

# VALUE OF ECOLOGIC COMPONENT IN FOREST MANAGEMENT DECISION MAKING. CASE STUDY: FORESTS ADJACENT TO BUCHAREST, ROMANIA

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## **Abstract:**

*To say environment management is, nowadays, of outmost importance for any ecosystem concerned in an understatement; nevertheless, in Romania, especially – as least, since the present paper analyses Romanian ecologic statu quo – improving forest management, so to speak, in Romania, is all the more important, since social and economic decisionmaking as to forests (e.g. forests close to Romania's capital, Bucharest) includes necessarily an ecologic component. The main issue is how to make this component as visible and important as possible, without simultaneously reducing the economic and social components.*

**Key words:** sustainable management, forest, natural resources, wood

**JEL classification:** Q20, Q23

## **INTRODUCTION**

The debate, opened nearly a half a century ago, concerning the relationship between society (e.g. market economy) and ecology/environment protection (i.e., forest protection) is, in its practical application, a several-tier operation (Bran, 2002); first is basically the acknowledgment this relationship is not a king-commoner type one. Instead, society-forest relationship is an interdependent relationship, for whose sustenance and sustainability *people* must do whatever is necessary in order to create, or, if this already exists, to bolster a stabile equilibrium between its (two) components (Matilainen et al., 2009).

As far as Ilfov County (itself, part of Romania) is concerned, in time, forests adjacent to Bucharest were included into a process of gradual transformation and development. This process is, however, not yet complete, not in the least because these forests are fairly large, being included in no less than *three* forest districts – namely Snagov, Baneasa and Bucharest –, districts whose main *designed* utility is protecting the forest ‘assets’ that comprise the so-called *green belt* of Bucharest.

These forest districts form what is known in Romania as Ilfov Forest Division – situated, as Romanian geography imposes it, in field region, its average altitude being no more than 80 meters above sea level. Forests which make up Bucharest's *green belt* are named Baneasa, Cernica, Snagov, Corbeanca and Raioasa.

Between 1990 and 2005 area covered by forests adjacent to Bucharest City dwindled by as much as 50%. Due to process of expansion of residential, commercial and industrial areas, especially in Northern part of Bucharest, pressure was applied continuously on wooded areas. But, furthermore, a different type of pressure came to the fore, namely one which befell both natural environment and health state of general public of Bucharest, as direct result of a tiny ratio of

wooded areas adjacent to Bucharest and an almost general lack of active environmental education (Moga and Radulescu, 2004).

The bare minimum we *must* hold on to is protecting present wooded areas and extending them as quickly and effectively as possible – and this is to be accomplished by local public administrations, if environment quality is ever to *improve*. For the time being, it is a must to extend whatever forests Bucharest can make use of.

In Romania, at least, forests, any forest for this matter, is particularly threatened by retrocessions (Nichiforel, 2011). This is because Romanian state was, between 1948 and 1989, a communist state, and, as such, *all* forests were nationalized. Starting with 1990 AD, many (former) owners of forests, they themselves or their heirs, or simply those who, legally or less so, bought the ‘honor’ of being owners of the *rights* of those forests, came to the fore to ask their forests back from state’s grip (Tutueanu, 2015).

The problem, because *this* was and still is a big problem, even, is once they were reinstated as rightful owners of the(ir) forests, they simply proceeded to grubbing them, using afterwards the remaining deforested areas for building up of residential areas instead. While these apartments, houses or malls were sold, or rented, with more or less financial efficiency, the damage made to environment is palpable, sensible and lasting.

Especially one must take into account the importance of preventive measures, which aim at protecting to the fullest extent whatever forests Bucharest can make use of (Giurgiu, 2010). For, adding to illegal deforestation, Baneasa forest, for example, faces one more predicament – namely, pollution. This is because its very location, north to Bucharest, exposes it to many a pollution source.

And sources exist, and even are plentiful – in Bucharest: cars and general road traffic, uncontrolled and excessive tourism, unlawful operations and interests of private forest owners; all this, and of course not *only* this, tends to turn Baneasa forest into a ruin, at least from an ecologic point of view.

So, in order to avoid, for as much as possible, *extension* of pollution, Ilfov Forest Division came up with a series of measures, aimed at:

- I. Limitation of forest access
- II. Insect control
- III. Forest cleaning.

The same Division also proposed enforcing several actions, namely:

- (A) Identification of degraded terrains not proper for any other use, which can be afforested and in this manner included in national forest fund
- (B) Constitution of protection forests
- (C) Fitting forest administration with performant tools and equipment
- (D) Durable administration of existent forested areas and afforestation of new areas
- (E) Prohibiting constructions (of roads, houses, etc.) being carried out in national forest fund.

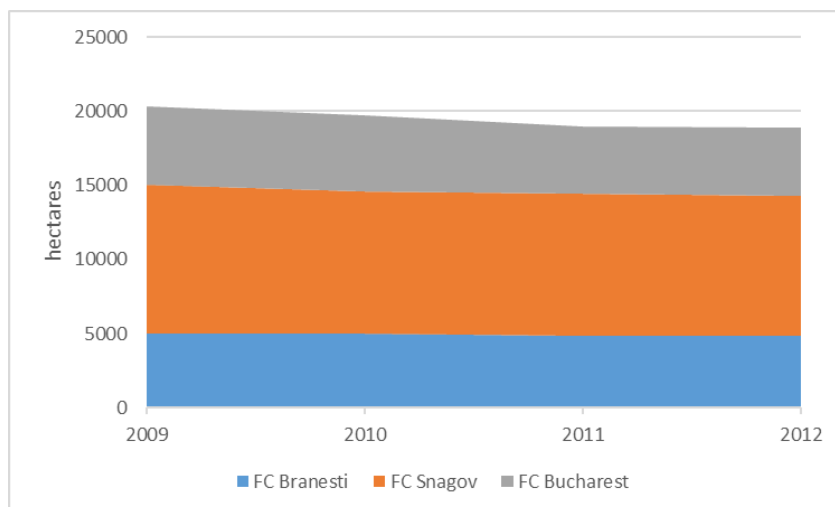
## 1. STATE AND TRENDS OF FORESTS IN ILFOV COUNTY

Ilfov Forest Division, part of ROMSILVA, directed around December 31<sup>st</sup>, 2012 a total area of 19551 hectares of forest terrain, as state public property, of which 18891 hectares in Ilfov County. In this county a total area of 3594 ha constitute private forest terrains, 90 ha represent monastery owned forests and all the rest are private property of owners whose property rights were reconstituted according to a number of laws, most important of them being Law 18/1991, Law 1/2000 (updated – inclusively by Law 247/2005).

The total area of 18891 ha of forest terrain from Ilfov County is allocated to various uses, in this manner:

- 18130 ha classified as *forest*

- 761 ha classified as *other* terrains of forest fund, respectively terrains used by forest administration, terrains used by forest culture and production
- 82 ha classified as terrain allocated for afforestation.

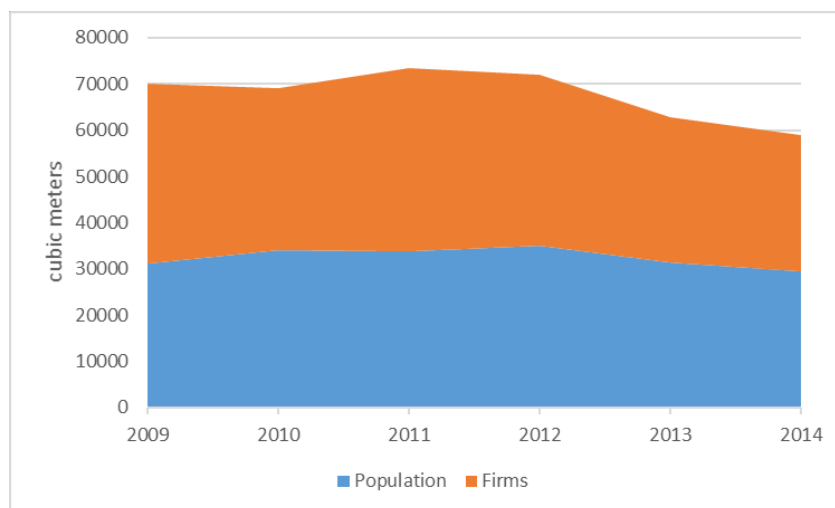


**Figure 1. Evolution of forestry area in the Ilfov Forestry Direction**  
Data source: Ilfov Forestry Direction

In analysis concerning dynamics of forest fund related to Ilfov Forest Division, all three forest districts it comprises recorded, between 2009 and 2014, a reduction of forest areas, in the interval 2009-2012, and in the following years 2013 and 2014.

This clearly shows that the anthropogenic pressure was greater in Bucharest than in Snagov and Branesti.

Between 2009 and 2014, dynamics of forest fund related to Ilfov Forest Division oscillated frequently. That is, given in 2009 forest funds belonging to Ilfov Forest Division had 20,323 hectares, this decreased with 6.22% to 19,060 hectares in 2010, to increase somewhat in 2011 with 3% (with reference to 2010); in 2012, forested area expanded with a meager 0.50%, to 19,551 ha.

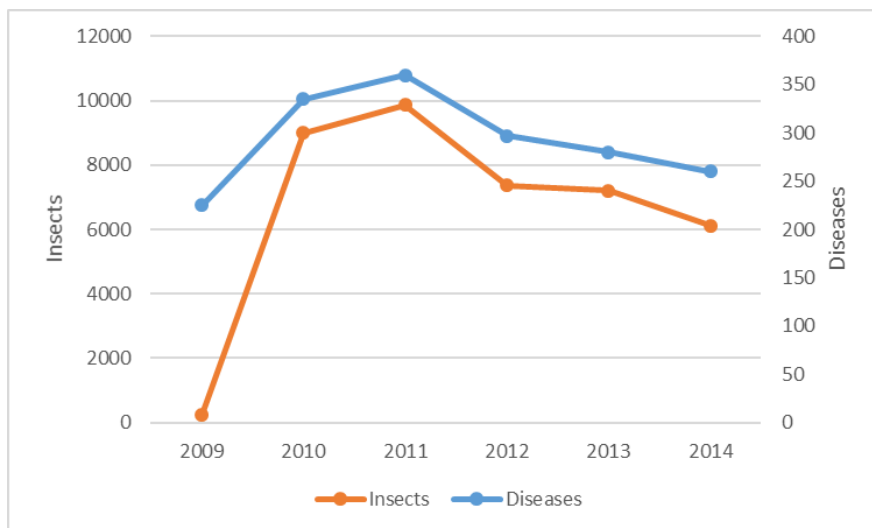


**Figure 2. Wood harvested by population and firms**  
Data source: Ilfov Forestry Direction

As to timber exploited and introduced in Romanian economy, its quantitative dynamics' main features can be described as follows: firstly, timber is purchased either by general public or by specialized companies; secondly, as timber exploitation' dynamics is concered, it too evolved in a rather fluctuant manner.

If, in 2009, to be precise, timber bought by general public amounted to 31,100 cubic meters, 2010 recorded an increase of this value (with 2,900 cubic meters), up to 34,000 cubic meters. In year 2011 general public bought a smaller quantity – that is, 33,700 cubic meters –, but this situation improved (for Ilfov Forest Division) in following year, quantity of timber bought by general public rising with 4.00%, to 35,100 cubic meters. The next two years are indicating a downward trend.

Analysis of quantity of timber bought by companies shows that in 2009 companies bought 38,900 cubic meters; from this level the 2010 value dropped a bit, more exactly with 3,900 cubic meters, to rise again in 2011 with 4,700 cubic meters and, in 2012, to drop again to the level of 36,900 cubic meters. The trend observed for population could be also seen for firms in 2013 and 2014.



**Figure 3. Forest areas affected by diseases and insects (hectares)**

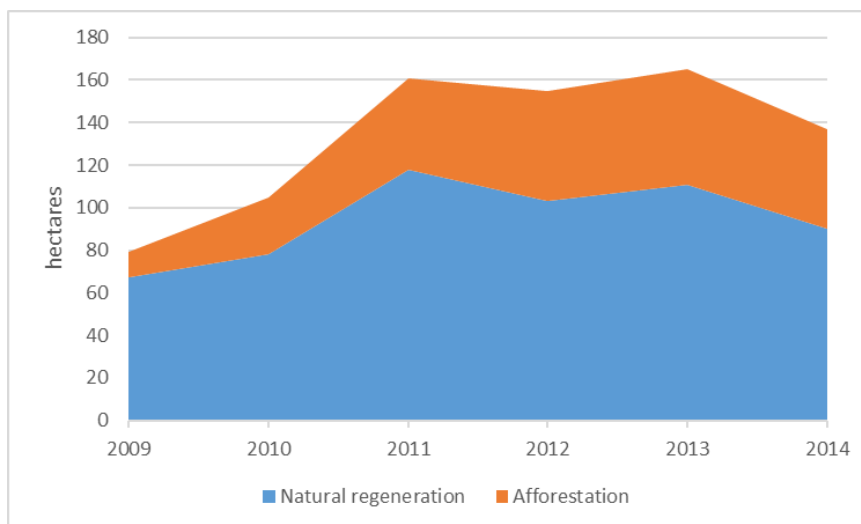
Data source: Ilfov Forestry Direction

Ilfov Forest Division has many responsibilities; among them, one of the most important is looking after the forest they manage, in any and every possible way.

In 2009, in order to exterminate all parasite fauna and flora that destroys the forests, this Division took action over an area of 239 hectares; this area grew to 341 hectares in 2010, then to 376 hectares in 2011. In 2012, area in which parasite fauna and flora was eliminated from declined to 307 hectares, and continued further up to 2014.

As to defoliating insects, Ilfov Forest Division took determined action, in 2009, over an area of 1,123 hectares; this action was sensibly boosted in next years, so that the area on which defoliating insects were destroyed expanded up to 9,872 hectares in 2010, respectively to 10,305 hectares in 2011; as of 2014, this respective area was smaller, of only 6125 hectares.

In figure above we illustrated the afforested areas, on one hand, and the natural regenerated ones, on the other hand. Areas which naturally regenerated are expanded – this trend started in 2009, as natural regeneration of forest happened on an area of 65 hectares (in decline compared to 2008), and a gradual increase was recorded until (at least?) 2012, when natural regenerated area decreased slightly, to 114 hectares. This rised to 137 hectares in 2014.



**Figure 4. Natural and afforestation regeneration of forest area**

Data source: Ilfov Forestry Direction

In order to maintain forests neat and trim, every year Ilfov Forest Division must undertake specific operations of forest rebuilding, forest trimming and, one of the most important, forest grooming. All these require, more or less, getting rid of dead trees, broken and fallen branches, etc.

## 2. FORESTRY DEVELOPMENT STRATEGY

According to Burlacu (2012), Romania is below European average as to forest-covered areas – i.e., 26.7% of Romania is covered by forests, compared to European average of 30%. This situation led to designing of strategies aiming at afforestation schemes, but also at issuing laws in order to achieve active protection of forest fund.

Forest protection is a diar necessity and not a ‘middle way’ of sorts for at least two main reasons: first is forest plays a very important role in maintaining ecologic equilibrium (Dragu, 2011); on the other hand, forest is a resource which needs a very much time span for regeneration.

Maybe the most important problem forest sector in Romania deals with is desertification. As a result, in 1996 already, Romania ratified Convention for Combating Desertification through Law 26/1996. The result of *this* is a series of national strategy schemes, designed, drafted and, at least in theory, applied:

1. National Plan for Environment Protection;
2. National Plan for Rural Development;
3. National Strategy for Romania’s Economic Development;
4. Project for Strategies aimed at Combating Desertification [Bran, 2002, p.355-356].

## CONCLUSIONS

Forest policies and also forest strategies must be elaborated in such a manner that their designers will not overlook the restrictions imposed both by available resources (among other things, any strategy, as well as any policy must be designed from the very beginning in a realist manner, inclusively by not overestimating resources which will be used whilst elaborating and implementing that strategy) and by the reality of *real* needs forests require.

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