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# THE PROTECTION CURTAINS – IMPORTANT FACTOR IN IMPROVING THE QUALITY OF LIFE

Theoretical  
Article

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## Abstract

*In recent years many extreme natural phenomena have affected not only agriculture, but the population of the country as well. The continuous deterioration of the environmental conditions has produced irreversible effects on people's lives and activities. Protection curtains are a solution for such phenomena.*

*In this paper, the authors focus on the main phenomena challenging the environment and highlights a few solutions that could diminish the negative effects of such phenomena on the quality of life and the environment.*

*Research shows that Romania's population, in general, and Romania's rural population, in particular, as well as the national economy, has been challenged these two decades by extreme meteorological phenomena of particular amplitude: heat and severe drought, abundant rainfall, land glides and catastrophic floods, and abundant stormy snow falls.*

## INTRODUCTION

The sustainable development should ensure a balance between the need of continuation of the economic and social development as well as the protection and improvement of the environmental conditions, as it is the only way of ensuring the welfare of the present and future generations. In the last years, Romania has faced major disasters which makes the natural risks an actual issue. Hence, we consider that the establishment of the forest protective curtains would constitute a particularly important component for the sustainable development of the rural communities and increase inhabitants quality of life (living conditions). (S ndulache, C., S ndulache, I., (2011). *Hazarde i riscuri naturale în România*, [Natural hazards and risks in Romania], Bucure ti: Editura Universitar )

Quality of life is defined as "individuals' perception of their social situation, in the context of cultural value systems in which they live and, depending on their needs, standards and aspirations" (1998. *World Health Organization*)

Permanent increase in inequality of life is a priority for every individual. An analysis of the factors which contribute to the quality of life is essential in order to identify strengths and weaknesses of a community.

In this respect, we can state the most important factors contribute to quality of life: general perspective on quality of life, health, economic prosperity, security and good governance. This study reveals that the establishment of protection curtains represents as a possible alternative for improving the quality of life.

## MATERIALS AND METHODS

The research methodology consists in a bibliographical study based on scientific documenting following the steps below: information, data collection, source study, and source grouping.

## RESULTS AND DISCUSSIONS

In the interwar period, Romania was well known through the network of forest protective curtains made immediately after the First World War. Unfortunately, they were cleared out between 1957 – 1962, once with the forced unification of the lands for collectivisation.

Romanian Parliament adopted even since 2002, Law no. 289 (republished in 2014) regarding the accomplishment of a national system of the protective curtains. According to this normative act, besides the protection of the communication routes against massive snow falls, the forest curtains were and are thought as a shield against land sliding, erosions, as defences for localities, embankments and river shores against climatic factors.

According to this law, the forest protective curtains are of the following types:

- for the protection of the agricultural lands against damaging climatic factors and for the mitigation of the climatic conditions from the protected perimeter;

- against erosion, for protection of the soil subject to erosion phenomena;

- for the protection of the communication and transport routes, especially against snow drifts;

- for the protection of embankments and shores against currents, floods, ice and others;

- for the protection of the localities and of various economic and social objectives.

The areas in which forest protective curtains are necessary, identified in Romania are: Romanian Field, Tisza Field, Danube Plain and Dobrogea Plane, frequently affected by drought. They are located based on technical documentations, usual rectangular networks, in phases, according to emergencies, the lands situated in the most arid zones having priority.

**The forest curtains protecting against erosion** are made in all the areas of the country, on lands in different degrees of degradation. The procedure of identification and forestation of degraded lands is provided in the Government Ordinance no. 81/1998 concerning some measures for amelioration by forestation of the degraded lands, approved with amendments and supplements by the Law no. 107/1999. This category includes also the lands with mobile sands, requiring forestation works for their fixation. (2002 Legea nr. 289 din 2002 **privind perdelele forestiere de protec ie** [Law No. 289 of 2002 on forest protection curtains], publicat în *Monitorul Oficial nr. 338*)

**The forest curtains for the protection of the communication and transport routes** are made on both their parts, on the sections that are frequently affected by massive snow falls.

**The forest curtains for the protection of embankments and shore against current, floods and ice floes** are made along them in rectangular alignments, on different widths and lengths, depending on the land orography, the speed of the water current, height of the waves and ice floes pushing force.

**The forest curtains for the protection of the localities and various economic and social objectives** are made around the urban and rural communities, of the polluting industrial units, of some economic, social, cultural and strategic objectives. (2002 Legea nr. 289 din 2002 **privind perdelele forestiere de protec ie** [Law No. 289 of 2002 on forest protection curtains], publicat în *Monitorul Oficial nr. 338*)

Between 1991-2012 in Romania were created 2036 hectares of protective curtains from which 763

hectares in forest stock and 1273 hectares on other lands.

Therefore, the year 2003 was a peak in the action of installing the forest protective curtains in Romania, being created 116 ha in the forest stock under state public property and 498 ha on other lands, from which:

- 186 ha Vrancea County,
- 94 ha Ialomi a County,
- 29 ha Olt County,
- 26 ha Constan a County,
- 26 ha Ilfov County,
- 25 ha Buz u County,
- 20 ha Dolj County,
- 20 ha Dâmbovi a County,
- 19 ha Timi County .a. (Iacob, D.,

Achim, D., Daia, M. (2014) *Stadiul actual i perspectivele realiz rii Sistemului Na ional al Perdelelor Forestiere de Protec ie*, [Current status andprospects for the National System of Forest Protective Curtains], Bucure ti)

The identification of the owners on which lands the forest protective curtains follow to be achieved and obtaining of their consent, represents a stages without which the forest protective curtains cannot be made.

In order to obtain the consent of the owners of agricultural lands for creating forest protective curtains, the Law no. 46/2008 – Forest Code provides the following:

- granting from the state budget of a compensation for the income loss, amounting to 10 times the average price of a cubic meter of wood mass on foot, on hectare, corresponding to the surfaces effectively occupied by the forest protective curtains, for individuals and legal entities that agree with creating the forest protective curtains on their lands;
- management of the forest protective curtains through the forest range under the structure of RegiaNa ionala a P durilor – ROMSILVA and ensuring the equivalent value of the works of administration from the state budget.(2008 Legea nr. 46 din 2008 – Codul silvic [Law No. 46 of 2008 – Forest code], publicat în *Monitorul Oficial nr. 338*)

For solving out the difficulties encountered in the stages foregoing the installation of the forest protective curtains, it was elaborated the Law no. 213/2011 for the amendment and supplementation of the Law no. 289/2002 containing among other the following provisions:

achievement of the cadastral documentations by assigning cadastral number for the lands on which the forest curtains shall be made;

establishing the content of the cadastral documents through the protocol with ANCPI;

noting in the real estate register of the fact that the land is subject to forestation;

Inclusion of the forest protective curtains in forest arrangements;

nomination of RegiaNa ional a P durilor – ROMSILVA as on behalf of the Romanian state;

approval by Government Decision of the initiation of the expropriation procedures as well as the granting for administration to the expropriator (RNP – ROMSILVA) of all the expropriated estates and the global amount of the compensations estimated by the expropriator ;

the possible litigations postpone the payment of compensations, but they don't suspend the transfer of the ownership to the expropriator;

the expenses for acquiring the estates, including those in front of the courts of law are borne from the state budget, through the budget of the central public authority that is charge with silviculture;

establishing the procedures of expropriation in case of the undisputed successions.Iacob, D., Achim, D., Daia, M. (2014) *Stadiul actual i perspectivele realiz rii Sistemului Na ional al Perdelelor Forestiere de Protec ie*, [Current status andprospects for the National System of Forest Protective Curtains], Bucure ti)

Following the performed researches, the authors ascertained that there are some difficulties that may arise in the accomplishment of the forest protective curtains, even if there is legislation and a national system of forest curtains:

- the reluctance of the land owners at the proposal of creation of the forest curtains;

- difficult identification of the locations of the curtains of protection of the communication routes;

- provision of incorrect sites in Government Decision no 994/2004;

- very difficult identification (sometimes impossible) of the land owners on which followed to created the protective curtains, due to incomplete or incorrect cadastral situations recorded by the local public administrations or at the offices of cadastre and real estate publicity.

- the high costs and the very difficult procedures of accomplishment of the documents of tabulation and change of the category of use of the lands;

- obligation of expressing in writing of the owner of his consent /disagreement for making available the land for creating the forest protective curtains. (2007 Hot rrea Guvernului nr. 1343 din 31.10.2007 pentru aprobarea înfiin rii perdelelor forestiere de protec ie a câmpului în jude ele Constan a, Ilfov i Tulcea [GovernmentDecision no. 1343 of 31.10.2007 approvingtheestablishment of forest protective curtains on thefield of Constan a, Ilfov and Tulcea County] publicat în *Monitorul Oficial, Partea I nr. 778*)

## CONCLUSIONS

Following the researched carried on, the authors underline the need and the appropriateness of the forest protective curtains In Romania considering the following points of view:

- in the absence of the irrigation system, the agriculture depends on the climatic conditions, and the achieved productions are small and are frequently damaged on large surfaces, especially because of the excessive and extended droughts;

- the phenomenon of drought from the Southern part of the country is accentuated and it must be related, first of all to the low surfaces lands occupied by forests and (eventually) with to the climatic changes;

- there was a network of forest protective curtains for fields, destroyed most of it by forest clearing, and the assessment of the two situations (before and after the destruction of curtains), from the point of view of the agricultural crops, environmental conditions, landscape, soil erosion, protection of the communication routes, and of the human settlements, etc., is a definite advantage considering the curtains' presence.

In conclusion, the authors emphasize the main effects of the installation of the forest protective curtains in Romania:

- improvement of the microclimatic conditions (decrease of the amplitude of the air temperature, during the day and the night, reduction of the wind speed, retaining of the snow, reduction of the evapotranspiration, increase of the air humidity);

- decrease by 1-4 C of the daily amplitude of the air temperature and by 1-2 C of the annual one, reduction of the wind speed, reduction of the non-productive evapotranspiration by down to 30%, increase of the air humidity at the soil surface by 3-5%;

- improvement of the conditions of growth and development of the agricultural crops;

- increase of the conditions of fertility and preservation of the soil, reduction of the erosion and of the water flows on slopes, reduction down to the total stopping of deflation, increase of the soil humidity, enrichment of the soil with humus and other nutritive substances and modification of its pH due to the excess of organic substance from leaves and roots;

- increase of the production of wood mass and accessory products;

- increase of the surfaces covered with forest vegetation;

- protection of the economic and social objectives and of the communication routes;

- generating favorable conditions for the development of the local fauna;

- increase of the zone biodiversity;

- mitigation of the fixed carbon stock and the diminution of the one from the atmosphere;

- reconstruction and improvement of the landscape, etc.

Analyses show that forest protection curtains play a very important role in the sustainable development of rural communities, contributing to the improvement of micro-climate conditions, to the diminution of the wind speed, to the improvement of the growth and development conditions of the crops, to the diminution of land erosion, etc. areas increased quality of life in general.

## ACKNOWLEDGMENTS

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*Appendices*

Table No. 1.

*Installation of the curtains of protection of fields and communication routes by Regional Administration of P. durilor (National Administration of Forests) -ROSILVA*

<b>Year</b>	<b>Total</b>	<b>In forest stock</b>	<b>In other lands</b>
1991	-	-	-
1992	1	-	1
1993	5	-	5
1994	75	-	75
1995	89	-	89
1996	460	179	281
1997	126	86	40
1998	26	26	-
1999	217	97	120
2000	109	74	35
2001	106	92	14
2002	144	35	109
2003	614	116	498
2004	8	6	2
2005	13	12	1
2006	7	7	-
2007	19	19	-
2008	5	5	-
2009	-	-	-
2010	9	9	-
2011	-	-	-
2012	3	-	3
<b>Total</b>	2036	763	1273

*Source: The current stage and perspectives of the accomplishment of the national System of Forest Protective Curtains*

