Virgin / quasi-virgin forests in Romania

Defining Virgin / quasi-virgin forests in Romania:
In the acceptance of this concept, through "virgin – quasi-virgin forests" or "virgin – quasi-virgin forest ecosystems" we understand forests with primordial structures. Therefore, we will understand, those forest ecosystems which always ruled themselves through natural biocoenosis processes, in which both the forest station (biotope) and especially the biocoenosis were not major influenced by human interventions (composition, biomass dynamic, age distribution, natural regeneration of the ecosystem) and, through their spreading, ensure self-adjustment.
(Terminology: primary forests; forest ecosystems; biocoenosis processes, etc.)

Note:
For the most part of Europe, even in the Carpathians region, both by traditionally specific (transhumance, use wood for fire, traditional crafts, hunting, best use of products which are accessories to the forest, etc.) and especially in the last decades through development of the economic/industrial sector, it is impossible to talk about biocoenosis which were not directly or indirectly influenced by the anthropogenic factor. By defining "virgin – quasi-virgin forests" will thus be neglected human interventions less obvious, which did not lead to the alteration of the biocoenosis structure and further to a significant influence of the forest ecosystem dynamics.

Objective:
Establishment of practical criteria and indicators (starting from the ones used in „Virgin Forests in Romania"(I.A. Biriş and P. Veen, editors, 2005 – result of the project PIN-MATRA/2001/018 – „Inventory and strategy for sustainable management and protection of virgin forests in Romania) which allows rapid identification on the field of "virgin forest".

This document propose the definition of a clear "threshold" (minimum identification elements) over which we may accept that any forest, fulfilling these criteria, describe a virgin – quasi-virgin forest ecosystem. According to evolutionary stage of each forest considered virgin – quasi-virgin, certainly, will be obviously difference between each other, first of all in terms of structure, the reason for which we don't intend to draft detailed scoring, reflecting qualitative criteria for the characterization of this forests. In this first phase, and especially due to continuous threats endangering these forests, we intend only a swift identification of this biocoenosis and finding efficient/rapid solutions for their protection.

Opportunity / Need:
An easy and objective system of criteria will allow a quick and low-cost identification of the virgin – quasi-virgin forests in Romania.
Now, on the basis of increasing pressure over forests, continuous changes occurred in the structure of forest property and due to a rambling implementation of the forest sustainable management principles, a drastic/accelerated reduction came across these last remaining surfaces of virgin – quasi-virgin forest of the European Community.

CRITERIA & INDICATORS FOR SELECTION OF VIRGIN – QUASI-VIRGIN FORESTS IN ROMANIA

Tabel 1.

A1	**Criterion**	**Naturalness**			
Indicators			**YES**	**NO**	**OBS.**
A1.1	Phytocoenosis formed of local/site-specific plant species.				Terms will be defined: „local/site-specific" (will avoid spruce stands from Bucovina, Covasna, Harghita, etc)
A 1.2	Presence of specific[1] animal species (from information and own observations).				Don't need necessarily existence in the same place of all species specific to the ecosystem type.
A1.3	Lack of silvicultural leading interventions and stands regeneration. May still be accepted interventions with negligible human influence which have not significant influenced the structure and dynamic of the ecosystem.				Terms: „negligible human influence". Are considered human interventions with negligible influence the following: • totally isolated extractions/injuries of trees, meaning below **5%** from the volume on the management planning unit; • *random* crossing of herds on a route to and from pastures; • sporadically collection of accessory products (mushrooms, forest fruits); • hunting paths & infrastructure of the game fund management (game salt-place, feeding-place, etc.); • thematic trails and tourist activities with environmental low impact (tourist routes, climbing); • picketing management planing limits or routes; • extraction paths near transit, which serve other stands than the ones in question. ***Assessments will be made on forest body level, being also considered, as appropriate, partly in management planning units.***
A1.4	Ecosystems with complex structures covering all stages of development (some stages may be present only on small surfaces) in a mosaic structure (horizontal). Diversity of ages				

	& biometrical/volume elements.			
A1.5	Presence of trees that reached the limit of physiological age, in the given conditions.			Most often they will have exceptional dimensions in report with forest station yield
A1.6	Presence of dead wood standing and on the ground in all stages of degradation and all over the forest surface.			The quantity of dead wood should be evaluated on ecosystem structure and conditions of forest station.
A2	**Criterion**	**Surface & Delimitation**		
Indicators		**YES**	**NO**	**OBS.**
A2.1	The surface of primordial forests with negligible human influence (without the sections which do not respond to the selection criteria) is larger than 50 ha and it is laid out in a compact way for ensuring self-regulation and perpetuation of the forest ecosystem.			
A2.2	The forest is bounded, as possible, of natural limits (heights, valleys, streams, forest edge) to give additional stability against external abiotic factors. To ensure stability conferred by natural boundaries, can include possible areas that do not respond to the naturalness criteria A.1.			Natural limits not necessarily have to overlap with the parceling limits. Will be accepted: heights, valleys, secondary streams. Will also be accepted as artificial limits: • permanent roads; • corridors for high voltage lines or other utilities; • open parceling lines; • railway roads, etc. The surfaces that do not respond to the naturalness criteria A.1., will not overcome 15% of the total forest body area.
A2.3	Fragmented configuration of the land surface, due to natural felled trees, which brings ground volume from around the main roots.			