

Conference Report

Alpine Soil Symposium

Soil Conservation Protocol of the Alpine Convention – between demand and reality

Amber Residenz Bavaria, Bad Reichenhall, Germany, 23-24 June 2016

**A project within the framework of
the German Presidency of the Alpine Convention 2015-2016**

German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
(BMUB) – Environmental Research Plan (UFOPLAN)

Project reference number: 3715 71 201 0

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Background and aim of the Alpine Soil Symposium

Background

In the context of the International Year of Soils 2015, the German Presidency of the Alpine Convention is supporting a review of the Soil Conservation Protocol. The project, entitled “Assessment of the Soil Conservation Protocol with regard to its implementation and effectiveness in the Alpine region”, is funded by the German Federal Environment Agency (UBA) within the framework of the Environmental Research Plan (UFOPLAN). The Alpine Soil Symposium is part of the UFOPLAN project.

The Alpine Soil Symposium took place within the framework of the German Presidency of the Alpine Convention (2015-2016) under the auspices of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and the Federal Environment Agency (UBA). It was organised and managed by the consortium responsible for implementing the UFOPLAN project:

- blue! advancing european projects GbR
- CIPRA Austria
- LAND-PLAN Büro für landschafts-ökologische Planung und Gutachten
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Aim

The Symposium aimed to identify and discuss Alps-wide requirements and the implementation status of the Soil Conservation Protocol together with experts from public authorities, researchers, NGOs

and private soil stakeholders. Alpine soil protection challenges were also discussed and recommendations for future joint activities for enhanced Alpine soil conservation and improved implementation of the Protocol were developed in four World-Cafés.



Group photo: Symposium participants in Bad Reichenhall

Source: blue! advancing european projects GbR
The Symposium on 23-24 June 2016 attracted around 50 participants, who discussed current Alpine soil conservation issues and developed recommendations for future activities in the World-Cafés.

The Alpine Convention and the Soil Conservation Protocol

The Alpine Convention, an international treaty for the protection of the Alps, entered into force in 1995. At the core of the implementation of this Convention are the eight Protocols. In addition to promoting a comprehensive policy for the protection of the Alps, the Convention supports sustainable development in the Alpine region.

The Soil Conservation Protocol (“the Protocol”) aims, among other things, to reduce quantitative and qualitative soil impairments, in particular by applying production processes which have a minimal detrimental impact on the soil, by using land economically, controlling erosion and restricting soil sealing. Bearing in mind the interests of resident populations, the Protocol aims to reconcile economic interests with ecological requirements. Given

that the Alps constitute one of the largest continuous natural areas in Europe and are characterised by great ecological diversity and by highly sensitive ecosystems and that soil formation and regeneration of impaired soils happen very slowly, a further objective is to minimise the input of harmful substances and safeguard the functionality of Alpine soils. The Soil Conservation Protocol therefore seeks common Alpine solutions to similar soil protection challenges and to elaborate common implementation measures.

Further information about the Alpine Convention, the Soil Conservation Protocol and the other protocols is available here: [Alpenkonvention](#)

Programme

The programme for the Alpine Soil Symposium consisted of two main elements: the presentations and discussions in plenary, and the four parallel World-Café sessions.

The welcome and introduction were given by Frank Glante (Head of Section, Soil State and Soil Monitoring, German Federal Environment Agency) and Wolf Guglhör (Member of Bad Reichenhall City Council, responsible for Environment/ Construction). Both speakers emphasised the importance of the Alpine Soil Symposium in giving the topic of Alpine soil protection and the Soil Conservation Protocol a stronger voice.



Photo: The Alpine Soil Symposium
Source: blue! advancing european projects GbR

The welcome was followed by presentations by Wolfger Mayrhofer (Legal Adviser,

Permanent Secretariat of the Alpine Convention) and Luca Montanarella (European Commission, Joint Research Centre – Land Resources Management Unit). Wolfger Mayrhofer provided a technical introduction to the Soil Conservation Protocol of the Alpine Convention and some of its provisions, such as Article 7 (Economical and prudent use of soils). He also explained the legal status of the Soil Conservation Protocol and outlined some of the current challenges facing the Alpine region, such as the increase in land take. Luca Montanarella's presentation dealt with the European dimension of soil conservation and included topics such as the lack of European soil protection legislation, the integration of soil conservation into a range of EU policies, and recent projects, e.g. the evaluation of soil protection aspects in certain programmes adopted by Member States.

Afterwards, representatives of the consortium responsible for implementing the UFOPLAN project – Marianne Badura and Nina Kuenzer (blue! advancing european projects), Gertraud Sutor (LAND-PLAN), Roland Kals (arp – alpen.raum.planung) and Sebastian Schmid (University of Innsbruck) – presented the initial results of the online survey on the implementation of the Soil Conservation Protocol.

During the Symposium, four parallel World-Cafés were held for all participants. The World-Cafés aimed to identify and discuss Alps-wide requirements and the implementation status of the Soil Conservation Protocol together with experts from public authorities, researchers, NGOs and private soil stakeholders. In addition, Alpine soil protection challenges were discussed and recommendations for future joint activities for enhanced Alpine soil protection and improved implementation of the Protocol were developed. Around nine participants attended each World-Café, focusing on the following four topics:

- World-Café 1: Quantitative soil protection,
- World-Café 2: Qualitative soil protection,
- World-Café 3: Alps-wide cooperation,

- World-Café 4: (Non-)application of the Soil Conservation Protocol and knowledge transfer.

Each World-Café session was facilitated by a moderator and a minutes-taker and began with a keynote by the moderator to introduce the topic to participants.

Further information about the programme and presentations is appended to this Conference Report (see website of UBA).

Reports from the World-Cafés

The main outcomes of each of the four World-Café sessions are summarised in a short report below.



Photo: World-Café outcomes
Source: blue! advancing european projects GbR

Short report on World-Café 1: Quantitative soil protection: New approaches in Bavarian land management – Alliance for land conservation

Moderator: Claus Hensold, Bavarian Environment Agency, Sustainability, Indicators and Intermedia Environmental Protection Unit

Minutes-taker: Dr Roland Kals, arp – alpen.raum.planung, Salzburg

Quantitative soil protection is well-established as a national policy objective in Germany. Since the start of the Millennium, annual new soil consumption has decreased

considerably, but it is still more than twice the rate set as the target for 2020.

The Roadmap to a Resource Efficient Europe states that by 2020, all EU policies should take into account their direct and indirect impact on land use; there should be no net land take over the longer term (by 2050).

In Bavaria, regulations on land-saving – particularly the prioritisation of infill development – are mainly to be found in the Federal Building Code and the Bavarian State Development Programme. However, there are gaps in enforcement, notably as regards trade-offs in area development planning; monitoring of compliance with regulations is also inadequate.

Bavaria's Sustainable Development Strategy aims to substantially reduce land take; its long-term goal is a whole life-cycle approach to land use with no further land take.

The Soil Conservation Protocol of the Alpine Convention states, in Article 7, that in the drawing up of plans and/or programmes, matters regarding soil conservation, especially the economical use of soil and land, must be taken into consideration, with a specific commitment, in this context, to space-saving construction and an economical use of soil resources, to keeping the development of human settlements within existing boundaries and to limiting settlement growth outside these boundaries.

The core issues to be discussed are:

- Are appropriate legislation and regulations in place?
- Are the rules being implemented effectively?
- Is any support provided by the public authorities (advice, resources, pilot projects)?
- How much influence does the Alpine Convention have in limiting land take?
- Where is there a need for improvement?

Key statements/situation in various Alpine regions, based on the World-Café outcomes:

Land take/soil consumption

General points:

In general, awareness of the issue of soil is confined to the economic dimension, with less attention focused on other aspects. The compulsion to achieve “prosperity through growth” is a key driver of land take. Another

is the construction boom triggered by high demand for real estate and low interest rates on loans. "Virtual land use" (caused by the global trade in goods) is not currently included in land take statistics.

There is a general lack of public awareness of the function of soil as the essential basis for human existence and the provision of ecosystem services. Soil functions are not considered to an adequate extent, or at all, in planning processes.

Building and planning law is generally a local government responsibility. This downward shift of responsibility has an adverse impact in terms of land take.

Agriculture: There is large-scale land take for newbuilds, with privileged status for construction outside existing settlement boundaries.

Recycling of disused sites tends to work primarily when real estate prices are high.

Germany:

Germany's Federal Soil Protection Act gives priority to remediation. Most land take involves the conversion of agricultural land. Use of existing legal instruments is inadequate; the legislation has more to offer but its enforcement potential is not being utilised to the full.

In some cases, the Soil Conservation Protocol has been cited as an argument against the expansion of ski runs (e.g. Riedberger Horn/Allgäu).

Slovenia:

Slovenian planning law is too "soft". Urban sprawl is particularly difficult to control.

Austria:

There is a high level of land take and soil consumption. The main driver is the rise in the (monetary) value of land associated with land take. Austrian law is inadequate to deal with the problem of soil consumption. A softening of legal frameworks can also be observed. Weak regional planning encourages competitive disputes over local sites for industrial development, resulting in soil consumption.

Agricultural land is being lost at a dramatic rate, e.g. in the Inn Valley (Inntal) in Tyrol. Despite substantial price rises, land is not yet sufficiently expensive, with the result that

space is being wasted, one example being the construction of open-air parking lots.

Planning and evaluation methods

One fundamental question is still unresolved: what does "soil consumption" mean? Does it mean sealing and/or changes in use/degradation of soil resources? How should it be defined?

The deliberative process is heavily dependent on the quality of planning documents.

Surveying of land take, soil consumption and land use changes is possible in principle with the aid of modern remote sensing technologies but there are ongoing difficulties with classification. Terrestrial calibration will continue to be required.

Germany and Switzerland have well-established land statistics, but comparability over time is difficult as survey categories have changed.

Slovenia's Environmental Report contains some statistical data on soil consumption for the first time.

A number of basic evaluation problems have not been fully resolved: what is high-value soil (e.g. tension between high-yield farmland and ecologically valuable dry meadows)?

Reaching an overall assessment is very difficult as anthropogenic utilisation functions also fall within the scope of the Soil Protection Act.

There is insufficient linkage between quantitative soil consumption and qualitative aspects. There is a difference between the use of degraded soil, on the one hand, and consumption of soil types that are rare or almost impossible to restore, on the other.

When land is sealed, what happens to the soil that is removed? Where is it deposited? To what extent is it used for (planned) landscape design?

A Bavarian pilot project on soil quality rating did not produce sufficient differentiation for the purpose of area development planning on settlement perimeters.

Compensation for land take

Monitoring of compensation obligations is problematical in some cases due to gaps in

local authorities' reporting of land take/soil consumption.

As regards this specific point, it is not possible to draw more general conclusions that are applicable to the Alps as a whole as different approaches are pursued in the various countries.

Desired activities and recommendations based on the World-Café outcomes:

Awareness-raising:

- Increase lobbying for soils, publicise best practice, deploy charismatic personalities (e.g. local politicians who take a long-term view) as multipliers.
- Develop educational tools to raise awareness (e.g. a consequential costs calculator for local governments).

Planning principles:

- Produce a single Alps-wide definition of "good soil" (soil functions, soil life, rarity, restorability).
- Carry out Alps-wide monitoring of soil consumption based on uniform criteria; in particular, back up consumption data with qualitative aspects (soil quality rating); ascertain which indicators/data layers can be incorporated from EU land monitoring.
- Produce soil function maps to cover the entire Alpine region, modelled on those available in Upper Austria or Salzburg.
- Develop soil function maps for planning purposes, to cover the entire Alpine region, based on a pragmatic approach. The maps should be easy to use and should prioritise the soil's ecosystem services.
- Draw up registers of dumped waste soil as a reserve for future recultivation programmes.

Governance and planning:

- Improve communication between public authorities, e.g. via the Spatial Planning Platform in the Alpine Convention framework.
- Work towards a single minimum standard for national legislation on soil conservation.

- Enforce the legislation on soil conservation and land-saving more rigorously; develop clear procedures for subordinate authorities.
- Reform agricultural support and link it to long-term management commitments.
- Align state-level, regional and area development planning to the following primary objectives:
 - Dense and compact construction, prioritising infill development,
 - Stringent protection of (high-quality) agricultural land,
 - More intensive cooperation across local authorities (e.g. on the siting of industry).
 - Land use management to identify and make use of potential for infill development (vacant plots, infill sites, densification, land recycling),
 - Consistent rerouting of new construction towards sites with low soil functions,
 - Obligation to pay compensation for soil consumption, based on forest legislation.
- Significant increase in the costs of soil consumption through:
 - Introduction of a soil consumption tax (= penalty for destroying soil functions),
 - Abolition of (mileage-based) commuter tax allowance,
 - Introduction of land use allowances, modelled on emissions trading.

Short report on World-Café 2: Qualitative soil protection – Soil functions and ecosystem services – experiences from the *Land of Salzburg* and *Land of Upper Austria*

Moderators: Renate Leitinger, Department of Environmental Protection, *Land of Upper Austria*, and Georg Juritsch, *Land of Salzburg*, Head of Unit, Agriculture, Soil Protection and Mountain Pasture

Minutes-taker: Dr Gertraud Sutor, LAND-PLAN, Ebersberg

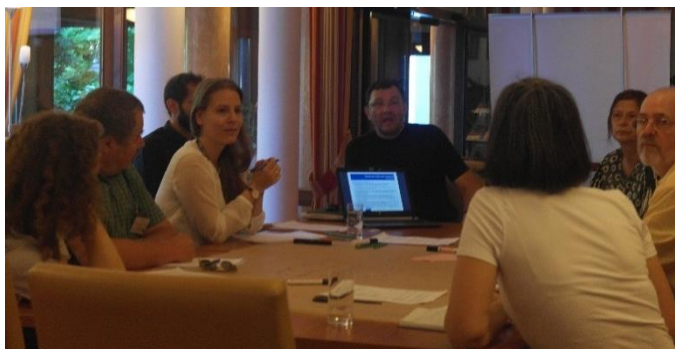


Photo: World-Café participants
Source: blue! advancing european projects GbR

NB: During this session, the term “qualitative soil protection” was defined as preventive soil protection in the narrow sense, with a focus on risk prevention (soil compaction, erosion) and soil functions. Aspects of qualitative soil protection relating to contamination (e.g. heavy metals, organic pollutants) were only discussed peripherally.

The discussion was structured using a guidance document and focused on the following eight topics:

- (1) Information on qualitative soil protection,
- (2) Definitions of good practice,
- (3) Working bases,
- (4) Steps towards comprehensive assessment of soil functions,
- (5) Legal and administrative measures,
- (6) Further measures within the meaning of Article 18 of the Protocol,
- (7) Scope to integrate the results into local planning,
- (8) Role of existing networks.

The main inputs from participants concerned the following:

- (1) Information on qualitative soil protection:

Datasets are available as the basis for assessing soil functions, but their use in member states varies considerably, with little integration into planning to date. There are gaps in relation to Alpine and forest soils. In addition to the existing methods, other specialist approaches were mentioned (e.g. surveying earthworm populations in soils).

- (2) Definition of good practice:

In general, mountain farming in the Alps is struggling with the maintenance of management regimes; there are some negative examples. However, it very much depends on the region: there are many positive examples in the forestry sector.

- (5) Legal and administrative measures:
The measures identified in the Protocol are not being applied, other than in relation to impaired soils.

- (8) Role of existing networks:
The networks are seen as extremely important and should continue to be expanded.

Desired activities / recommendations/ ongoing issues according to the World-Café outcomes:

- (1) Information on qualitative soil protection:

- Soil rating is desirable across all areas and should be carried out as far as possible according to uniform criteria to a 1:25,000 or more detailed scale (in Bavaria, a soil map is available for the entire state);
- Mapping of forests and mountain pastures (alms) is necessary (data on woodlands and forest are not currently made available to the public);
- Toolkits for incorporating the rating into planning processes are needed;
- Targets and measures should be defined more clearly in the Protocol.

- (2) Definitions of good practice:

- There needs to be a professional debate about grazing management issues;
- Examples of best practice should be compiled to promote shared learning.

- (5) Legal and administrative measures:

- More detailed provisions should be included in the Protocol, e.g. definition of the specific measures needed to achieve the general goals;
- Options are: to clarify the details at member state level, with overarching transnational coordination, OR
- To view the Protocol and its targets purely as a guideline for action at

domestic level, with details to be clarified on the basis of other national legislation.

(8) Role of existing networks:

- Support existing networks' efforts to increase the visibility of their soil-related activities.

Short report on World-Café 3: Alps-wide Cooperation – The Interreg VB Alpine Space soil project “Links4Soils” – common activities for the Alps

Moderator: Dr Borut Vrščaj, Agricultural Institute of Slovenia, Department for Agroecology and Natural Resources, Ljubljana

Minutes-taker: Nina Kuenzer, blue! advancing european projects GbR, Munich

The keynote by Dr Borut Vrščaj focused on the potential Interreg VB Alpine Space soil project “Links4Soils” and possible joint activities for enhanced Alps-wide soil protection. The aims of the potential project include soil stakeholder networking and improved use of existing soil knowledge in the Alpine region, better local soil management and associated implementation of the Soil Conservation Protocol, and improved transfer of knowledge of soil conservation and awareness of current problems in the Alps through the sharing of best practice and capacity building at regional and local level. Desired project outcomes include an Alps-wide multi-stakeholder soil conservation partnership (the Alpine Soil Management Partnership), an advisory service on good practice in soil conservation management, and an Alps-wide soil conservation web platform as an awareness-raising tool. The purpose of the World-Café and the project presentation was to ascertain whether the project approach, in the view of the participants, addressed the most important topics for Alps-wide cooperation under the Soil Conservation Protocol (specifically Articles 5, 20, 21 and 22) and to identify which additional challenges exist and require action in future.

Desired activities and recommendations based on the World-Café outcomes:

- Better knowledge transfer at Alps-wide level: The lack of knowledge about soil stakeholders, soil conservation activities and challenges facing other Alpine countries is a general problem. The question is: “Who is doing what in the Alpine region?”
- Network of soil stakeholders in the Alpine region as a viable future forum: Establishment of an Alps-wide soil conservation forum, involving stakeholders from the national to the local level and soil conservation experts (e.g. academics) to improve knowledge-sharing. This Alpine soil conservation network should, over the long term, lead to the establishment of a formal working body, e.g. with a mandate from a member state or as an Alpine Convention working group. This would ensure that it does not become a “personal” network but includes all regions on a formal basis.
- More intensive work on qualitative soil protection/spatial planning/land consumption at Alpine level: For example, linkage with the Alpine Convention's Spatial Planning Working Group or cooperation with EUSALP Action Group 6.
- An Alps-wide website, featuring soil conservation activities, topics, stakeholders and information about best practice should be set up as a knowledge-sharing tool and remain in place for the long term.
- Targeted knowledge transfer and awareness-raising at the local level: Information and workshops for the local level and mayors, focusing on best practice in soil management (e.g. forestry, agriculture, spatial planning) and Alps-wide dialogue. The lack of awareness at the local level about Alps-wide soil protection and about the Soil Conservation Protocol of the Alpine Convention is identified as an area where action is needed.
- Involvement and networking of existing soil protection stakeholders, forums and projects: For example, more intensive involvement of the European Land and Soil Alliance (ELSA), the People 4 Soil project or INSPIRATION, soil associations,

ministries, environment agencies, etc. to avoid duplication of structures and create synergies.

- More intensive dialogue on Alps-wide soil conservation problems is needed: The following were identified as key Alps-wide soil conservation topics requiring further dialogue: land consumption, integration into spatial planning, data availability and harmonisation, agriculture, forestry, climate change, erosion.
- Utilisation of the ecosystem services concept in order to make the fragmented topic of Alpine soil conservation more accessible for implementing organisations at the local/regional level.

Short report on World Café 4: (Non-) application of the Soil Conservation Protocol and knowledge transfer – The (non-)application of the Soil Conservation Protocol by the Land of Styria and regional/spatial planning

Moderator: Dr Liliane Pistotnig, Land of Styria, Department 13 – Environment and Regional Planning

Minutes-taker: Christian Steiner, Land of Lower Austria, Head of Rural Development Department

The keynote by Dr Liliane Pistotnig was based on the Styrian Government's guidance document entitled "The Alpine Convention in Regional/Spatial Planning", which comprises three sections: the basics, environmental objectives and guidance on completing the checklist, and the checklist itself (completion of which is mandatory for local authorities). The principle which applies in the Austrian state (*Land*) of Styria is that spatial planning rules are not there to be debated – they are there to be applied!

The core message: The Alpine Convention can support possible refusals; to date, however, there have been no cases in which a negative assessment was made solely on the basis of the Alpine Convention. It is important to note one major difference between Austrian and German law: in

Austria, the Alpine Convention is, in part, directly applicable (see also BMLFUW Manual on Implementing the Alpine Convention, by Dr Ewald Galle), whereas in Germany, its provisions must be transposed into relevant national law.

As local government is responsible for planning, the municipalities have a high level of autonomy; as a result, all the various factors are weighed up, e.g. floodplains, slide zones, etc. against economic arguments.

Main conclusions/situation in various Alpine regions based on the World-Café outcomes:

Land of Salzburg: Provisions on impaired soils (Article 14 of the Protocol) are applied during the assessment of ski runs and may constitute grounds for refusal.

Land of Tyrol: The Protocol is not currently an issue in regional spatial planning as every project is treated as a local intervention and is assessed individually on its merits. The authorities do not produce aggregate figures and therefore cannot identify any aggregate effects. Nonetheless, the Soil Conservation Protocol is a good – and in some cases the only – basis for technical assessment by experts (NB: Tyrol does not have its own soil protection law).

Bavaria: The Soil Conservation Protocol has rarely been an issue (e.g. Riedberger Horn: divergent assessments made at the administration/political level); rural counties deal with soil protection issues (but lack staff and expertise) in parallel to agriculture/forestry, nature conservation and water resources management.

UBA Germany: Bases for assessment of agricultural soils are currently inadequate; compensation measures mainly take place at *Land* level.

Slovenia: Current lack of cross-linkage across environmental affairs, agriculture and spatial planning. In contacts with the national and especially the regional level, the local language should be used in every case in order to reach the implementing authorities (primarily the municipalities) and awaken their interest.

Switzerland: The Alpine Convention is not on the political agenda. Switzerland has not ratified the Soil Conservation Protocol.

Summing up: The Alpine Convention is a “Sleeping Beauty”!

Desired activities and recommendations based on the World-Café outcomes:

- Reporting should be based on agreed key indicators, which should be recognised and applied by all Alpine countries in order to ensure comparability and improve commitment/compliance.
- Regular surveys using the indicators (qualitative and quantitative) should be carried out in order to provide evidence of cumulative/aggregate effects and ensure that the one-off assessments generally conducted hitherto do not conflict with the general principles of the Alpine Convention/its protocols.
- Appoint a soil coordinator at state (*Land*) level, tasked with “target group- and consumer-appropriate communication” (positive versus negative reporting) and liaison between all sectors and target groups.
- Improve the technical bases, e.g. use of soil function maps across all areas.
- Strengthen networks for awareness-raising and sharing of experience, e.g. through the accession of cities and municipalities to the European Land and Soil Alliance (ELSA).
- Make the Alpine Convention work: send a clear message that the Alpine Convention’s control mechanisms are effective.
- Strengthen the cross-linkage between the Alpine Convention and EUSALP Action Group 6; on soil issues, utilise the capacities of the subgroup on spatial planning and soil protection, which is now being set up.
- References to the Alpine Convention should certainly be included in legislation (NB: cross-linkages between EU rules and national legislation are mentioned but not the Alpine Convention).
- More intensive information work: Public awareness of the Alpine Convention and specifically the Soil Conservation Protocol is inadequate and weak in comparison to nature conservation. The importance of soil conservation should therefore be communicated more effectively with reference to examples (e.g. soil function

maps, provision of soil information, best practice) and linkage with nature conservation, spatial planning, water resources management, agriculture and forestry should be highlighted.

- Introduction of an Alpine Soil Partnership: In the context of the International Year of Soils 2015, the FAO set up the Global Soil Partnership (GSP), which is now being developed through regional arrangements such as the European Soil Partnership. In order to facilitate action by the Alpine states, especially at regional level, an ASP (in the sense of a coalition of the willing) should be considered. The need to integrate/link in with the Sustainable Development Goals (SDGs) should also be borne in mind.

Overall conclusions and outlook

In order to strengthen soil protection in the Alps, a transboundary forum is required: this was one of the main conclusions drawn at the Symposium. Soil experts from various public authorities and countries within the scope of the Alpine Convention and representatives of the [European Commission](#) and the German Federal Environment Agency (UBA) are calling for a continuous and structured dialogue on soil conservation. The Permanent Secretariat of the Alpine Convention and the current German Presidency, hosted by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), should look at possible formats for this dialogue.

The Symposium, which took place in Bad Reichenhall on 23-24 June 2016, looked at how soil policy in the Alps has changed as a result of the implementation of the Soil Conservation Protocol. In the opinion of many Symposium participants, the Soil Conservation Protocol of the Alpine Convention has generally proved its worth. However, the Protocol only has direct legal effect in one country – Austria. In other countries, such as Germany, the main frame of reference is the Soil Protection Act or spatial planning law. However, recent

developments show that the Soil Conservation Protocol can indeed be applied if relevant provisions are set out in federal or *Land* law; the protection zones in the Alpine Plan (*Alpenplan*) in Bavaria, which regulates infrastructural and tourism development, are one example.

However, the participants also drew attention to major gaps in knowledge of the content of the Protocol and its integration into administrative practice. There are particular problems with Articles 20 and 21, which concern the establishment of harmonised databases and coordination of monitoring. There was also an urgent call for regular dialogue with all soil conservation stakeholders in order to share best practice and benefit from the experience gained by other experts and countries, for example. It is also important to raise awareness of soil conservation in the Alps among all stakeholder groups. This may be a matter for the soil protection forum called for by participants.



Photo: Alpine Soil Symposium

Source: blue! advancing european projects GbR

Due to [climate change](#), with more frequent heavy rainfall events, and more intensive [land use](#), also at higher altitudes, Alpine soils are increasingly under stress. For that reason, the current German Presidency of the Alpine Convention (2015-2016) has made the further implementation of the Soil Conservation Protocol one of its main objectives. In autumn last year, the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety ([BMUB](#)) and the Federal Environment Agency ([UBA](#)) therefore commissioned a study to review current progress on the

implementation of the Soil Conservation Protocol and recommend actions to improve soil protection. Among other things, the study sought to identify changes in the signatory states' soil conservation policy that may be attributable to implementation of the Protocol; it also considered whether the signatory states have adequate legislation in place to protect soil in general and implement the Protocol in particular. The study's initial findings on progress in implementing the Protocol in specific thematic areas – quantitative soil protection; soil functions and erosion; quantitative soil protection and land-saving; and international cooperation – are now available and were discussed at the Symposium. Due to the participation of large numbers of experts from various public authorities, researchers, NGOs and private soil stakeholders in the survey and Symposium, valuable insights were gained into day-to-day soil conservation practices.

It was apparent, for example, that soil functions of relevance to [climate protection](#) are not considered in soil conservation at present, and that the definition and interpretation of agricultural use of fen soils and wetlands vary considerably.