

Alpine forests seen from a multi-disciplinary perspective



Documentation Joint Workshop EUSALP Action Groups 2, 6, 7, 9

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Contents

Rationale of the workshop.....	3
Workshop proceeding	4
Documentation of the discussion tables	5
Discussion table 1: Determining factors for the sustainable use of wood in the Alpine economy (focus sector: construction)	5
Discussion questions	5
Notes from the discussion	5
Discussion table 2: Multifunctionality of forests in the face of climate change.....	9
Discussion questions	9
Notes from the discussion	9
Discussion table 3: Green infrastructure, forests and urban life styles in the Alps: An opportunity for climate change adaptation?	13
Discussion questions	13
Notes from the discussion	13
Discussion table 4: Governance - Initiating a macro-regional cross-sectorial cooperation ..	16
Discussion questions	16
Notes from the discussion	16

Rationale of the workshop

This document summarizes the outputs of the cross-sectoral workshop “Alpine forests seen from a multidisciplinary perspective” that was organized during the 2nd EUSALP Annual Forum 2018 on 21.11.2018 in Innsbruck. The workshop is based on the initiative of EUSALP Action Groups 7 and 9 and was realized in close collaboration with EUSALP Action Groups 2 and 6.

The workshop was built on the rationale that EU macro-strategies address common societal and territorial challenges that only can be resolved through transnational and cross-sectoral cooperation by enhancing mutual understanding of complex policies and by developing and implementing macro-regional governance frameworks to address these challenges.

Forests are the green lungs of our planet. At the same time, our native forests are a habitat of numerous creatures, an environment of rich biodiversity, a place of recreation for humans and a storage for large amounts of CO₂ in soils and biomass. Especially in steep alpine terrain, forests have an important protective function against mudflows and avalanches. Local timber is an important natural resource for construction materials for buildings, energy supply and woodcrafts, supporting the economic sector with a rich tradition and promising future while contributing to CO₂ reduction through substitution, short transport routes, and product storage. Without any doubt, the Alpine forest is a multi-talent that provides a very broad quantity of services. Due to its manifold importance for nature and man, the forest is at the core of several scientific disciplines and policy areas.

Based on the work programs of the EUSALP Action Groups 2, 6, 7 and 9, all related to the topic of forests in the Alpine region, the workshop focused on the multi-functionality of the Alpine forests and timber sector. Advisory experts from various disciplines, research and collaboration projects provided inputs on current developments in the forest and wood sector in the EUSALP area. The aim of the workshop was to strengthen the synergies between the work programs of the single Action Groups and to identify interrelations and potential conflicts of interest in different policy fields.

Workshop proceeding

The workshop consisted of three parts: Pitching – discussion tables – wrap-up. At the beginning of the workshop, each Action Group gave an elevator pitch to inform the participants about activities and ongoing projects in the field of timber and forests. The pitching tackled the following topics:

- Elevator pitch Action Group 2: “Improving the use of local wood: an asset for economy and ecological transition in the Alpine region

Magalie Santamaria, Regional Council Auvergne-Rhône Alpes

- Elevator pitch Action Group 6: “The sustainable cascadic use of forest resources”

Christian Hoffmann, Institute for Regional Development, Eurac Research

- Elevator pitch Action Group 7: “Timber and more: From forest functions to green infrastructure”

Jörg Ewald, University of Applied Sciences, Weihenstephan-Triesdorf

- Elevator pitch Action Group 9: “Sustainable construction and wood”

Ulrich Santa, Energy Agency South Tyrol-CasaClima

The presentations of the elevator pitches are available online at: <https://www.alpine-region.eu/events/eusalp-annual-forum-workshop-alpine-forests-seen-multi-disciplinary-perspective>

After the pitching session, four cross-sectorial discussion tables were organized to discuss specific topics relevant for the Alpine timber/forest sector. The tables focused on the following four issues:

- Discussion table 1: Determining factors for the sustainable use of wood in the Alpine economy (focus sector: construction)
- Discussion table 2: Multifunctionality of forests in the face of climate change
- Discussion table 3: Green Infrastructure, forests and urban life styles in the Alps: An opportunity for climate change adaptation?
- Discussion table 4: Governance - “Initiating a macro-regional cross-sectorial cooperation”

The outcomes of the discussions were presented in a final plenary wrap-up session.

Documentation of the discussion tables

Discussion table 1: Determining factors for the sustainable use of wood in the Alpine economy (focus sector: construction)

Moderator: Boris Klečina, Ministry of Economic Affairs, Labour and Housing Baden-Württemberg

Discussion questions

- 1) In which way does sustainable construction contribute to climate protection?
- 2) What are the existing barriers and incentives impeding or allowing local wood supply chain to match wood timber demand?
- 3) What are the most effective means to allow local alpine wood to fully exploit its potential in the building supply chain?
- 4) Which strategies for supporting sustainable woody biomass resources and the sustainable use of forests in the Alps are you aware of?

Notes from the discussion

1) In which way does sustainable construction contribute to climate protection?

- **Substitution effect**: Sustainable construction material from renewable sources which has a low energy demand in production (such as wood) can substitute unsustainable construction material from non-renewable sources with high energy demands in production (such as concrete, bricks, steel).
- **Carbon storage**: Wood stores carbon dioxide by taking it out of the atmosphere for the photosynthetic process. Its carbon storage properties depend on the longevity and durability of wood when used as a construction material, since the carbon dioxide is released back into the atmosphere when the wood is eventually used as fuel again.

- High potential for circular economy: Reusability of wood as a construction material depending on its durability and how well the aspect of future deconstruction is taken into account at the planning stage.
- Communication, visibility: Wood, when used as a construction material, is a visible testament to efforts in climate protection; wooden buildings can be seen and felt. As such, they communicate and promote an effective means of climate protection by simply existing.
- Material savings: Timber (particularly CLT, GLT) can reach the same constructive properties such as thermal insulation with less material used, e.g. with slimmer walls.
- Less demanding production steps: The process of turning wood into workable timber construction elements *can* take less energy, space, infrastructure, and produce less emissions.
- Short value chains: The process of turning wood into workable timber construction elements *can* be undertaken locally, saving on emissions.

Some of these arguments are not so much inherent properties of wood as a construction material that contributes to climate protection, but *prerequisites* so that wood can serve in that way. Timber can contribute greatly to climate protection if e.g. longevity, durability, reusability, and local production are taken into account.

2) What are the existing barriers and incentives impeding or allowing local wood supply chain to match wood timber demand?

Barriers:

- The construction sector in the Alpine region has long-established workflows and conditions which, in the case of wood, still rely on imports of processed elements.
- Even when local wood is set to be used, a lack of processing plants in the vicinity generally turns out to be a bottleneck, partly due to a small/stagnant workforce in the wood processing industry.
- Transport generally is and presumably will remain cheap enough to economically favor imports over local production.
- Public demand for locally produced wood exists, but there are currently no widely accepted labels yet; several are in development.

Incentives:

- Incentives (i.e. from the public authorities), with some exceptions, do not exist.
- Incentives through a change of procurement rules would be a good avenue, but are currently not implemented.

As a summary, while imported timber will remain an attractive competitor in the foreseeable future, there is a real demand for locally produced wood which needs to be met with expanding the wood processing sector, implementing widely recognized labels, and implementing an incentive structure with public funding.

3) What are the most effective means to allow local alpine wood to fully exploit its potential in the building supply chain?

- Raising awareness of wood as a viable construction material with the general public, companies, and public authorities.
- Stimulation of demand
- Policy implementation
 - o Adaptation of procurement rules to incentivize wood as a construction material
 - o Publically funded campaigns for the use of wood as a construction material, but also vocational training in the wood sector
 - o Funding programs, e.g. for public buildings

The focus point in the discussion was not the allocation of public funding, but the raising of awareness, as most architects and engineers, but also public bodies (e.g. local authorities and councils) and the general public still have outdated reservations regarding the use of wood as a construction material, e.g. in terms of fire protection or maintenance.

4) Which strategies for supporting sustainable woody biomass resources and the sustainable use of forests in the Alps are you aware of?

- EUSALP context: CaSCo, CirculAlps
- UNESCO context: BioSphere



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- potential future INTERREG project, current working title “AlpWood”

In urgent need of a research/development focus and funding are

- an exploration of ways to lower the emissions for the use of woody biomass for energy and heating, and
- a cross-sectorial approach uniting the energy and construction aspects of wood.

Prepared by Boris Klečina, Ministry of Economic Affairs, Labour and Housing Baden-Württemberg

EUSALP - EU Strategy for the Alpine Region

80 million people, 7 countries, 48 regions, mountains and plains
addressing together common challenges and opportunities



Discussion table 2: Multifunctionality of forests in the face of climate change

Moderator: Tina Trampuš, Slovenian Institute for Nature Conservation

Discussion questions

- 1) Which new challenges to forests functions arise from climate change and urbanization?
- 2) Are people aware of the multifunctionality of forests and do they accept multifunctional sustainable management by forest owners and foresters?
- 3) Which tools and resources do forest owners and managers need to maintain multiple ecosystem services?
- 4) The “Forest of the future” – how could it look like?

Notes from the discussion

The discussion was based on the previously prepared questions (see above). Since the issues are interconnected and participants also stressed out other various challenges regarding forest functions and management, the discussion did not stick to the questions but the issues were covered and ideas brought up. Basic points from the discussion and some specific interesting issues that were brought up, were for this report clustered to three main topics.

Awareness about multifunctionality of forests

- People (in general) do not know much about the forest functions. The focus is mostly on personal interests (e.g. someone who is interested in biking is aware that bike trails are existing within a forest so the recreational function /ES is provided). This is especially true for citizens living in urban areas.
- Most people take forest and its' functions for granted. There is also no awareness about the measures and needs for management.

- Most people perceive the forest as a stable (not-changing) ecosystem/environment. They are not aware of the changes and the management that is applied and requested for maintaining stable forest stands.
- Dramatic changes are already happening. Everybody can see them.

Suggestions:

- Forest owners and institutional representatives of the forest and timber-industry sector need to be included in the dialogue and decision process.
- We need more teaching - education in basic programs, as well as raising awareness of general public.
- Projects in cities (e.g. planting of trees/urban forests) should be used for raising awareness about the forest functions.
- Rising awareness about forest functions could be combined with the promotion of jobs opportunities.
- We should rise awareness about dramatic changes in the forest ecosystem that are present or are predicted for the future.

Management issues and value of the forest

- There are different conflicts regarding the use of forests, e.g. in France it happened few times that a biker was shot by a hunter. There is no zoning of uses or efficient spatial/time regulation.
- In Austria, the law says that a forest owner is responsible for the accident if the biker is injured while cycling in his forest. This encourages land owners to protest against trans-passing. There are some examples of measures when the land owner has a contract with the tourist board where it is clearly stated that an insurance of the tourist agency takes over responsibility. (In some cases, land owners gain some income from compensation payments due to the touristic use of their forest, or they even build forest roads which can be used for both purposes: forest management and mountain-biking).
- Forest owners are obliged by law to manage the forests so it can provide multiple functions. The idea of introducing subsidies for recreational function/use was brought up but was also mentioned that this could change the system also in the negative way (e.g. rising expectation of the land

owners in the sense that they would expect to get extra payments for the task that was previously perceived as part of the regular management).

- It is obvious that leisure & recreation is a very important function of Alpine forest, meaning that it probably gains much higher economic value than the revenues that come from timber production. It is an indirect income (for the economy of the region), not really visible at first sight.

Suggestions:

- Management of forests should be planned taking into account many different functions and uses. Zoning or other spatial planning measures (and other measures, e.g. time regulations or restrictions regarding hunting or recreational use) should be used, to avoid conflict and also to reduce the negative impact on the ecosystem.
- The role of forest managers (land owners) should be promoted and made clear that the efficient (sustainable/close to nature) management assures the provisions of many ecosystem services.

Challenges for the future

- Climate change is not a future matter – it is happening now: example of the nature disaster in the Belluno region, October 2018, where many millions of trees were cut down by the strong winds.
- The forest sector suffers from a lack of human resources. Already present, but could accelerate in the future. More forest managers and jobs that relate to timber production/ processing will be needed. Young people are not attracted to the jobs that are difficult (hard labor) and also have higher safety risks.
- More pressure on mountain forest is expected in the future, because of urbanization or other trends, e.g. people moving to the mountains due to rising temperatures and other climate changes.
- Pressures to the forests arise from different directions (biotic and a-biotic effects), e.g. pests, invasive species, natural hazards, deforestation and clear cutting due to the higher needs of the agricultural land, inefficient re-forestation due to large deer population etc.

- Forests are an important habitat for many animal and plant species and will stay that also in the future. Climate changes are predicted to have negative but on the contrary also positive impact on wildlife.

Suggestions:

- There is a need for more focus on education and systematical promotion of educational programs for foresters, forest and timber managers and forest workers in the future.
- Cross-sectoral solutions are needed to address different issue that relate to multiple forest functions and land use (e.g. housing, agriculture, flood/soil protection ...)
- Managements of the wildlife should be carefully planned taking into account effects of climate change, natural disasters (including predictions), changes in (national) hunting policies etc.
- Due to climate change we should put more focus on the state and planning of forest management on the level of the Alpine region. We should have a clearer vision on what are the needs regarding forests in the whole region.
- Wildlife management will be an important issue due to climate changes and as it is expected that the human presence in mountain areas might increase so management in the sense of sharing the environment with wildlife is needed.

Prepared by Tina Trampuš, EUSALP Action Group 7

Discussion table 3: Green infrastructure, forests and urban life styles in the Alps: An opportunity for climate change adaptation?

Moderator: Albuin Neuner, Agriculture and Forestry Department Tyrol

Discussion questions

- 1) What are the interrelations between metropolises and forests? Are there more synergies and partnerships or more conflicts and distrust?
- 2) Can the concept of “green infrastructure” benefit from concepts/trends of/in other disciplines such as building architecture and landscape architecture (e.g. vertical greening systems, sustainable city concepts)? What could be opportunities and challenges to connect these concepts?
- 3) What are the concrete benefits of green infrastructure as a climate change adaption measure?

Notes from the discussion

Interrelations between metropolises and forests

The participants of the discussion table distinguished between two types of forests. On the one hand, there are remote forests detached from urban areas and on the other hand there are forests close to big cities. Inside the EUSALP, both types can be found. The differentiation between these two types of forests is relevant since the local vicinity to urban centres comes with challenges that are less persistent in remote forest areas. The following challenges were outlined during the workshop:

- As a general trend, the use of the forests as a space for recreation by multiple groups is on the rise since several years. Young people use forests near to urban areas as a meeting point, as well as bikers and hikers. Amongst these user groups, conflicts of interests/use

may arise esp. between hikers and bikers using the same trails. The use of e-bikes, in particular, has led to a veritable boom in the forests, which in turn has led to an impediment to regulated forest management. In order to enable cooperation, steering measures are necessary. Banning of these user-groups is not effective. It is necessary to pick up the visitors emotionally and to win them over for the needs of the forests and especially for the preservation of social benefits of the forest for the entire community.

Possible approaches to tackle the challenges that arise from the multiple use of forests: These conflicts can be solved by intelligent forest management and by multiple zoning of the forests for the different user groups.

- One approach discussed was to highlight each person's personal role in issues of climate change and the need to protect the forest and to respect set limits.
- The multifunctionality of forests appear to be neglected in public discourse and participants of the discussion table lined out that a strengthening of the multiple ecosystem services in the public needs to be strengthened. The awareness for the importance of the functions of forests as carbon capturing and climate protection systems and its water retention mechanisms needs to be strengthened.
- Possible approach to tackle challenge:
 - a) demarcating of protected areas
 - b) offer more outdoor education opportunities to raise awareness in the population
 - c) campaigning to raise awareness of political decision-makers and population about the multifunctionality of forests
 - d) Multipliers in local communities: especially when it comes to steering measures in the recreation area multipliers play an important role. Only different interests groups take up the issue of multi-functionality, steering measures get accepted in the local community.



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This approach has proven successful esp. in cases of forest restricted areas near to urban centres.

e)

Prepared by Albuin Neuner Agriculture and Forestry Department, Tyrol and Maren Meyer, Energy Agency South Tyrol-CasaClima, EUSALP Action Group 9

Discussion table 4: Governance - Initiating a macro-regional cross-sectorial cooperation

Moderators: Michaela Künzl, Bavarian Ministry of the Environment and Consumer Protection; Maren Meyer, Energy Agency South Tyrol-CasaClima

Discussion questions

- 1) Taking into account the 4 elevator pitches and the EUSALP Action Plan (considering activities, indicators and objectives), where do you see potential for synergies between the activities and interests of the Action Groups?
- 2) What are the common societal or territorial challenges that all the Action Groups aim to tackle in the sector of “wood and forests”?
- 3) Which activities could be envisaged in the future in order to strengthen synergies in these policy fields to create benefits for the work of your Action Group?
- 4) Which other actors and processes could be taken into the “EUSALP boat”?

Notes from the discussion

Detecting synergies between the Action Groups’ projects and studies

- EUSALP AG members, representatives and experts found that in the field of “wood and forests” there are several topical overlappings between the work foci of the Action Groups that offer a good potential for collaboration and synergies:
 - o Energy efficient and sustainable construction methods (with local timber): AG2+AG9
 - o Multifunctionality of forests are relevant for all the present AG2-AG6-AG7-AG9 and also for AG8 that was not represented in the workshop

- Several project findings and studies initiated by the single AGs are of interest for deepened exchange between the Action Groups:
 - o ARPAF project Triple Wood: initiated by AG2
 - o ASP project CirculAlps: initiated by AG2 and AG6
 - o CasCo project: supported by AG2; esp. of interest: policy paper on low carbon timber
 - o Studies on “Key performance indicators for buildings” and “Grey energy assessment in construction/ Alpine construction materials” conducted by EUSALP AG9

Added value of enhanced horizontal cooperation of the AGs

- Integrated/cross-sectoral policy approaches appear to have great potential in the field of “Alpine timber/forests” because of the multifunctionality of forests and the holistic approach of sustainable development, in general.
- Cooperation between the AGs can help to better foresee contrasting interests between the different policy fields; several experts acknowledged that local timber in the Alps is a precious resource with an increasing request in different sectors which may pressure a sustainable use in the future
- Support is needed to establish truly short economic chains in the timber economy based on sustainable criteria. Several barriers have to be overcome in this context:
 - o Local labels exist in the Alpine area that intend to promote local wood, however, there is a lack of acceptance and scepticism in the regional economies are being noted by experts
 - o More awareness in the population is needed as far as concerns local and sustainable timber in the Alps

Establishing modes and tools for effective cooperation between the Action Groups

- Representatives of the Action Groups pronounced the interest in deepening horizontal exchange and in defining together how/on which grounds this cooperation could be established. A two-step

procedure was proposed to further develop a concept for horizontal collaboration in the EUSALP governance system:

- Step 1 (from 2019 onwards) Building of a core-group, composed of AG members from AG2-6-7-9 that define together future activities and that foster the exchange between the AGs
- Step 2 (2020+): Setting-up of a cross-sectorial advising experts group that gathers latest information about “Alpine forests/timber” sector such as overcoming obstacles in the sustainable use/management of the resource “forest/timber”
- The expert group would be transdisciplinary

Stakeholders to be involved in the step-2-process (list unexhaustive)

- Decision-makers in the EUSALP
- EUSALP Action Groups
- Experts and ongoing research and collaboration projects
- Forest owners

Prepared by Maren Meyer, Energy Agency South Tyrol-CasaClima, EUSALP Action Group 9