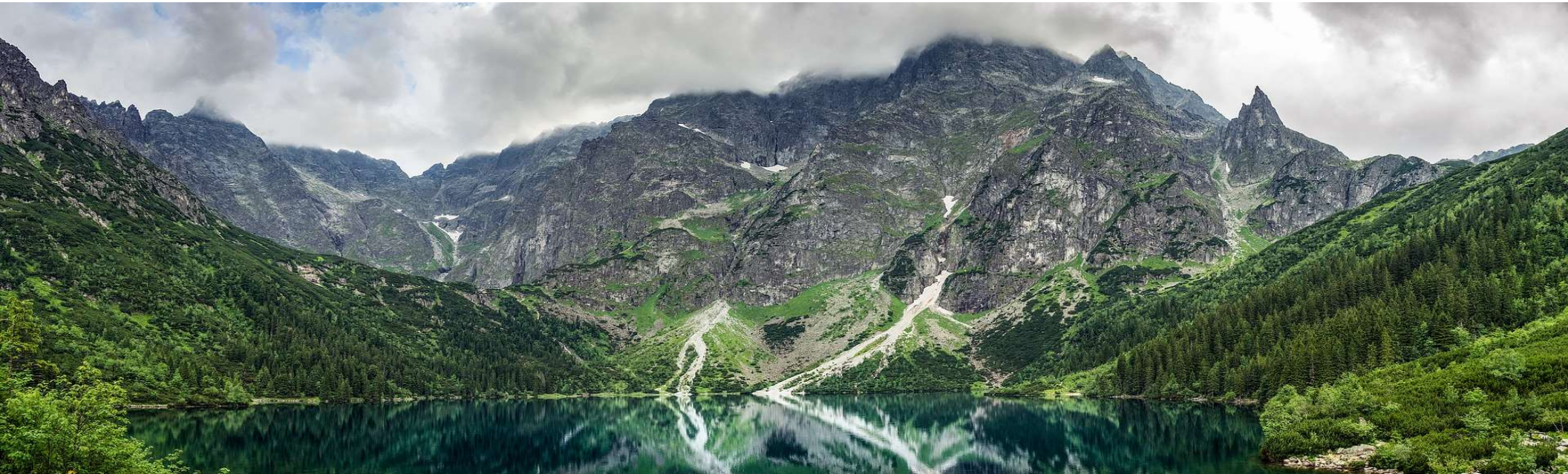


Definition and Criteria on Forests



Definition on Virgin Forests of the Carpathian Convention

According to Article 7 lit. (k) and (e) of the “Protocol on Sustainable Forest Management to the Framework Convention on the Protection and Sustainable Development of the Carpathians” (hereinafter Forest Protocol- FP), “virgin forests” means natural forests which have not been influenced directly by human activities in their development

Criteria and indicators on Virgin Forests of the Carpathian Convention

CRITERIA & INDICATORS FOR SELECTION OF VIRGIN FORESTS IN THE CARPATHIANS

A1	Criterion:	Naturalness
Indicators:		Defining:
A.1.1.	Species composition	Forests formed of <u>native/autochthonous tree species according to potential natural forest types.</u>
A1.2	Structure	<p>Cyclic ecosystems with complex structures, which include <u>all stages of small development circles</u> (some phases may be present only in small areas) in a <u>mosaic structure</u> (horizontal) and <u>vertically layered, according to the natural type of forest.</u> Range of tree ages proved by biometric characteristic.</p> <p>Occurrence of trees with exceptional dimensions according to the site conditions and species, and <u>signs of physiological decline.</u></p>
A1.3	Deadwood	Presence of deadwood (lying and standing) at all stages of degradation and all over the forest surface.
A1.4	<u>Human activities which influenced the development, structure and dynamic of the</u>	<p>Infrastructure:</p> <p>No documented evidence and no visible traces of forest exploitation infrastructure (e.g. absence of remnants of facilities of wood water transport supporting walls, regulating facilities roads, trails, dams, cable systems, etc.) or other forestry machinery recent traffic. Limited traces of pedestrian activities are allowed (pathways not wider than 1 m).</p>

Criteria and indicators on Virgin Forests of the Carpathian Convention

	ecosystem	<p>Felling: No felling occurred in the past, confirmed by documentary evidence (by forest inventory and planning documents, archives, etc.). No visible traces of harvesting which has influenced the development of forests.</p> <p>Non wood forest products: No visible traces of extensive gathering of such products (mushrooms, berries, fruits, medicinal herbs, etc.). The collection of such products is acceptable unless there are visible traces of extensive gathering of such products.</p> <p>Forest litter removal: No visible traces and no documentary evidence (by forest inventory and planning documents, archives, etc.).</p> <p>Grazing: No visible traces and no documentary evidence of grazing/soil erosion (by forest inventory and planning documents, archives, etc.). Acceptable: occasional passing of livestock to and from pastures without impact on the forest development.</p> <p>Recreation /education infrastructure: No recreation infrastructure.</p>
A2	Criterion:	Area & Delimitation
	Indicators:	Defining:
A2.1	<u>Area</u> of forest plot stand	Minimum 20 ha.
A2.2	<u>Shape</u> of forest plot stand	Minimum distance between any two opposite boundary points does not decrease below 200 m. This rule does not apply to the remains of relic/rare forests ecosystems or relic tree stands, surrounded by natural stands.

Definition on Primary Forest of the EU Commission

Primary forest: 'Naturally regenerated forest of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.'

Explanatory notes:

1. This definition includes both pristine and managed forests that meet the definition.
2. This definition includes forests where indigenous peoples engage in traditional forest stewardship activities that meet the definition.
3. This definition includes forests with visible signs of abiotic damage (e.g. storms, snow, droughts and fires) and biotic damage (e.g. from insects, pests and diseases).
4. This definition excludes forests where hunting, poaching, trapping or gathering have caused the loss of significant native species or disturbance to ecological processes.
5. Primary forests have a number of key characteristics:
 - they show natural forest dynamics , such as natural tree species composition, occurrence of dead wood, natural age structure and natural regeneration processes;
 - the area is large enough to maintain its natural ecological processes;
 - there has been no known significant human intervention, or the last significant human intervention was sufficiently long ago to have allowed the natural species composition and processes to re-establish themselves.

Inventory of Virgin Forests

- Definition of Carpathian Convention proved to be narrow –

“natural forests which have not been influenced directly by human activities in their development”

“Virgin and quasi virgin”

Definition on Natural Forests of the Carpathian Convention

According to Article 7 lit. (e) of the “Protocol on Sustainable Forest Management to the Framework Convention on the Protection and Sustainable Development of the Carpathians” (hereinafter Forest Protocol- FP), “natural forest” means forests composed of tree species indigenous to the area with most of the principal characteristics and key elements of native ecosystems, such as complexity, structure and diversity.

Criteria and indicators on natural forests: First alternative

A1		Criterion:	Naturalness
		Indicators:	Defining:
A.1.1	Species composition	Forests formed of native/autochthonous tree species according to potential natural forest types.	
A1.2	Structure	Cyclic ecosystems with complex structures, which include <u>all stages of small development circles</u> (some phases may be present only in small areas) in a <u>mosaic structure</u> (horizontal) and <u>vertically layered</u> , according to the natural type of forest. Range of tree ages proved by biometric characteristic.	
		Occurrence of trees with exceptional dimensions according to the site conditions and species, and <u>signs of physiological decline</u> .	
A1.3	Deadwood	Presence of deadwood (lying and standing) at all stages of degradation and all over the forest surface.	
A2		Criterion:	Area & Delimitation
		Indicators:	Defining:
A2.1	<u>Area</u> of forest plot stand	Minimum 20 ha.	
A2.2	<u>Shape</u> of forest plot stand	Minimum distance between any two opposite boundary points does not decrease below 200 m.	

Definition of an Old-Growth Forest of the EU Commission

Old-growth forest: 'A forest stand or area consisting of native tree species that have developed, predominantly through natural processes, structures and dynamics normally associated with late-seral developmental phases in primary or undisturbed forests of the same type. Signs of former human activities may be visible, but they are gradually disappearing or too limited to significantly disturb natural processes.'

Explanatory notes:

1. This definition includes forest stands that originate not only from natural regeneration, but also from planted or sown native tree species (provided that they meet the rest of the definition).
2. This definition includes forest stands where indigenous peoples engage in traditional forest stewardship activities that otherwise meet the definition.
3. This definition includes forest stands with visible signs of abiotic damages (e.g. storms, snow, droughts and fires) and biotic damage (e.g. from insects and diseases) that meet the definition (see the third additional note in Section 2.4).
4. Forests with visible signs of past human activity are not excluded from the definition of old-growth forests, unless the magnitude of the impact of the activity is such as to prevent the forest stand from counting as old-growth (see Section 3.2).
5. Old-growth forest stands do not include stands for which there is evidence that they are under active productive management. This includes low-intensity silvicultural regimes and coppicing.
6. Some key characteristics of old-growth forest stands are:
 - they contain structural features and dynamics such as natural regeneration, gap dynamics, large and diverse dead wood, structural complexity, and the presence of old trees, or trees reaching senescent stage and tree-related microhabitats.
 - they have acquired these structural features and dynamics through several decades of natural development without significant human intervention.

Criteria and indicators on natural forests (based on EU): Second alternative

A1		
Main indicators		
Indicators:		Defining:
A1.1	Native Species	Composed of native species. However, the presence of a small number of Non-native trees should not disqualify a forest from being designated as natural forest if they do not significantly disturb ecological processes.
A1.2	Deadwood	Characterized by a high proportion and diversity of standing and lying deadwood. The amount and type of deadwood can vary greatly between natural forests depending on the forest type, the local environmental conditions and the area's recent disturbance history
A1.3	Old or large trees	Often characterised by a high volume of standing trees relative to earlier development stages for the given forest type and local growing conditions and by the presence of old or large trees some of which may reach the maximum age known for the species under the local site conditions.
A2		
Complementary indicators		
Indicators:		Defining:
A2.1	Stand origin	Most natural forest stands originate from natural regeneration, but some sown or planted forests can meet the definition, if given enough time to develop the characteristics of old growth forests.
A2.2	Structural complexity	Natural forests are generally characterised by structural complexity. This can include a multi-layer canopy structure, horizontal structural diversity and soil microrelief structures such as mounds caused by uprooting.
A2.3	Habitat trees	Natural forests are often characterised by the high density and high diversity of tree related microhabitats. These are defined as a 'distinct, well delineated structure occurring on living or standing dead trees, that constitutes a particular and essential substrate or life site for species or species communities during at least a part of their life cycle to develop, feed, shelter or breed.
A2.4	Indicator species	Natural forests often host species of late seral developmental phases that are specific to a certain forest type. These can include species on the red list of the International Union for Conservation of Nature (IUCN).

Definition on Natural Forests. Romania proposal:

Romania proposes to equate the definitions of "natural forest" and "quasi-virgin forest", respectively completing the definition of "natural forests" as follows:

"Natural forests" are forests composed of indigenous tree species, which have, first of all, the characteristics and key elements of the native ecosystem, such as the complexity of the species corresponding to the fundamental natural type of forest, the uneven-aged or relatively uneven-aged structure of the stand, the presence of a wide range of structural, genetic and specific diversity; natural processes not being disturbed by the intervention of the human factor in the last 3 decades.

Way forward

- Secretariat proposal “Alternative 1” ->
- Scientist comments / EU Commission Guidelines ->
- Alternative 2 ->
- Romanian proposal ->
- Secretariat proposes to develop a “Consolidated proposal” in consultation with Romania and send it to the Forest WG for written comments and clearance.