

European Wilderness Journal

Impressions of a Forest Excursion to Romania
Between virgin forest wilderness, rural idyll and forest destruction

By Prof. Dr. Hans Dieter Knapp

**SPECIAL
EDITION**



Let's get Wild!



Impressions of a Forest Excursion to Romania

Dear Friends of the wild!

Prof Knapp shared with us this devastating report about forestry practices in Romania and we immediately wanted to publish this report in order to make it available to our supporters and wilderness advocates. In Europe, there is still this belief that deforestation is something that only happens in the Amazon or Canada. This report in addition to others, published by the Environmental Investigation Agency and the Organized Crime and Corruption Reporting Project, clearly shows that the destruction of old growth forest is also a massive problem in Europe, especially in countries but not limited to them such as Romania, Ukraine, Poland, Slovakia, Croatia and Slovenia.

There are estimations that in the last 10 years more than 120,000 ha of old-growth forests have been lost forever. This is especially frustrating, since this situation seriously undermines all biodiversity conservation efforts by the European Union and their efforts to reverse climate change. Old growth forests are of great importance because often they correspond with the last wilderness areas in Europe. Once roads for the logging trucks and harvesters (what a name!) have been cut through the forest, any effort to protect the associated wilderness is seriously in peril.

Please help us to stop deforestation and the destruction of our last old growth forests in Europe.

Welcome to the European Wilderness Society!



Max A E Rossberg, MMS

Let's get Wild!

Prof. Dr. Hans Dieter Knapp

Prof. Dr. Hans Dieter Knapp is a geo-botanist and landscape ecologist. He was born on his still beloved island Rügen in 1950. He started with his first studies of biology at University of Greifswald, where he accepted almost 30 years later an Honorary Professor in 2006 at the Institute for Landscape Ecology and Nature Conservation of Greifswald University.



As a scientific officer he gained experience in plant geography, vegetation science as well as landscape history at University Halle where he also did his Ph. D. (Dr. rer. nat.).

As a curator of the Müritzer Museum an expedition took him first time to Mongolia, later followed by expeditions to Russia, the Caucasian region and Iran where he gained deep insight into international nature conservation.

In 1990 he developed the East German national park programme, which includes five national parks, six biosphere reserves, three nature parks for the Ministry of Environment and also prepared the International Academy for Nature Conservation Isle of Vilm.

In 1994, he became the Head of the Department Isle of Vilm of the German Federal Agency for Nature Conservation and he was responsible for the sections Biological Diversity, Marine and Coastal Conservation as well as the International Academy for Nature Conservation with a 50 people strong team while he was also holding the Chair of the City Council of Putbus.

Until 2009 he was a member of the scientific advisory board of WWF Germany. He also is a member in the NABU curatorium and of the EURONATUR advisory board. He is also a vice-chair of the Michael Succow foundation for protection of nature, member of EUROPARC Federation, WCPA and president of INSULA RUGIA e.V. And he is a patron of the Nature Film Festival Neustrelitz.

In 2015 he finished his professional career in the Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety in Berlin, and lived up his former activities in the peace and environment movement.

He officially retired in 2016. For his work he received several international acknowledgements and awards such as the Correns Medal of the Biological Society (1982), Kaus Award (1991), European Conservation Award in Germany (coll., 1991), European Conservation Award (coll., 1992), Fellowship of the German Marshall Fund (1992), Ridder of the Golden Ark (1993), Fred M. Packard International Parks Merit Award of IUCN (1997), Altan Gadas of the President of Mongolia (2011), Grosser Binding-Preis für Natur- und Umweltschutz (2013)

With his extensive experience, vast professional network, profound background and exceptional expertise he is now involved in several international projects concerning wilderness, beech forests and old growth forests.



Fig. 1: Forest wilderness, virgin forest of Sinca (all pictures by Hans D. Knapp)



Fig. 2: Rural idyll, Viscri in Transsilvania



Fig. 3: Forest destruction, clear cuts in Fagaras Mountains, Arpasu Valley



Fig. 4: Location of the visited sites. 1 – Sinca forest, 2 – Piatra Craiului National Park, 3 – Viscri forest, 4 – Arpasu Valley in Fagaras Mountains, 5 – Mt. Sureanu, 6 – Mt. Cindrel, 7 Sadu Valley, 8 – Olt Valley, 9 – Cozia National Park

1. Background

Romania has the largest stock of beech forest in Europe. It contributes the largest part of the nomination of European Beech forests to the World Heritage List. This nomination is an extension of UNESCO's Primeval Beech Forests of the Carpathians and Ancient Beech Forests of Germany.

Once they are destroyed, their natural processes are forever interrupted, not only impacting the local nature but also climate change worldwide. There is urgency in solidifying protection for these forests in Romania due to the increasing reports of forest destruction and illegal logging which has raised concerns about the remaining virgin forests of the Romanian Carpathians. There meetings and calls for a stop to such activities have been published during the last years which seems to have improved the situation. In addition NGOs have taken legal action to put an end to this unacceptable situation. Old growth forests are often the remaining patches of wilderness in Europe.

Due to this critical situation, I decided to visit few places in the Carpathians and in Transylvania to see for myself what is happening with the old growth forests of Romania. The excursions to Sinca forest, Piatra

Craiului and Viscri forest were organized by Dietmar Gross and Prof. Dr. Rainer Luick. Further participants from Germany were Sabine Korn-Luick, Hermann Graf Hatzfeldt and Dr. Lutz Fähser. In these three forest sites (1-3) we met several Romanian colleagues from administrations and NGOs.

I was grateful for the opportunity to visit these places and to discuss various topics with my colleagues. I am fascinated by great virgin and quasi virgin forests that are landscapes of high integrity as well as by idyllic cultural landscapes in rural areas. However, I am very concerned about the extensive exploitation of timber. My personal impressions of the visited sites shall be documented by pictures and commentary.

I would personally like to thank the European Wilderness Society for their support to publish this report and thus make it available to a larger audience. I would also like to thank EURONATUR for their support. Maybe we can change something after all.

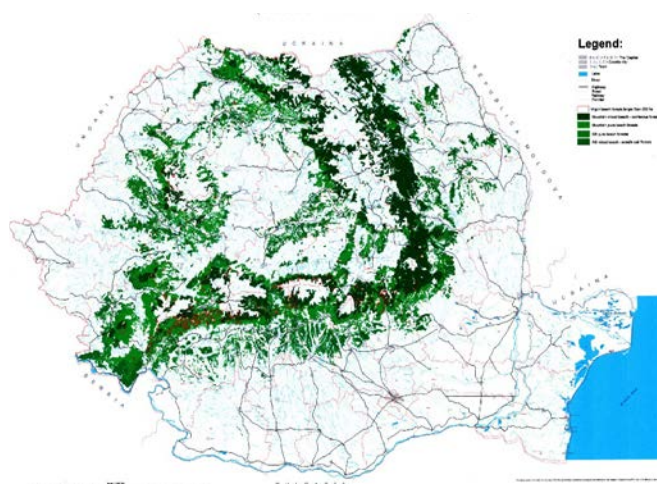


Fig. 5: Distribution of Beech forests (green) and Virgin Beech forests (red) in Romania. Badea & Biris (2012), Annex 50.

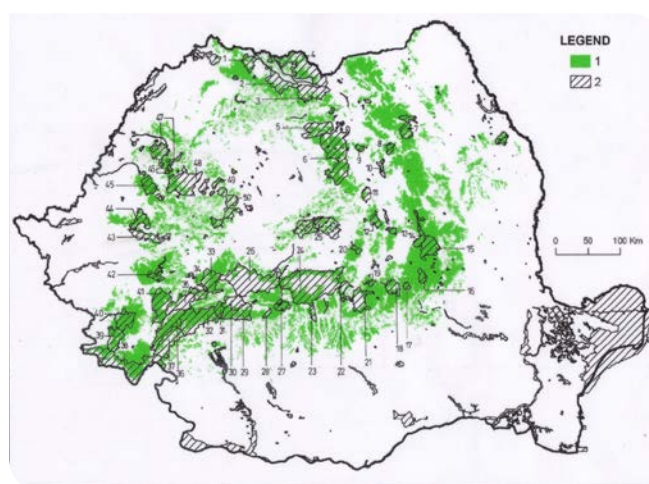


Fig. 6: Distribution of Beech forests and NATURA 2000 in Romania. Stoiculescu (2007), p. 61

2. Observations

2.1 Sinca forest

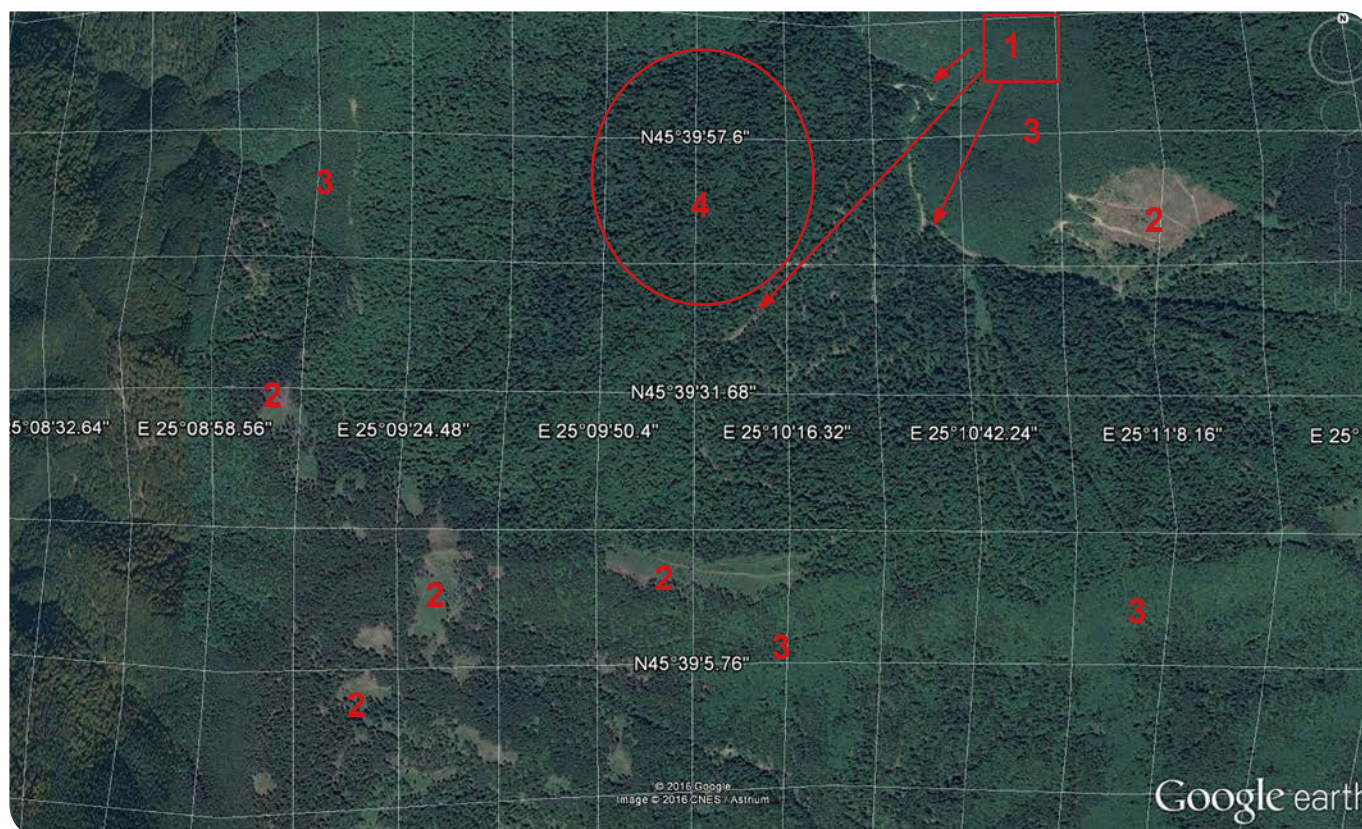


Fig. 7: Satellite image of Sinca forest (all satellite images by Google earth) Large closed forest area (17,000 ha) in the Eastern part of the Site of Community Interest (SCI) Muntii Fagaras (NATURA 2000).

The municipality owned forest was planned for felling. WWF identified the stock 2008 as virgin forest and stopped the felling plan in cooperation with the responsible forest administration. A stock of 338.24 ha is nominated to the World Heritage List as component part of the Romanian contribution to the extension nomination 2016. The buffer zone of has a size of 445.76 ha.

The virgin forest and the buffer zone are surrounded by managed forests. The satellite image shows forest roads (1), few clearcuttings (2) and young stocks after clearcutting (3) close to the remaining virgin forest (4).

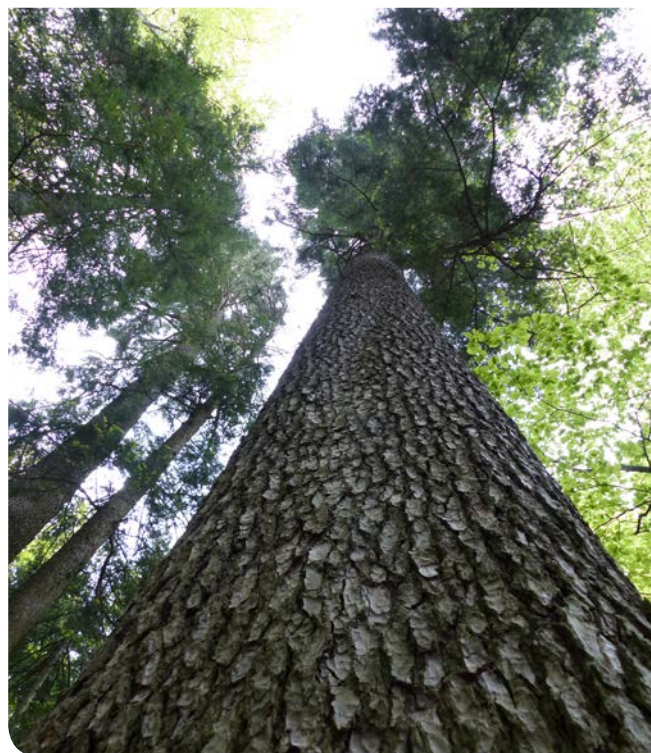


Fig. 8 a-c: The Sinca virgin forest is a mountain mixed forest of beech and fir with trees of huge dimensions in 900-1,300m a.s.l. The oldest *Fagus sylvatica* trees are 480 years, the highest beech is 58m, the highest fir 62,5m, the largest diameter of fir 1,45m.



Fig. 9a-f: Sinca virgin forest. A fascinating mountain forest stock of high integrity, diverse structures with all stages of regeneration cycle and all age classes of both tree species. High productivity and high volume of biomass, total 1,588 m³/ha (27% of that is deadwood).



Fig. 10: Sinca forest. The high value as virgin forest was not known in the forest administration. Forest road construction is the beginning of the end of virgin forests. Fellings from winter/spring 2016 and roads very close to the nominated virgin forest stock.

The protection status is unclear, but forests are located in the NATURA 2000 Fagaras Mountains. The trees of managed beech forests have to log with 110 years in three steps within 10 -15 years in shelter-wood system, according to the valid forestry.

2.2 Piatra Craiului National Park

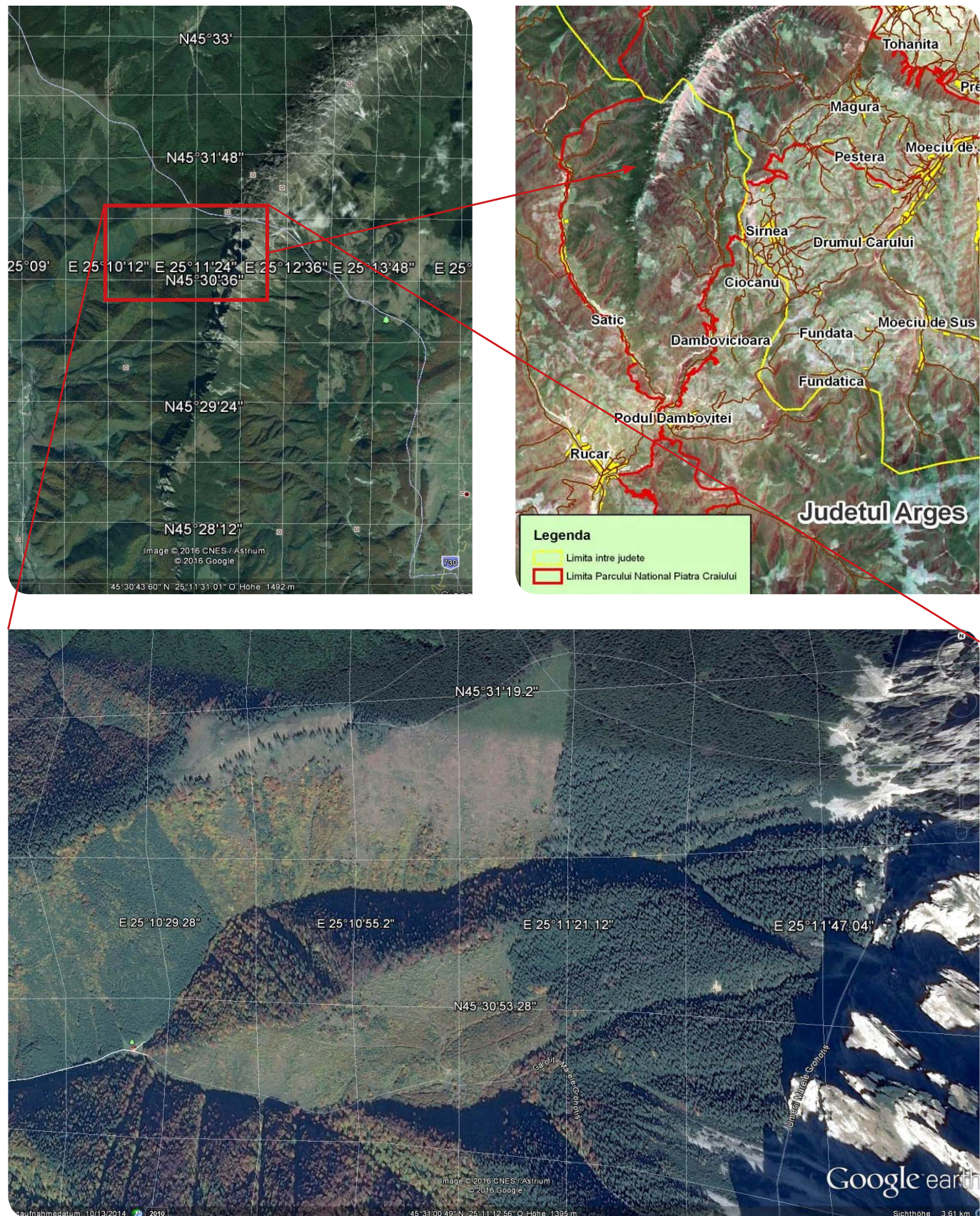


Fig. 11a-c: The Piatra Craiului National Park was designated 1990, it covers 14,800ha. The rocky alpine ridge is 25 km long, the highest peak is 2,238 m. The satellite image shows large clearcuttings within the national park. Source of the map (<http://pcrai.ro/images/harta03.jpg>).



Fig. 12a-b: Piatra Craiului National Park. a) Ridge of Piatra Craiului from West. In the middle ground old-growth mountain mixed forest (*Fagus* and *Abies*). In the foreground left planted spruce (*Picea abies*) after final felling of shelter-wood system, spontaneous pioneer stage of *Betula pendula* and *Salix caprea*. – b) View to West (Jezeri Mountains) from the same place. Right side remaining old-growth forest (*Abies* and *Fagus*), in the foreground pioneer stage of *Betula* and *Salix* in spruce plantation after final felling.



Fig. 13a-f: Remaining old-growth, mountain mixed forests at the northern slope of secondary ridge. 2,400 ha of the National Park are owned by the Foundation Conservation Carpathia (<http://www.carpathia.org/en/>) now, and without any interventions in succession to wilderness.



Fig. 14a-f: a) The old-growth forests at the Southern slope of secondary ridge within the National Park were logged in 2,000 by the forest administration against the vote of the national park administration. The deforested slope was planted with spruce. Now it is in succession with *Betula pendula*, *Salix caprea*, *Sorbus aucuparia*. – b-f) The mountain slopes between Piatra Craiului and Jezeri Mountains are deforested in large parts. The Foundation Conservation Carpathia bought 17,000ha including degraded forests and initiated a project for forest and soil regeneration in that area.

2.3 Viscri forest

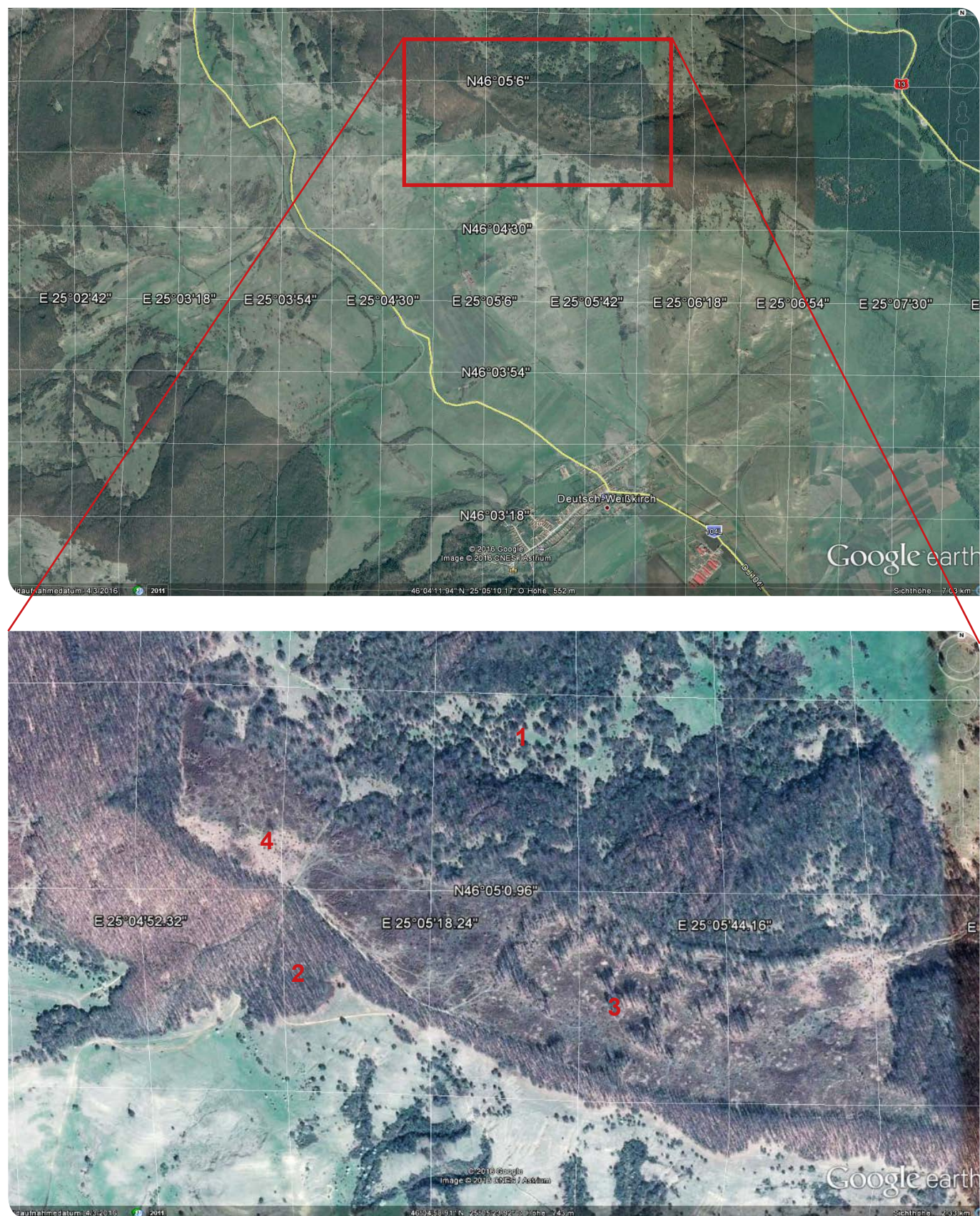


Fig. 15a-b: Cultural landscape North of Viscri in Transylvania. The hills are covered by mixed deciduous forests (oak, hornbeam, lime, beech). The image shows traditional pasture woodland (1), 120 years old oak forest (2), second phase of femel system (group-selection system) (3), final phase of femel system (4).



Fig. 16a-f: a-d) Traditional pasture woodland in complex with continental grassland of high biological diversity. – e-f) 120 years old mixed oak wood with *Quercus robur*, *Carpinus betulus*, *Fagus sylvatica*, *Acer campestre*, owned by the municipality, ready for felmel system.



Fig. 17a-f: Viscri municipality forest. Final stage of femel system. Oak forests are managed in age of 120 years by femel system. Within 10-15 years all old trees were felled. The result is like a clearcutting. The timber is mainly used as fuel.

2.4 Arpasu Valley in Fagaras Mountains



Fig. 18a-b: Northern slope of the Fagaras Mountains (NATURA 2000), South of Arpasu de Sus (1) and Victoria (3) at the border between Sibiu and Brasov districts (2). (4) Arpasu Mare (stream), (5) visited area, (6) secondary ridge Muchia Tarata with Vf. Boldanu, 1679m.



Fig. 19a-f: a-b) View in the upper valley of Arpasu Mare stream to the main ridge of Fagaras Mountains. Old-growth mixed mountain forest of beech, fir and spruce; c-e) Clearcuttings of spruce forests at Vf. Boldanu, and shelter-wood system in old-growth beech forests; f) clearcuttings at Eastern slope of Bunchioaia.



Fig. 20a-g: a-c) Forest road in the Arpasu Mare valley, destroyed by timber transport; d-g) timber transport roads across old-growth beech-fir-forest, partly up to 5m deep and 5m broad, erosion of soil approximately up to 10,000 m³/km.



Fig. 21a-f: Images of forest destruction, timber transportation roads and clearcuttings in old-growth beech (fir) forests and spruce forests. – The Fagaras Mountains including the mountain forests are Site of Community Interest (SCI, NATURA 2000).

2.5 Mt. Sureanu

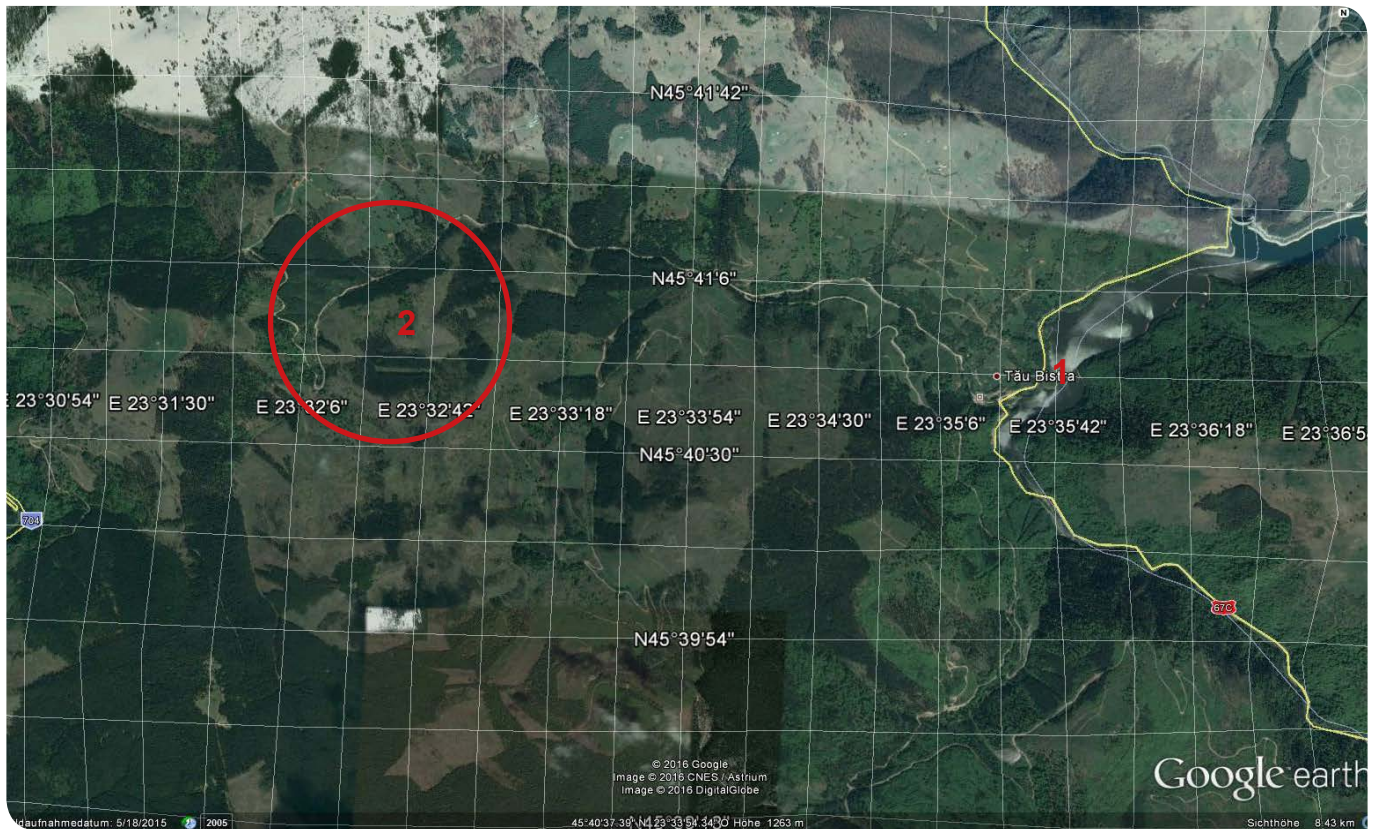


Fig. 22: Muntii Sureanu SW of Sugag, W of Lake Tau (1), the yellow line is the Transalpina road. Large parts of the area are deforested (grey). (2) The inspected area.

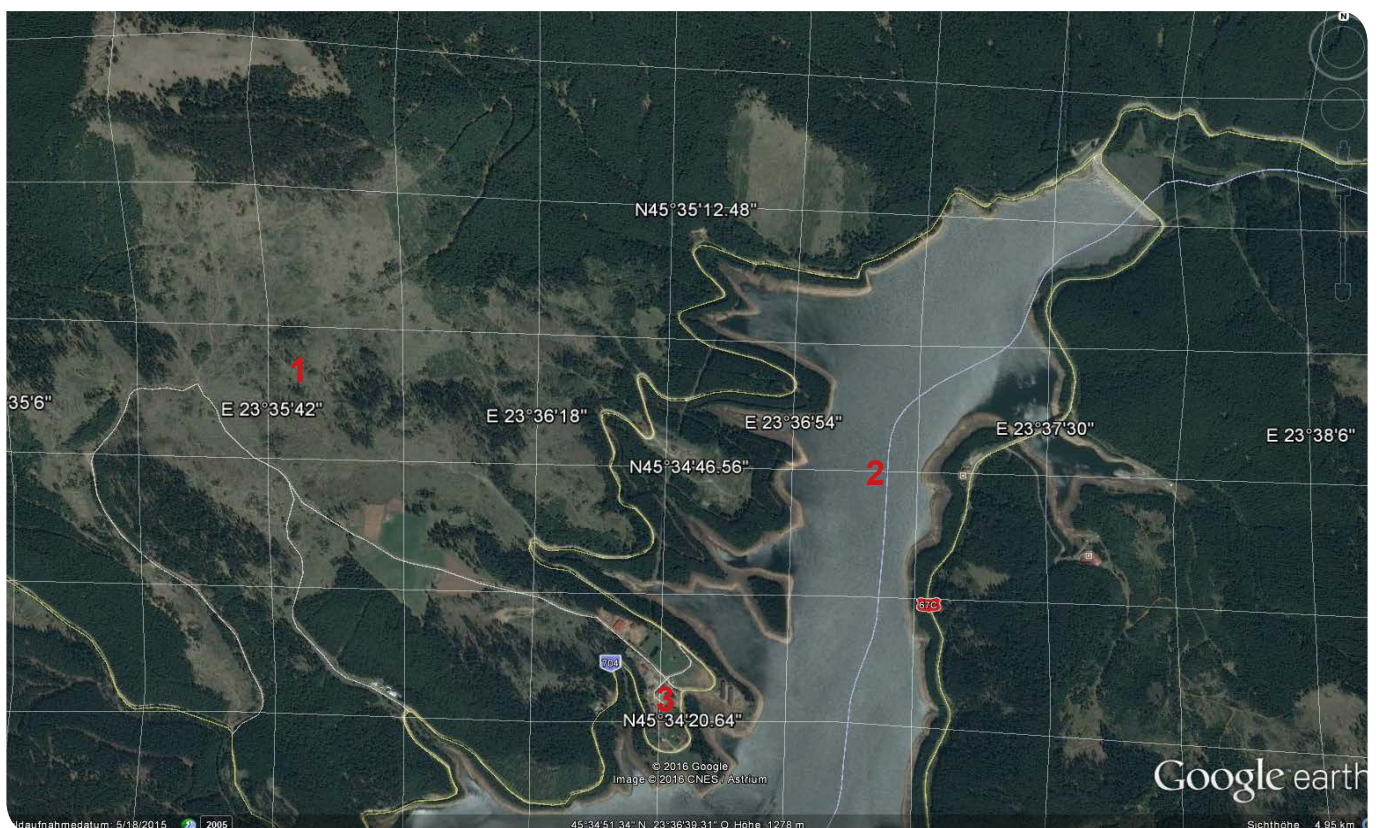


Fig. 23: Huge clearcuttings (1) West of the Lake Oasa Mica (2); (3) Monastery.



Fig. 24a-f: a) Remnant of natural beech-fir mountain mixed forests W of Lake Tau; b) forest regeneration at former clear-cut; c-f) huge clear-cuts in (artificial) spruce forests.



Fig. 25a-e: Large scale forest destruction; d+e) 360° panorama image shows a huge clear-cut of spruce plantations.

2.6 Mt. Cindrel

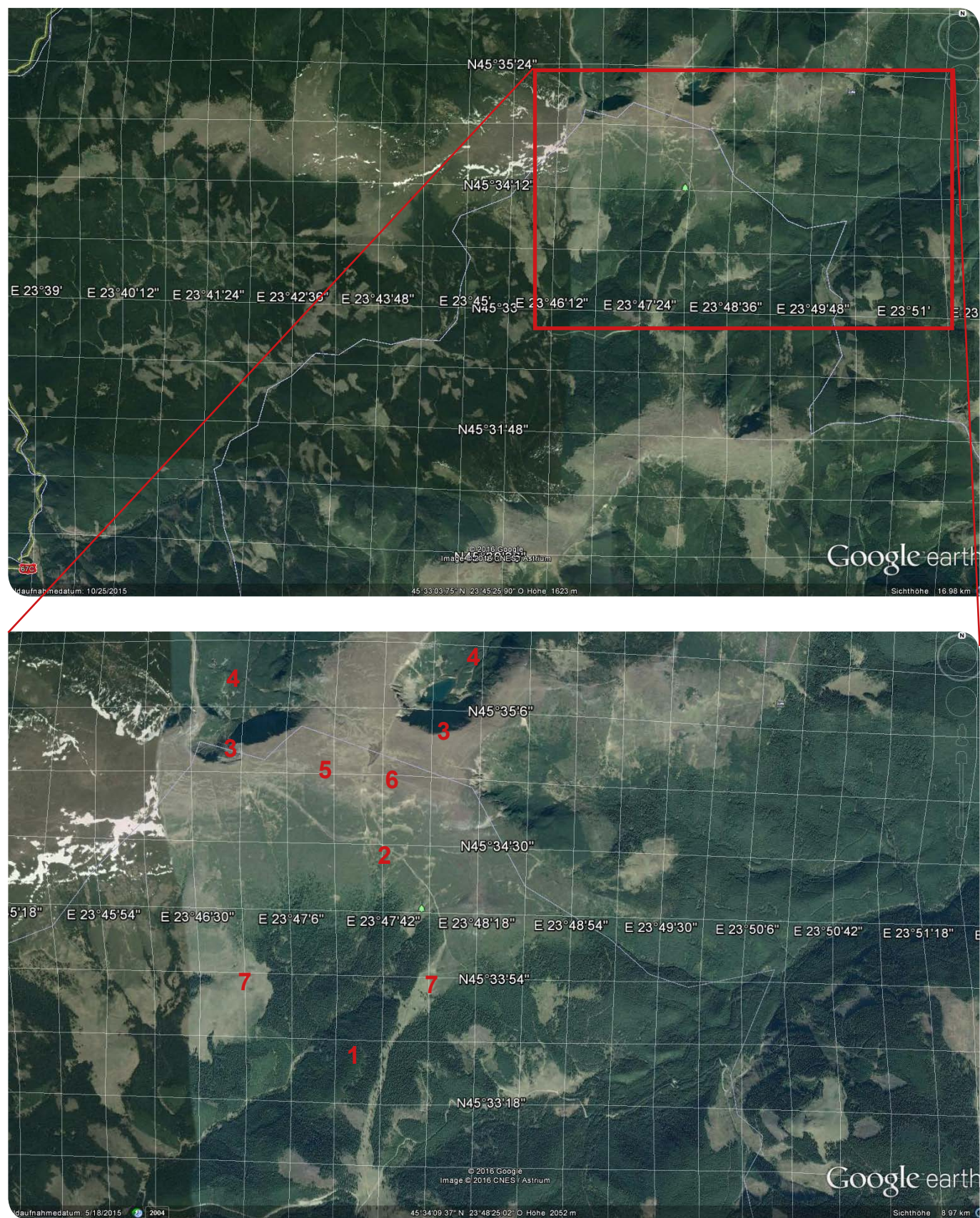


Fig. 26a-b: Muntii Cindrel (SW Sibiu). (1) Mountain spruce forest (up to 1,700m forest line), (2) former *Pinus mugo* subalpine belt, degraded to *Juniperus sibiricus*-*Rhododendron myrtifolia*-*Bruckenthalia spiculifolia* dwarf shrub-land, (3) glacier kettle with steep rocks and moraine lake, (4) *Pinus mugo* shrub-land with single *Pinus cembra* trees, (5) alpine grassland, (6) summit (2,244m), (7) mountain pasture grassland; see fig. 28-29.

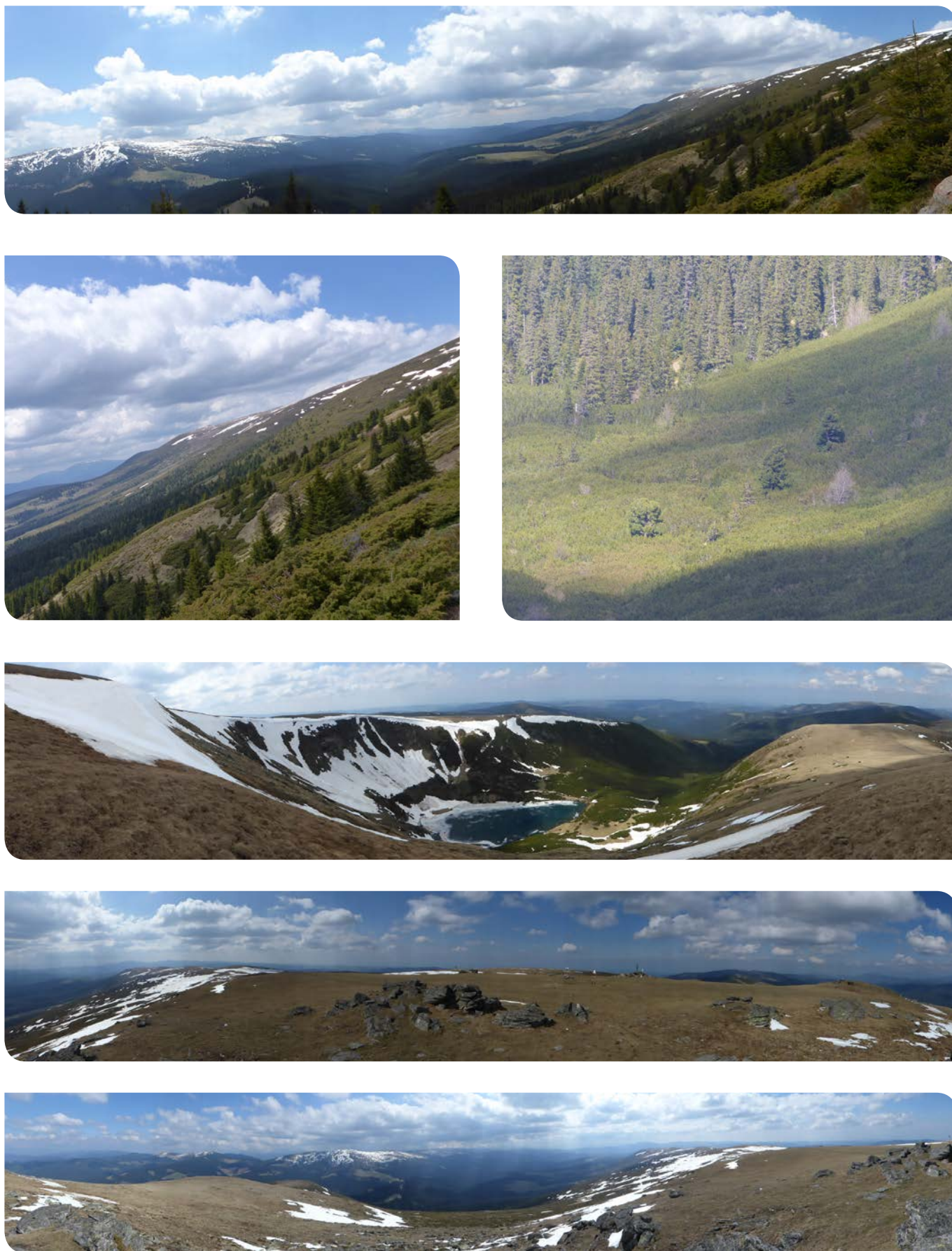


Fig. 27a-f: a-b) Southern slope of Mt. Cindrel, forest line, view to SW, c) glacier kettle with *Pinus mugo* and *Pinus cembra*, forest line formed by *Picea abies*, d) glacier kettle with lake, e) summit plateau, 2,244m, f) view to East.

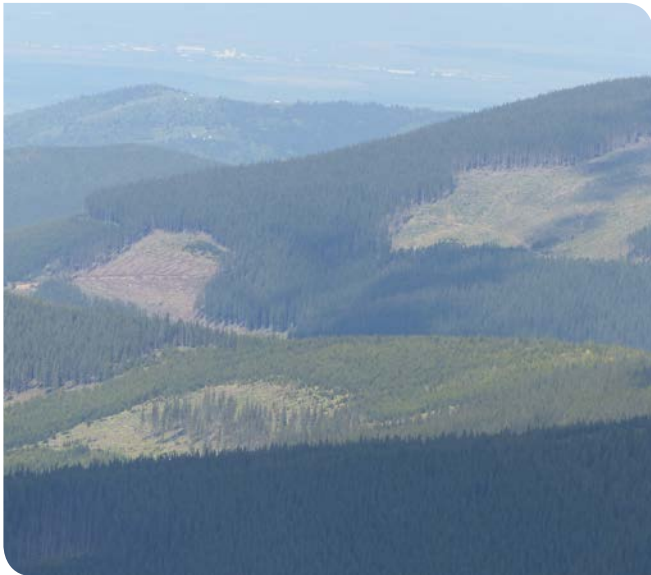


Fig. 28: a-b, f) Mountain pasture grassland, c-d) current clear cuts in spruce forests, e) destruction of *Pinus mugo* subalpine shrub-land.

2.7 Sadu Valley

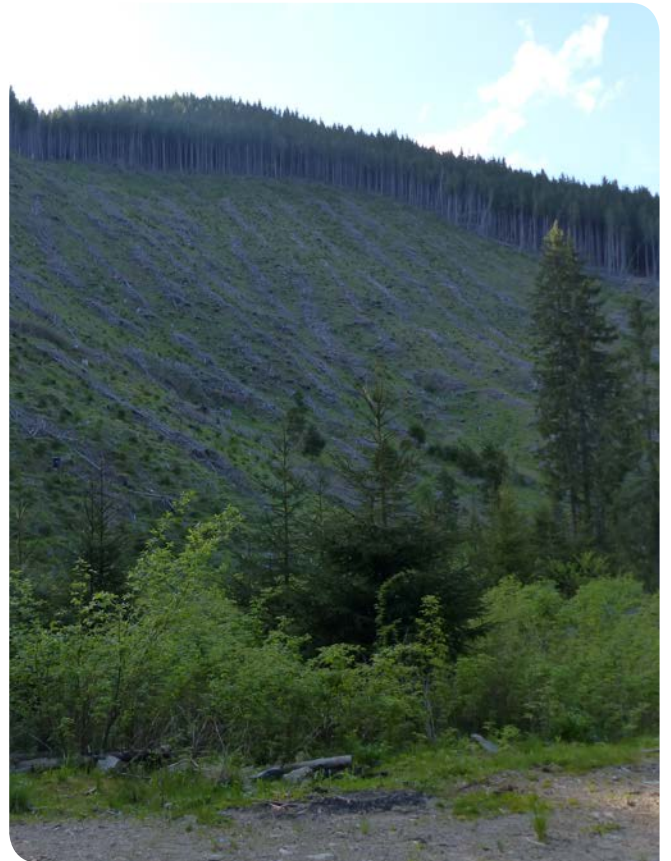


Fig. 29a-c: Deforested mountain slopes in the Sadu river valley South of Sibiu

2.8 Olt Valley

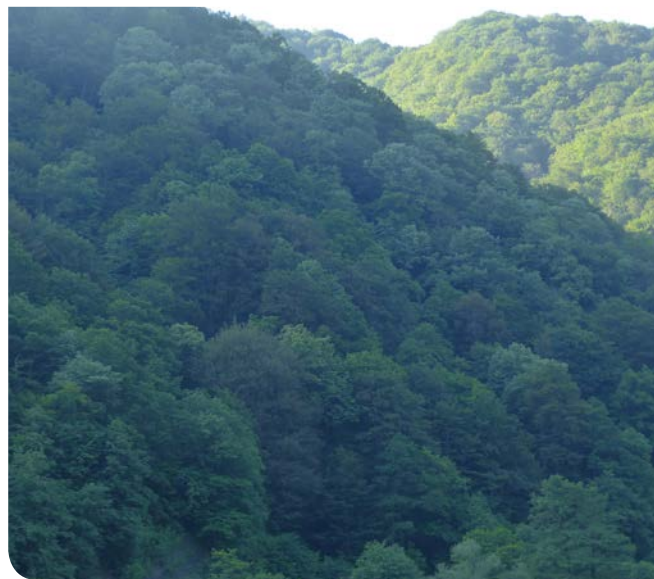
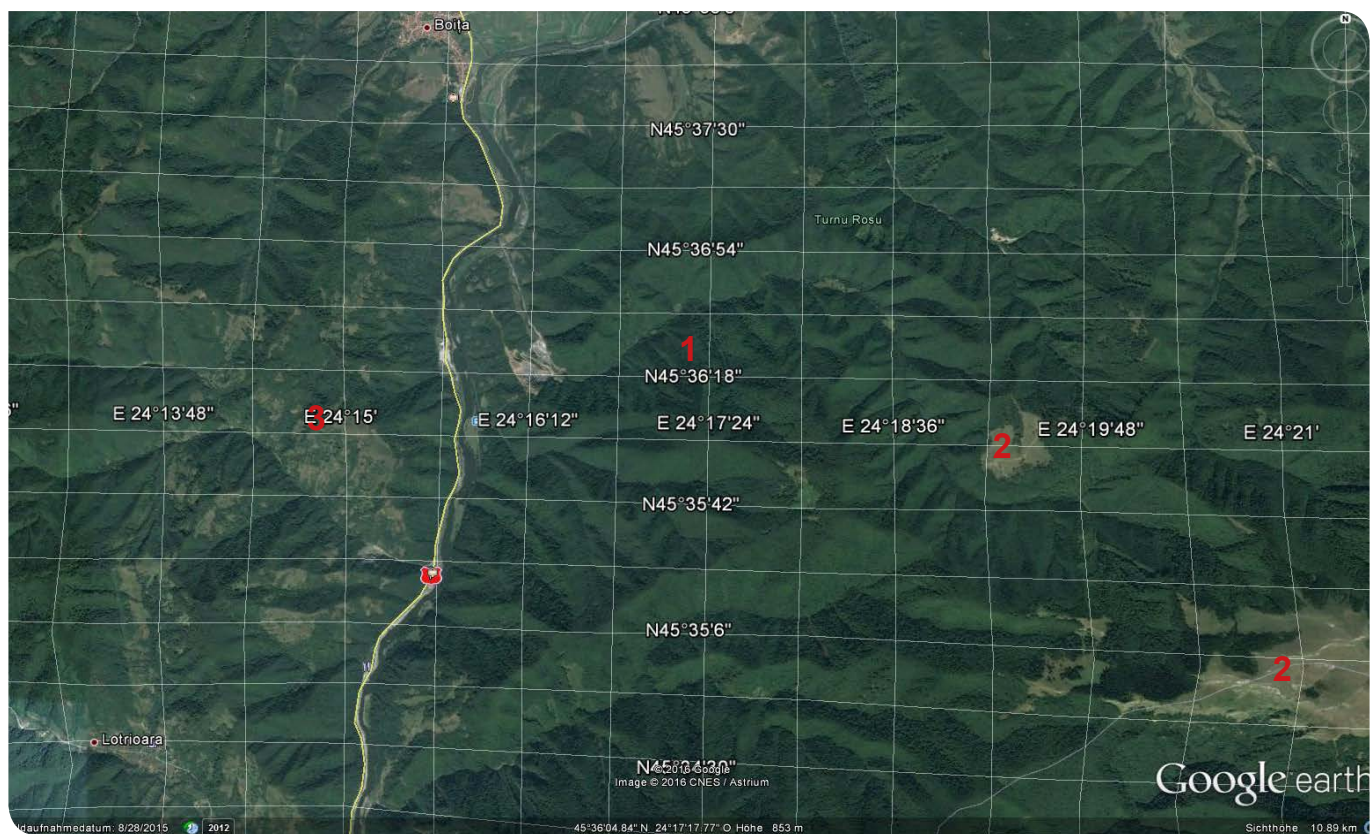


Fig. 30a-c: The valley of Olt River through the Southern Carpathians. The slopes along the valley are covered by closed old-growth beech forests. Large areas East side the valley looks like high integrity (1), but there are first large clear-cuts (2); West of the valley the mountain slopes are degraded by many cutting areas (3). – The large closed beech forest stock (1) should be protected as a large protected area, before it would be destroyed.

2.9 Cozia National Park

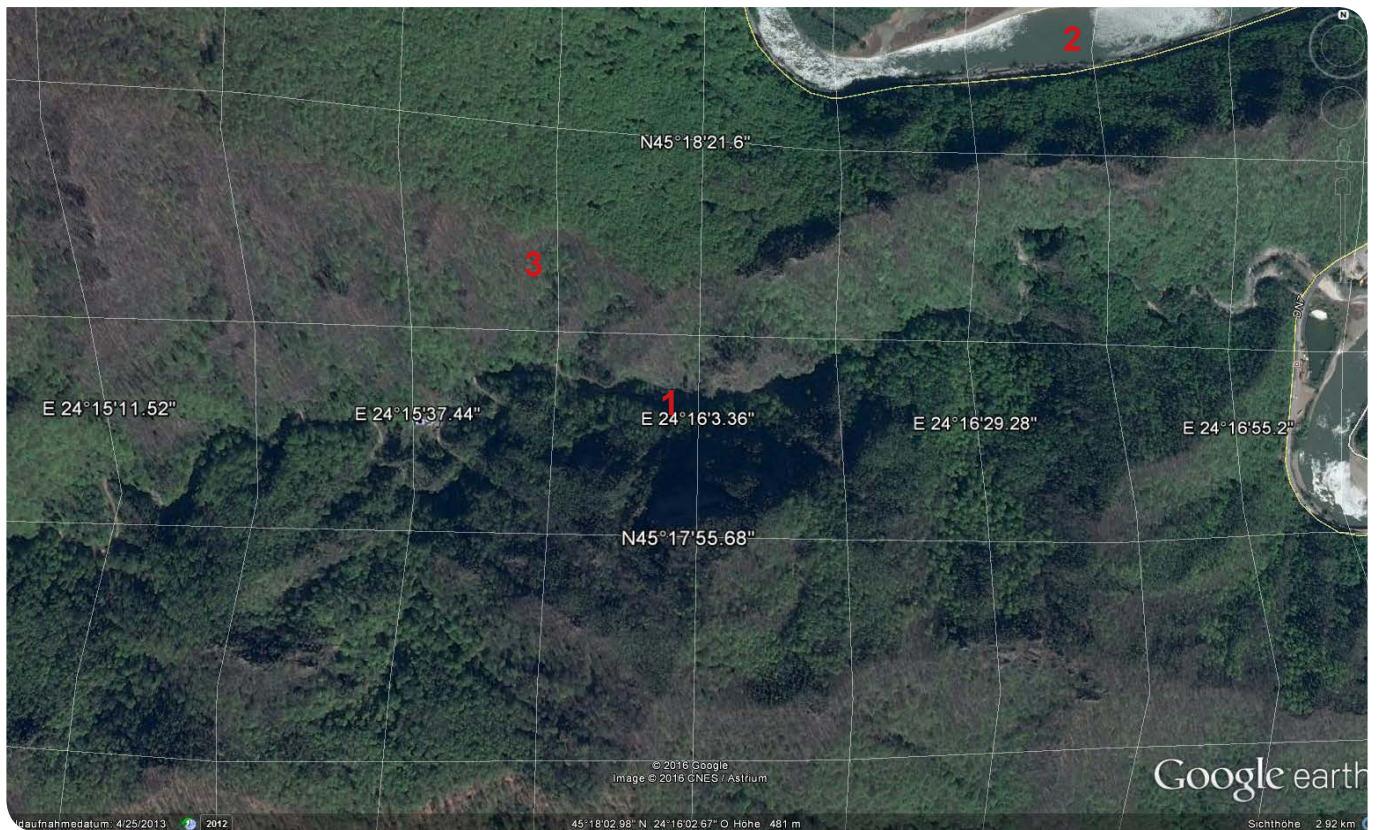


Fig. 31a-c: The Cozia National Park was designated 2,000 and it covers 17,000 ha of mountain area. It is one of the most scenic landscapes in the Carpathians. The satellite image shows the valley of the Lotrisor river (1), which contributes to the Olt river (2). The rocky slopes are covered by thermophilic forests (3), (b) in complex with beech forests.

3,389.16 ha of the Cozia National Park in two parts are a component cluster of the World Heritage nomination. Lotrisor is one of the two parts, surrounded by a buffer zone of 2,408.83 ha.

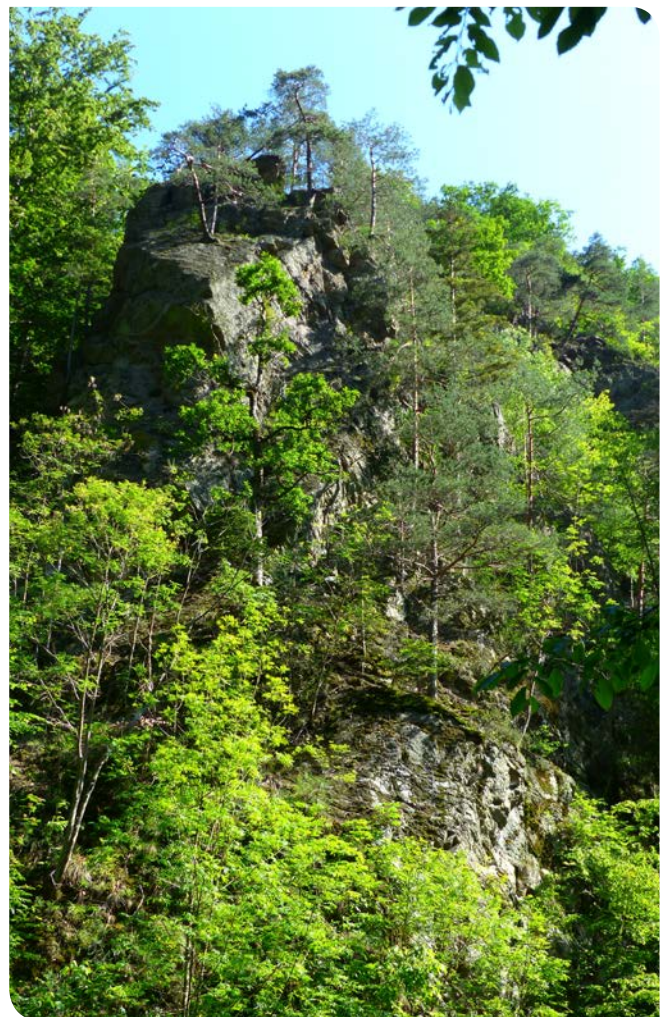
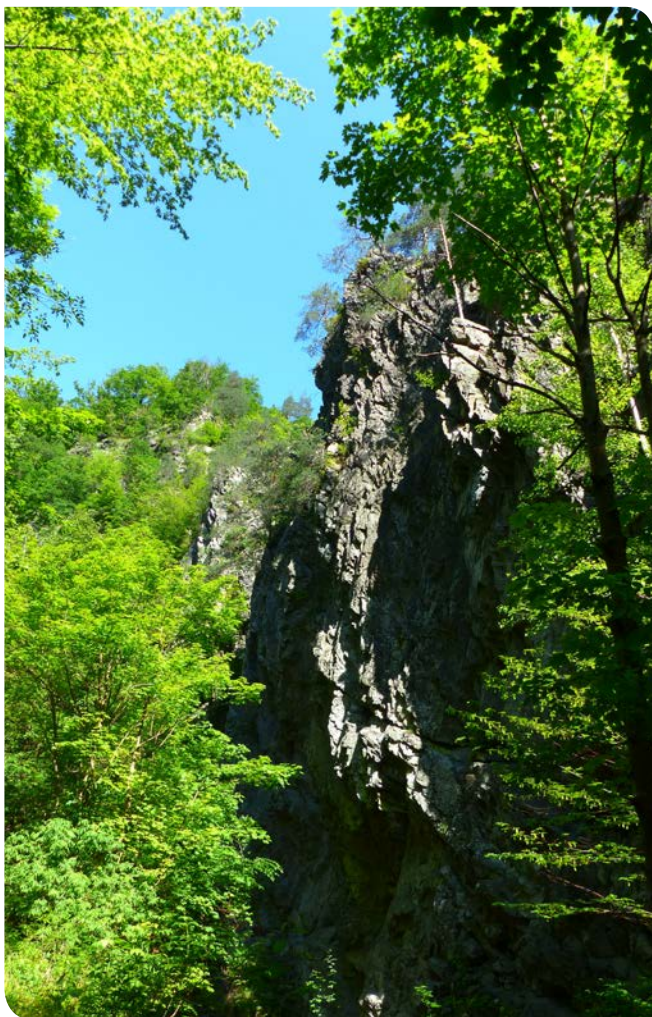
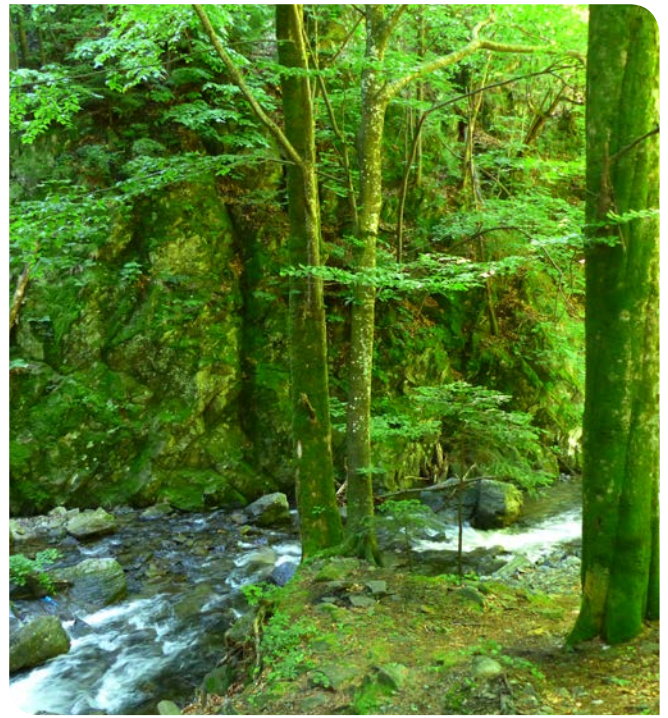


Fig. 32a-d: a) Thermophilic mixed deciduous forests at Southern slopes with *Tilia tomentosa*, b) river gorge of Lotrisor with mixed deciduous forests of *Fagus sylvatica*, *Acer pseudoplatanus*, *A. platanoides*, *Ulmus glabra*, *Fraxinus excelsior*, *Tilia platyphyllos*, *Carpinus betulus*; c-d) steep rocks with *Pinus sylvestris* woodland.

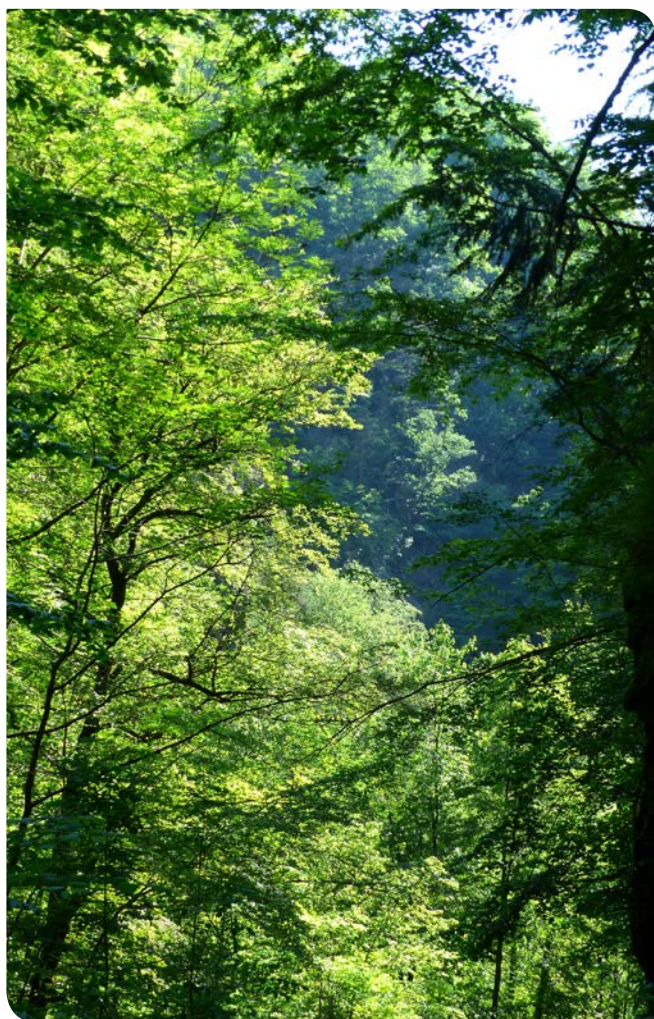
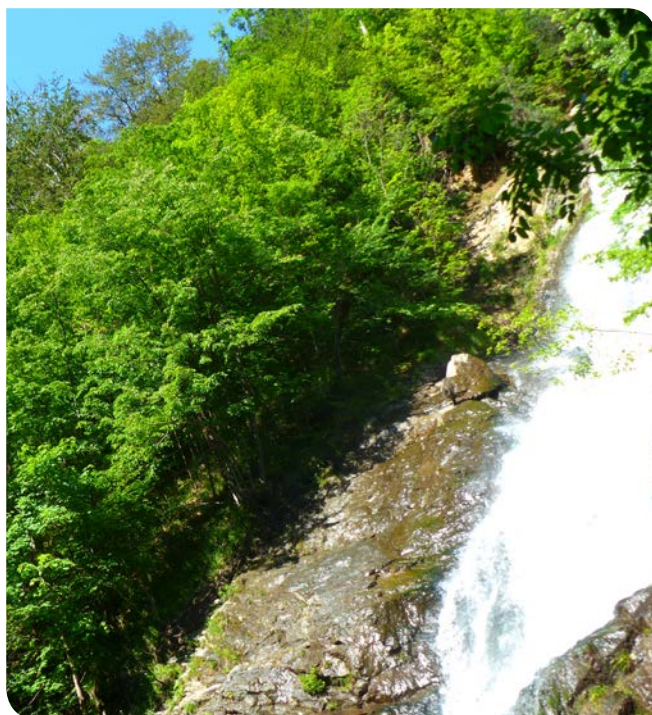


Fig. 33a-d) The Lotrisor waterfall was the last and wonderful impression of the journey. The great and fascinating nature of Cozia National Park demonstrates, that Romania is able to save its natural heritage of European and global significance.

3. Conclusions

1. The forest area in Romania has been reduced during the last two centuries. Today 26,7% of the territory are forested. The remaining natural forest stock has mostly changed in structure and composition by traditional land-use practices like pasture, , change of natural forests to forest plantations, age class system etc.”
2. A large stock of old-growth and virgin forest of European importance and high conservation value remained in remote areas of the Carpathians, which are the main forest region today. This represents the largest stock of beech and mixed beech forests of Europe, but also natural spruce forests in the upper mountain belt up to the forest line.
3. The construction of forest roads is the beginning of the end for virgin and old-growth forests.
4. Many of the remaining virgin and old-growth forests have no national conservation status and are not protected. However even in designated protected areas such as Piatra Craiului National Park, old-growth forests were destroyed by legal and illegal cuts. The NATURA 2000 status offers to protection and is often completely ignored.
5. Legal and illegal logging in virgin and old-growth forests have the same consequences, old-growth forests are damaged for many decades and virgin forests are destroyed forever.
6. As foresters explained, forest law and regulations, like management plans, require the use of stocks older 120 years in shelter-wood system (beech), femel system (oak), or clear cuts (spruce). Consequencely all old trees would be lost by regular and legal forest use.
7. Since joining the European Union in 2007 and the opening of the national economy to the global market, the usage pressure on Romania's forests has increased dramatically. Timber trade (legal as well illegal) is a profitable business with high potential for forest degradation. The ongoing practice could be described as non-transparent and ill-fated alliance of complicated structures and responsibilities, personal interests, corrupt individuals, foreign investors and timber companies joined by profit and greed. Today I would call it The System of Dracula.
8. Saving the remaining stock of virgin and old-growth forests in Romania is a very important part of the natural heritage of Europe, and the management of commercial forests pursuant ecological criteria (e.g. Forest Europe or the Greenpeace vision for the Romanian forests) requires comprehensive measures at the local, national and international level by responsible state bodies, NGO and civil society. The past has shown that this is not a guarantee since even nature conservation NGOs have been involved in the introduction of international timber companies believing that they would adhere to international sustainable forest management practices.
9. Clear cuts in coniferous forests often are justified and legalized as so called sanitary cuts or protection measures because of bark beetle infections. These claims are seldom substantiated and therefore too often abused.
10. The current forest management practice destroys natural and semi-natural forest structures, eliminates old-growth stocks, and causes harm to the ecosystem functions of forests (i.e. the balance of water supply, soil protection, carbon sequestration).
11. The management of commercial forests pursuant ecological criteria requires resolute measures by the owners and the responsible state bodies. It should be supported by NGO and the civil society.
12. The nomination of eight component parts/clusters with total size of nearly 24,000 ha, surrounded by 64,454 ha buffer zone, is an good contribution by Romania to the extension nomination of European beech forests to the UNESCO World Heritage List. It confirms the outstanding value and importance of the Romanian Carpathians for the protection of temperate deciduous forests worldwide.
13. However, the UNESCO World Heritage nomination of the selected virgin beech forests would be a farce, if virgin and old-growth forests outside of the nominated areas would be destroyed by femel felling, shelter-wood system and clearcuttings, which dominate the current management of commercial forests.
14. Saving the old-growth forests of the Romanian Carpathians as an important part of the joint European natural heritage, and a significant contribution to the global natural values requires resolute action at local, national and European levels. It requires transnational cooperation because of the international importance of the forests as well as because of the international connected structures of forest destruction. It is a mutual challenge for the civil society, NGO, administrations and policy to combat destructive practices and to save the natural treasure of virgin and old-growth forests of Romania.
15. **The virgin and old-growth forests of Romania, especially of the Carpathians are too valuable for clearcuttings and shredder for pellets.**

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