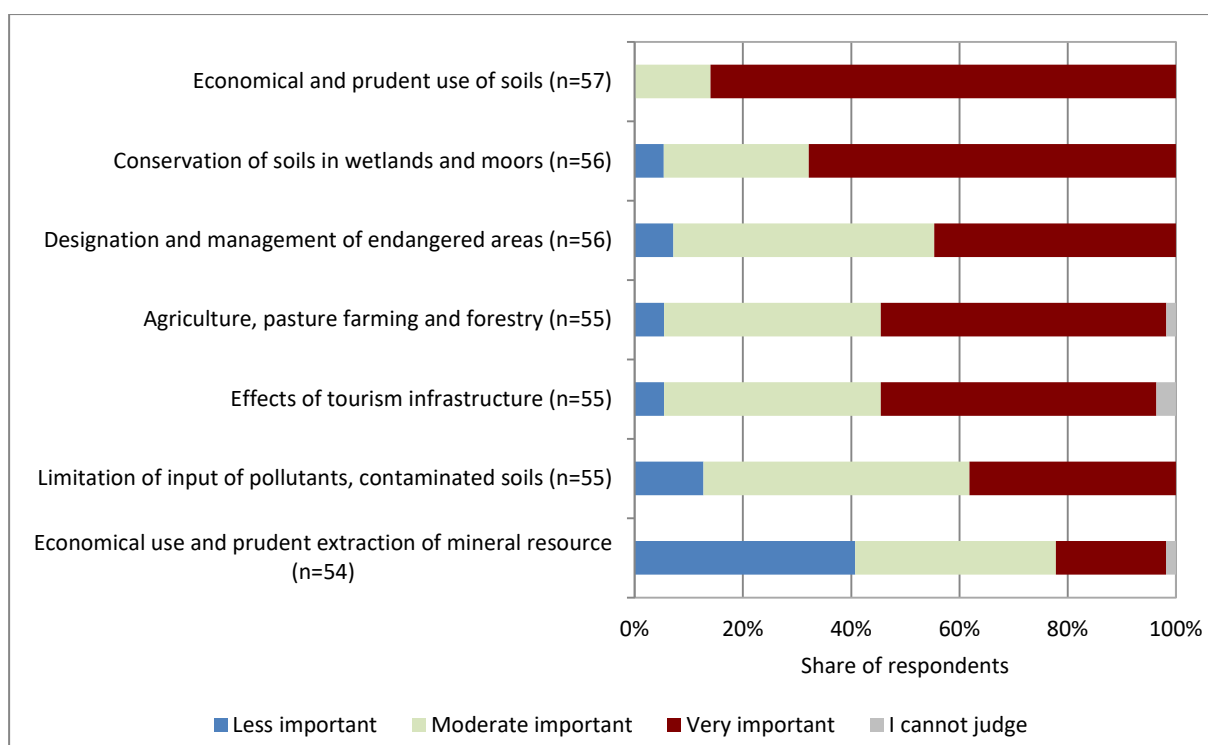
<b>Designation and management of endangered areas (by erosion and accumulation)</b>		
	No. of respondents	Share [%]
Less important	4	7,1
Moderate important	27	48,2
Very important	25	44,6
<b>Total</b>	<b>56</b>	<b>100,0</b>

<b>Agriculture, pasture farming and forestry</b>		
	No. of respondents	Share [%]
Less important	3	5,5
Moderate important	22	40,0
Very important	29	52,7
I cannot judge	1	1,8
<b>Total</b>	<b>55</b>	<b>100</b>

<b>Effects of tourism infrastructure</b>		
	No. of respondents	Share [%]
Less important	3	5,5
Moderate important	22	40,0
Very important	28	50,9
I cannot judge	2	3,6
<b>Total</b>	<b>55</b>	<b>100,0</b>

<b>Limitation of input of pollutants, contaminated soils</b>		
	No. of respondents	Share [%]
Less important	7	12,7
Moderate important	27	49,1
Very important	21	38,2
<b>Total</b>	<b>55</b>	<b>100,0</b>

<b>Economical use and prudent extraction of mineral resource</b>		
	No. of respondents	Share [%]
Less important	22	40,7
Moderate important	20	37,0
Very important	11	20,4
I cannot judge	1	1,9
<b>Total</b>	<b>54</b>	<b>100,0</b>



**G3. In your opinion, are these soil topics sufficiently addressed by the international/Alpine-wide cooperation?**

Economical and prudent use of soils		
	No. of respondents	Share [%]
Not sufficient	35	68,6
Partly sufficient	8	15,7
Sufficient	4	7,8
I cannot judge	4	7,8
<b>Total</b>	<b>51</b>	<b>100,0</b>

Conservation of soils in wetlands and moors		
	No. of respondents	Share [%]
Not sufficient	18	36,0
Partly sufficient	19	38,0
Sufficient	7	14,0
I cannot judge	6	12,0
<b>Total</b>	<b>50</b>	<b>100,0</b>

Designation and management of endangered areas (by erosion and accumulation)		
	No. of respondents	Share [%]
Not sufficient	22	44,9
Partly sufficient	14	28,6
Sufficient	6	12,2
I cannot judge	7	14,3
<b>Total</b>	<b>49</b>	<b>100,0</b>

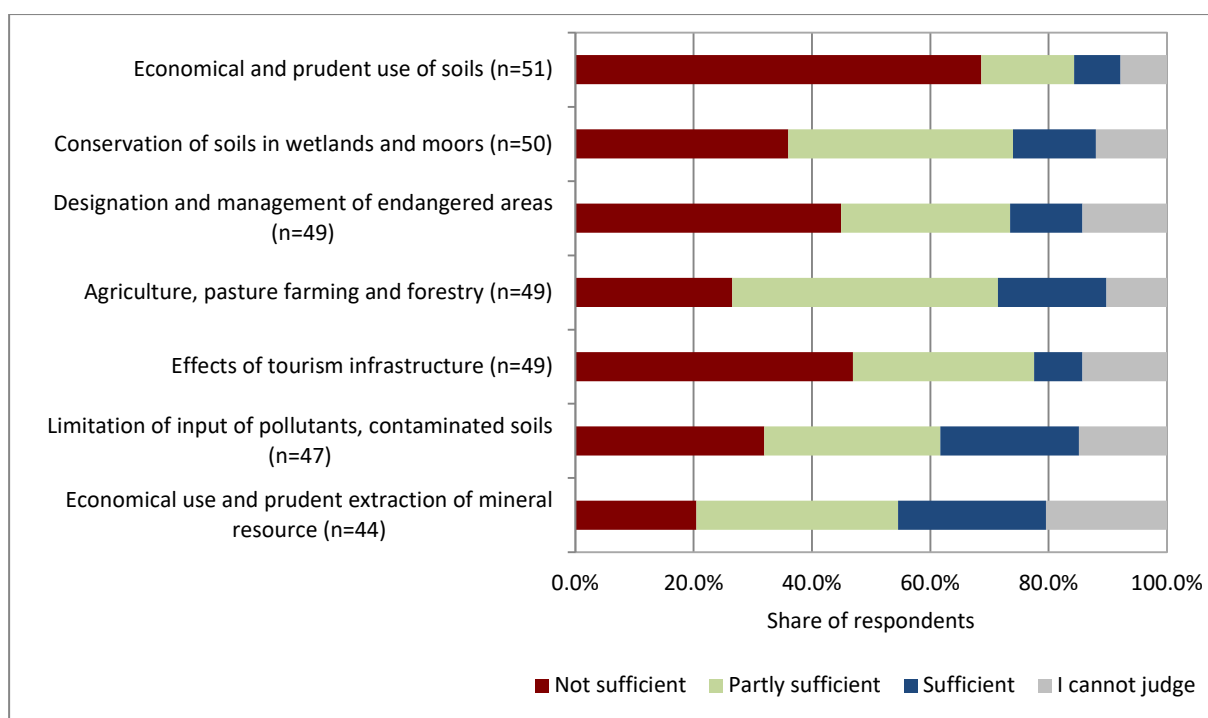
<b>Agriculture, pasture farming and forestry</b>		
	No. of respondents	Share [%]
Not sufficient	13	26,5
Partly sufficient	22	44,9
Sufficient	9	18,4
I cannot judge	5	10,2
<b>Total</b>	<b>49</b>	<b>100,0</b>

<b>Effects of tourism infrastructure</b>		
	No. of respondents	Share [%]
Not sufficient	23	46,9
Partly sufficient	15	30,6
Sufficient	4	8,2
I cannot judge	7	14,3
<b>Total</b>	<b>49</b>	<b>100,0</b>

<b>Limitation of input of pollutants, contaminated soils</b>		
	No. of respondents	Share [%]
Not sufficient	15	31,9
Partly sufficient	14	29,8
Sufficient	11	23,4
I cannot judge	7	14,9
<b>Total</b>	<b>47</b>	<b>100,0</b>

<b>Economical use and prudent extraction of mineral resource</b>		
	No. of respondents	Share [%]
Not sufficient	9	20,5
Partly sufficient	15	34,1
Sufficient	11	25,0
I cannot judge	9	20,5
<b>Total</b>	<b>44</b>	<b>100,0</b>





**G4. Are you involved in activities/projects in international/Alpine cooperation on soil conservation in the Alps? (Art. 5 SCP)**

	No. of respondents	Share [%]
Yes	19	14,0
No	36	26,5
No answer	81	59,6
<b>Total</b>	<b>136</b>	<b>100,0</b>

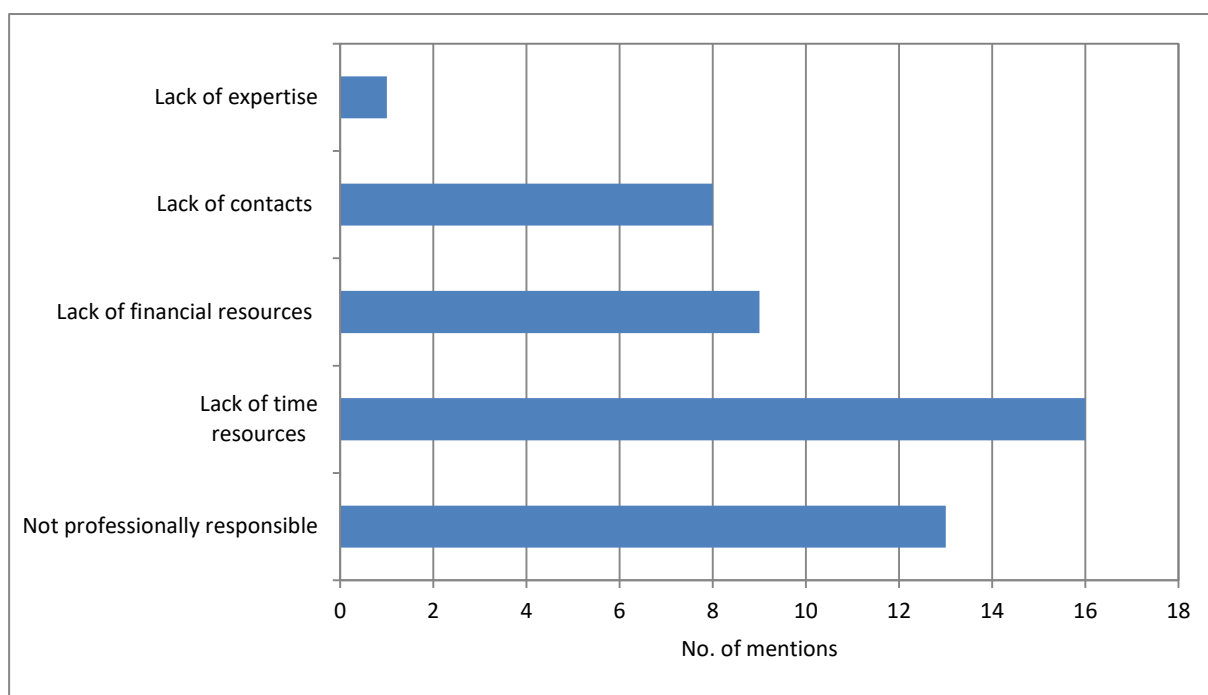
**G5. If yes, in which measures on the following topics of the Soil Conservation Protocol are you involved? 1 = Not involved 6 = Entirely involved**

**Degree of involvement per measure [No. of respondents]**

	Involvement						Total
	1	2	3	4	5	6	
Economical and prudent use of soils	1	2	4	2	5	2	16
Conservation of soils in wetlands and moors	8	1	3	2	1	0	15
Effects of tourism infrastructure	4	1	1	5	1	2	13
Limitation of input of pollutants, contaminated soils	5	3	2	3	0	0	13
Designation and management of endangered areas (by erosion and accumulation)	0	0	0	0	0	0	0
Agriculture, pasture farming and forestry	0	0	0	0	0	0	0

**G6. If not, why are you not involved in any activities on the above-named topics? [multiple selection]**

	No. of mentions	Share [%]
Lack of expertise	1	2,1
Lack of contacts	8	17,0
Lack of financial resources	9	19,1
Lack of time resources	16	34,0
Not professionally responsible	13	27,7
<b>Total</b>	<b>47</b>	<b>100,0</b>



**G7. From your point of view, what are the most important principles of national and international/Alpine-wide cooperation that lead to an effective implementation of the Soil Conservation Protocol? (Art. 5(1) SCP) [multiple selection]**

**National**

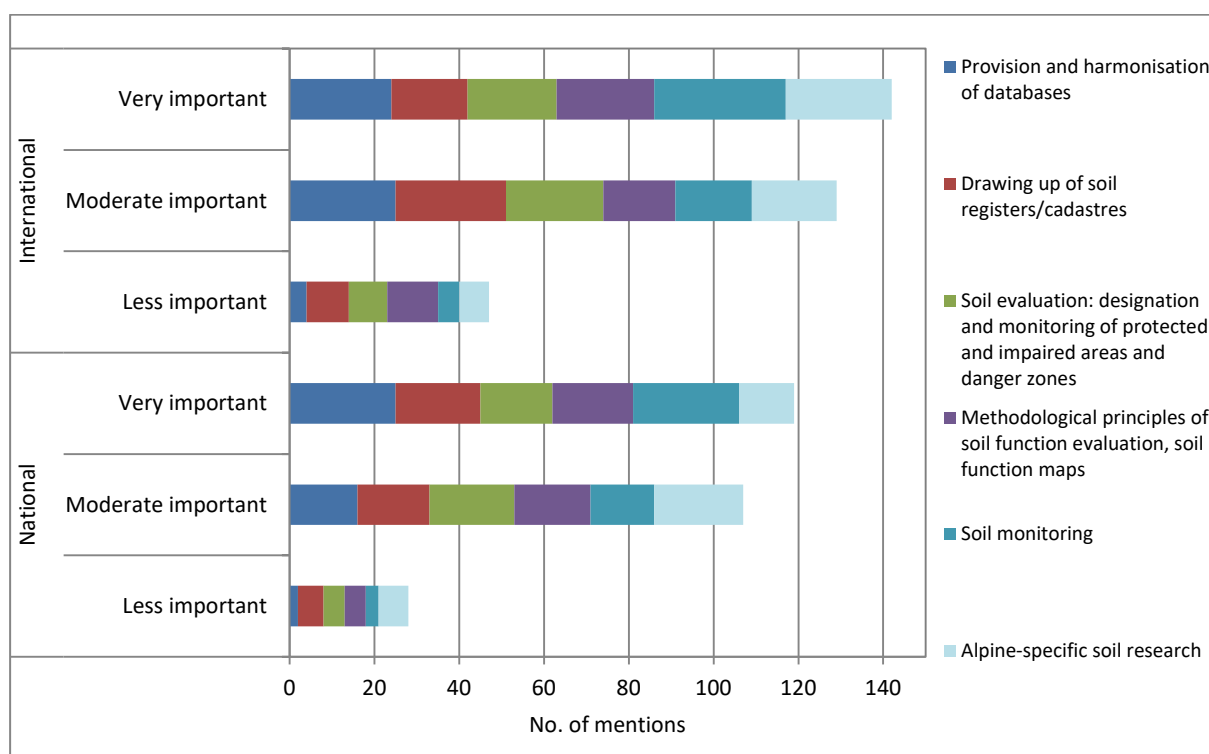
Importance per principle [No. of mentions]

	Provision and harmonisation of database	Drawing up of soil registers/ cadastres (mapping, map creation)	Soil evaluation: designation and monitoring of protected and impaired areas and danger zones	Methodological principles of soil function evaluation, soil function maps	Soil monitoring (qualitative soil protection, e.g. inputs of pollutants)	Alpine-specific soil research
Less important	2	6	5	5	3	7
Moderate important	16	17	20	18	16	21
Very important	25	20	17	19	25	13
<b>Total</b>	<b>43</b>	<b>43</b>	<b>42</b>	<b>42</b>	<b>44</b>	<b>41</b>

### International/Alpine-wide

Importance per principle [No. of mentions]

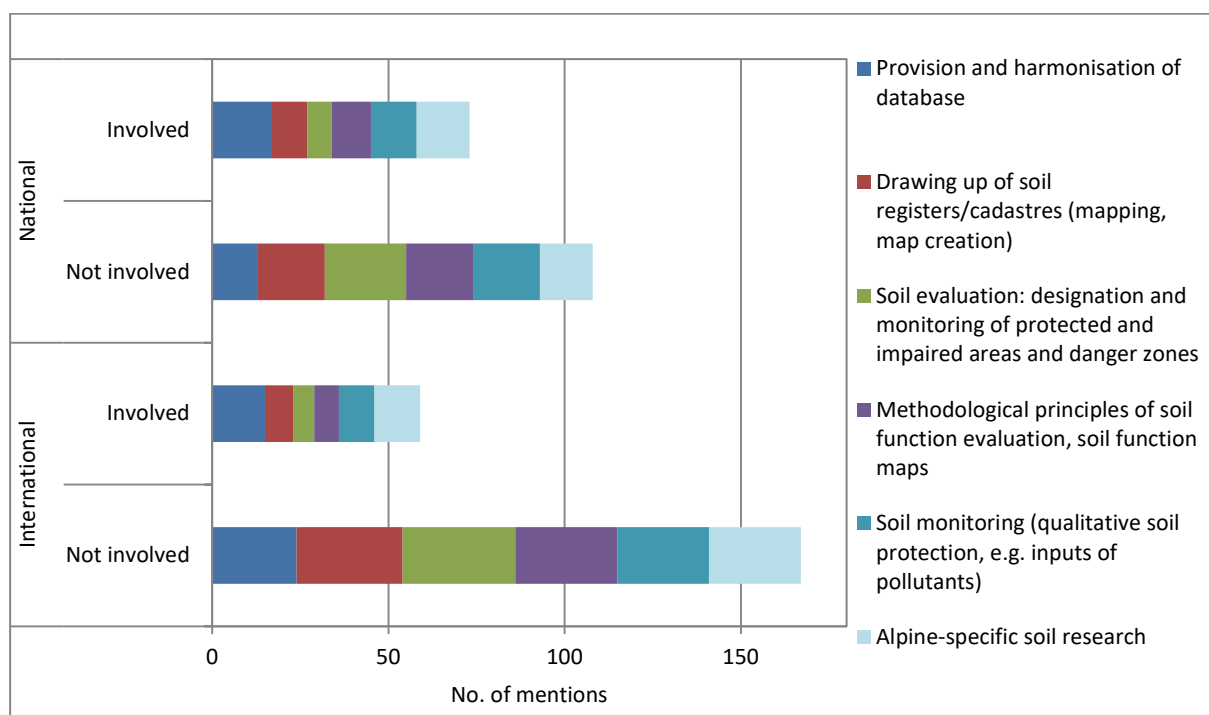
	Provision and harmonisation of database	Drawing up of soil registers/cadastrs (mapping, map creation)	Soil evaluation: designation and monitoring of protected and impaired areas and danger zones	Methodological principles of soil function evaluation, soil function maps	Soil monitoring (qualitative soil protection, e.g. inputs of pollutants)	Alpine-specific soil research
Less important	4	10	9	12	5	7
Moderate important	25	26	23	17	18	20
Very important	24	18	21	23	31	25
<b>Total</b>	<b>53</b>	<b>54</b>	<b>53</b>	<b>52</b>	<b>54</b>	<b>52</b>



**G8. In which of these principle activities of national and international/Alpine-wide cooperation are you involved? [multiple selection]**

**Involvement per activity [No. of mentions]**

		Provision and harmonisation of database	Drawing up of soil registers/cadastrés (mapping, map creation)	Soil evaluation: designation and monitoring of protected and impaired areas and danger zones	Methodological principles of soil function evaluation, soil function maps	Soil monitoring (qualitative soil protection, e.g. inputs of pollutants)	Alpine-specific soil research
National	Involved	17	10	7	11	13	15
	Not involved	13	19	23	19	19	15
International	Involved	15	8	6	7	10	13
	Not involved	24	30	32	29	26	26



## Section H: Part 3) Outlook

### H1. From your point of view, are there any current topics, which have not yet or only inappropriately been covered by the Soil Conservation Protocol? (*open question*)

*All statements are based on the original wording but were translated into English.*

- All topics of the Soil Protection Protocol, as it shows little effect so far
- Practical application of the desirable measures
- Atmospheric substance entries. Soil damage through "modern" agricultural practice (manuring ....)
- Limiting the sealing of soils
- Soil as the basis of biodiversity
- Soil biodiversity, natural hazards
- Soil protection as part of the biotope protection
- Limiting the enormous soil sealing
- It is necessary to correct and improve the soil damage that has been done.
- The topics in the Alpine Conservation Convention are treated very comprehensively, but the national implementation seems to be inadequate.
- Initial training: foresters are just beginning to be trained on the characteristics and challenges of soil protection. Agronomists are few. Hydraulic engineers not at all
- Harmonization and comparability of soil-related data
- Harmonization of norms, methods and interpretations
- I do not know the protocol. The question of how agricultural land is "played out" against forest land. In Switzerland, forest is completely protected and any compulsory new plant in the forest must be compensated by other land (clearing, for example), which is always done with agricultural land.
- Invasive alien species
- Yes, legal strengthening of soil protection! e.g. own approval procedures in the Soil Protection Act
- Careful handling of soil in the already questionable development of ski areas
- Permafrost
- Problem with permafrost due to climate change
- Quantitative soil protection, there are neither limits nor guideline values
- Spatial planning in connection with the SCP failed the aims of regional development; Problem of land speculation (for example by agriculture, second residences, etc.); Designation of commercial areas in almost every municipality; Labile areas
- Sanctions
- Protection of exploitation competitions in border areas (for example, retail trade, area designations, tourist projects ...). Here, common binding standards would be necessary.
- Suggestion to integrate the database system at transnational level and introduce a unified monitoring and evaluation system for soil protection in the EUSALP area
- Context Soil Protection and Climate Protection / Climate Adaptation

## H2. Which concrete measures/activities that support the implementation of the Soil Conservation Protocol and the Alpine soil protection would be additionally desirable? (If you haven't mentioned it before) (*open question*)

*All statements are based on the original wording but were translated into English.*

- Information that this protocol exists at all - exchanges of experience, especially for the level of municipalities, managers
- Increased information on the significance and impact of erosion in the Alpine region (condition and future scenarios); International research projects to promote visibility of the topic in science as well; Networking of different topic groups to develop greater assertiveness, such as land use change and potential melioration scenarios on erosion (adapted livestock and influence on erosion), material resources and erosion (peak phosphorus, peak potassium)
- General improvement and dissemination of awareness of the essential and existential meaning of soils and their functions for all life
- Establish equality of regulations across the Alpine region, raising awareness at regional, supra-regional and national level, SCP as a cross-cutting issue to the spatial planning protocol, etc., stricter legislation, strict legislation for mountain areas (such as tourist development), regulated spatial planning in the valleys; limitation of land use by agriculture loss of sensitive high mountain nature due to massive tourist interventions; stop of further developments, introduction of European Soil Protection Directive
- Better cooperation between national, regional and local administrations
- With regard to land saving, there has to be a reorientation of spatial planning in Austria. Area allocation is an instrument controlled by interest policy and must be an objective instrument of controlling meaningful settlement and spatial development.
- Awareness-raising in the field of law implementation of an Alpine-wide network for soil observation
- Bring the soil protection protocol to the attention of decision-makers
- Soil awareness needs to be strengthened urgently. The soil is not known, except as a building area. It must be published much more and should be worked on the soil as a natural object, already at school in the classroom.
- Clearer presentation of the legal relevance of the SCP at European level
- Increasing the efficiency of spatial planning; Restrictive handling of agricultural area corrections (including Z-method)
- Establishment of a common information platform for the exchange of experiences (see Bodenplattform in Austria)
- Put pressure on states, what else?
- Nationwide detailed soil mapping including potential for soil pollution
- Working spatial planning laws; Spatial planning competence no longer at the municipal level; Decoupling of politics and regional planning; Spatial planning not based on political decisions but on technical decisions
- Good public relations, like nature conservation
- Frequent symposia, manageable conferences
- I think that the SCP is far too little known and on this basis the implementation has to be improved.
- The protocol seems to be too generic and unclear. In order to implement it and to increase its effectiveness, it should be included in the national legislation. The protocol needs to be improved through the introduction of specific rules about land use, soil protection and restoration, with severe penalty for defaulter private and public entity.
- Implementation in the forestry law
- Information to politics and administrative levels, cooperation between alpine countries e.g. in the context of EUSALP
- Information on legal liability
- International networking of scientists and soil actors, public relations, lobbying with political decision-makers, demonstration of best practice examples, increasing legal compliance
- Concrete implementations of the soil protection protocol in national laws
- More concrete formulations in the soil protection protocol; Recognition of direct applicability at national level
- More concrete, more detailed formulation of the provisions
- Directing tourism and centralizing it to specific areas to relieve others and to actively promote soil conservation

- Measures, with which vacant building structures can be revalued (see current IHS study for Austrian hail insurance), e.g. vacancy rates, Building land mobilization through effective fiscal measures (→ Building land levy, infrastructure maintenance contributions ...), Awareness-raising (long-term)
- More awareness raising and public relations; Promote awareness among decision-makers, mainly in administration and politics
- More directly applicable regulations
- More actions
- Surveillance of the transport of soil - for control of invasive alien species, e.g. Fallopia japonica, Ambrosia; Active public education, e.g. free guided walks, voluntary removal campaigns
- More ecological agriculture - new promotion models for agriculture, reorientation of spatial planning
- Prevention of land take by building construction
- Legal harmonization (e.g. ratification by CH); Awareness-raising
- Legal liability and sanction mechanisms
- Raising awareness of the wider public on the Alpine Convention and in particular on the Soil Protection Protocol should be stepped up. It is especially important that awareness-raising is done in the national language.
- Harmonized mapping of land use
- Teaching the soil protection authorities, especially at the municipal level
- Instruction, further training on soil protection in the forestry sector (in the Bavarian mountain forests it is currently not worked, but "raged")
- Prohibitions, financial incentives, financial compensation, financial burdens
- Standardization and consolidation of the national legal protection of soil (national soil protection law, lacking provincial regulations for soil and area protection), specification of requirements and measures in the soil protection protocol, in particular for the protection of soil functions, and thus creation of more optimal links for the implementation of soil protection in planning processes EIA, SUP (Specifically in Austria, a substantial independent player with partly affiliation and high technical competence under the UVPG was excluded from the processes for assessment of soil protection in the EIA and can no longer influence) → Expansion of the collection and provision of soil quality data and data harmonization to provide ground-assessment basics (e.g. in Austria: BORIS Land Information System of the Federal and Provincial Federal States) >> Creation of area-wide soil function assessment maps and implementation in spatial planning as well as EIA >> Clear implementation of objectives and measures to limit land use in the Soil Protection Protocol of the Alpine Convention; Establishment of independent national networks for the exchange of knowledge between ground experts and players of related topics and for the coordination or development of strategies for soil and area protection as well as for the strengthening of the soil community (for example in Austria: Bodenforum Österreich [www.bodenforum.at](http://www.bodenforum.at)); Networking of transnational networks in the Alps through joint public relations such as events, or Internet platforms (for example Bodenplattform Österreich [www.bodeninfo.net](http://www.bodeninfo.net)); Increase in public relations, to communicate the objectives and significance as well as legal implementation obligations of the Soil Protection Protocol of the Alpine Convention to competent authorities
- Obligation to implement into national/regional legislation until a specified deadline
- The goal must be soil augmentation and soil improvement. Here, the "living soil" must receive the highest priority.
- First, reduction of the knowledge deficit; many affected persons know nothing of a soil protection protocol; Then try to benefit from the publicity of the Alpine Convention. In the future, the concrete implementation of individual measures will require a substantially increased reconciliation of information and knowledge between the individual Alpine states, as well as between the Federal Government and the states. And the Soil Protection Protocol has been European law since ratification by the EU (OJ 130/2006)!

**H3. In your point of view, how important are the following organisational levels for an effective implementation of the SCP? 1 = Not at all important 6 = Very important**

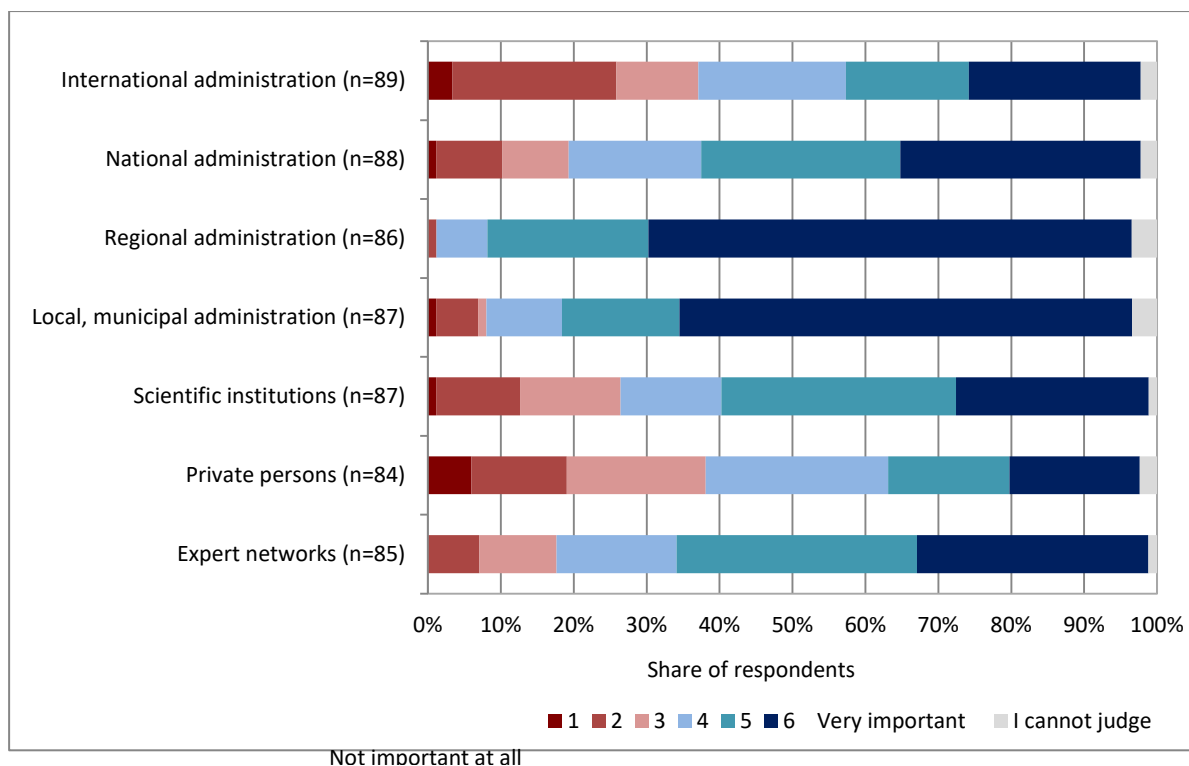
**Effectiveness of organisation levels [No. of respondents]**

	Importance							Total
	1	2	3	4	5	6	I cannot judge	
International administration	3	20	10	18	15	21	2	89
National administration	1	8	8	16	24	29	2	88
Regional administration	0	1	0	6	19	57	3	86
Local, municipal administration	1	5	1	9	14	54	3	87
Scientific institutions	1	10	12	12	28	23	1	87
Private persons	5	11	16	21	14	15	2	84
Expert networks (professional)	0	6	9	14	28	27	1	85

**Effectiveness of organisation levels [Share of respondents [%]]**

	Importance							I cannot judge
	1	2	3	4	5	6		
International administration	3,4	22,5	11,2	20,2	16,9	23,6	2,2	
National administration	1,1	9,1	9,1	18,2	27,3	33,0	2,3	
Regional administration	0,0	1,2	0,0	7,0	22,1	66,3	3,5	
Local, municipal administration	1,1	5,7	1,1	10,3	16,1	62,1	3,4	
Scientific institutions	1,1	11,5	13,8	13,8	32,2	26,4	1,1	
Private persons	6,0	13,1	19,0	25,0	16,7	17,9	2,4	
Expert networks (professional)	0,0	7,1	10,6	16,5	32,9	31,8	1,2	





#### H4. Is there anything else you would like to add/highlight in the framework of this survey? (open question)

All statements are based on the original wording but were translated into English.

- Improvement of acceptance of these topics from rural population especially from farmers, economics and mayors, start new education initiatives
- From my point of view, the interaction of all actors is important.
- Soil mapping must also be carried out in mountain areas so that the best soils are protected from exploitation by tourists. The pedogenesis of soils along forest edges (in the forest and in the adjoining agricultural land) is to be investigated more precisely: to what extent do humans interfere with pedogenesis through agricultural or silvicultural use?
- Land use takes place on site. Conservation is above all in the public interest, which may conflict with private interests. That is why competent and effective local administrators are important.
- Since the soil will never have a great lobby, it has to be integrated as part of a general value debate in the sense of transformation into a different society where cautiousness becomes a guiding idea. Otherwise, other aspects (especially economics) will always be decisive.
- The SCP is too unknown at the local municipal level but since the planning authority is within the municipalities, it is important to consider the SCP of the Alpine Convention at an early stage: educate and train mayors and district councils!
- The first step would be the ratification.
- At the moment, only measures are carried out which are profitable and successful in the short term. What is needed are the measures that provide the highest long-term benefits.
- The pedosphere is the so-called "critical zone", in which all influences and interactions, affect the processes of life with its diversity and quality. It is of paramount importance to understand and deal with these nonlinear dynamic processes. Until now the knowledge of these processes is socially and professionally far from sufficient to sustainably meet the protection of the soil.
- The distance to reality
- Effective implementation of the SCP for the Alpine States (except Switzerland) can only be achieved through the involvement of the administrations of the participating countries. Expert advice and support of administration level are indispensable to ensure the implementation of professional requirements.
- It should be noted that there are basically sufficient instruments for the protection of soils, which are also applied. Unfortunately, it exists a lack of control and implementation.

- No further experts are needed, but concrete implementation steps, and that is the responsibility of the administrations. Do other Alpine countries have no problem with the implementation?
- More involvement of local practitioners and people like landowners
- More directly applicable regulations would be desirable
- In my opinion, the levels become more important the more concrete, "local" they are. International and national guidelines are not taken into account in the actual "local" decision-making (from my experience), because sometimes too abstract. The biggest goal would be to motivate individuals and companies in their daily actions/attitudes to make space-saving actions (location selection, choice of transport mode, housing typology, etc.). How can this value change (!) be achieved? From personal conviction and certainly not by standards and guidelines "from above". The reality shows (unfortunately) that laws and regulations are too easily circumvented. An awareness of the problem has to be created and the (negative) contexts collectively understood and avoided.