Landowner and hunter's rights over red deer stocks management in several regions in Europe

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Topic 2: Natural resources, ecosystem services and environmental quality

Subtopic: 2.1. Economics, incentives and institutions for ecosystems and biodiversity

Short summary

There is a major concern across European nations about the management of wild large herbivores (red and roe deer, elk, moose) and their abundance and economic effects on forest ecosystems. The present study applies the analytical framework of Institutional Resource Regimes to understand the problems of controlling red- and roe deer populations. We describe how the rights over the game and over hunting are distributed between the landowner and the hunter in 12 countries in Europe. While legal property rights system establishes who owns the animals, public policies (e.g. hunting regulations) define who owns the right to hunt and which qualifications (minimum hunting area, licenses, management plans) are needed for that activity. The lack of coherence between the property rights system and the public policies has significant consequence on ecological sustainability of forestland management, as shown in six selected regions, for which a deeper analysis was performed.

Extended abstract

There is major concern across European nations about the management of wild large herbivores (red- and roe deer, elk, moose) and their abundance and economic effects on forest ecosystems (Fuller and Gill, 2001; Cote et al., 2004; Phillip et al., 2009; Andersen et al. 2014; Schulze et al., 2014). The situation has been already known in the history. The prohibition of the individuals right to hunt (hunting become reserved to seigniors) that was initiated at the beginning of XVIth century has lead to such an abundance of mammals in France that peasants were complaining in 1789 about the destruction of their gardens and fruits trees and about the fact that they were treated as criminals when hunting the animals that were causing them damages (Goubert et Denis, 1964). There are many examples in the history how a change in property rights system and associated hunting policies (e.g. hunting or protecting the top-level predators such the wolves, or the establishment of conservation measures) led to temporary or long-term disequilibrium between the wild large herbivores and forest ecosystems, affecting local communities through damages on agricultural crops and on forest regeneration (Brard, 2000).

There are two recent trends indicating that in the future a major change on in the current distribution of property rights and in hunting policies is needed. The first one is a consequence of large mammals' abundance. The increased number of red- and roe deer related road accidents (Danks and Porter, 2010; Snow et al., 2014) highlights again the issue of who owns the animals causing the incidents in the frame of civil or penal liability. The second trend is the recognition of a "not-to-hunt right" following different Court decisions (e.g. European Court Decision from 2012), which recognizes this right to the landowner, up to now obliged to accept hunters on his property. At least three European countries modified their legislation to recognize the "not-to-hunt" right (France, Portugal and Germany).

These are the reasons for questioning the current system of the property rights over the wild large mammals in several European countries and the current instruments used to regulate the access to and the management of red-deer stocks. Amongst the wild large animals we choose to study red- and roe deer because of their browsing impact on forest generation, but also because of their importance for income-related issues (for forestland owner, hunters or municipalities). Besides, red- and roe deer is not subject of any special protection measures and wild red-deer territories are in general larger than holdings of individual landowners.

To understand the problem of controlling red-deer population, we apply the analytical framework of Institutional Resource Regimes (Gerber et al. 2009). Within this analytical framework, we convene that legal property rights system establishes who owns the animals, while public policies (e.g. hunting regulations) establish who owns the right to hunt and which qualifications (minimum hunting area, licenses, management plans) are needed to access and manage the stocks of red-deer and withdraw (hunt) a certain institutionally permitted number of animals.

We describe for 12 European countries how the holder of hunting rights (hunters' associations, group of landowners, governmental agencies or individuals) is identified in the national legislation and how is defined the landowner's own rights to hunt or to exclude hunting on his property. We use Schlager and Ostrom (1992) concept of "bundle of rights" to cross-check two typologies: 1) typologies based on property rights upon the game analyzed under an historical perspective (ownership on red-deer as a subjective user right, as landowner right or as State right – Fromageau, 1999; Cirelli, 2002) and 2) typologies based on stock management analyzed under the perspective of harvesting level (systems requiring detailed harvest plan; systems where harvest is controlled by license and land/hunting ground ownership; system where harvest is controlled by license only; system where harvest is controlled by landowner only – Gill, 1990). Furthermore, for six selected case studies (Thuringia, Wallonie, Romania, Catalonia, Scotland and Portugal), we go further and we compare:

1. the incentives to hunt: e.g. hunting for trophy; for meat; as a lifestyle; for controlling population; for limiting damages; for money. Every system has its own main reasons for hunting red deer. (Some systems established these in the

law, in other cases the incentives were well studied already)

2. the practical instruments at work to regulate the red-deer stocks in relation with some characteristics of the resource (abundant, normal, below the optimum, presence of top-level predators or competitors) and of the hunting policy (namely the stakeholders, their interests, the perception of the problem of population control on the political agenda, and the enforcement level of the hunting quota).

While the characteristics of resource and hunting policy variables (stakeholders and enforcement) vary greatly, one may see a common influence of EU wildlife protection policies on hunting, but also a common interest of environmentalists and hunters for a greater stock of red- and roe deer. We show therefore that the ecological sustainability of forest ecosystem management when pending on red- and roe deer stocks control, is driven mostly by the (private) interests vested in the sector, as it was always the case within the hunting sector in the history (Fromageau, 1999).

Our argument here is that excessive red-deer population is harmful for the ecological sustainability of forests. The main message of the paper is that the current property right structure and policies are giving strong incentives to have higher stocks, which is damaging the forests. There are powerful interests, coming from two completely opposite directions (environmentalists and hunters) to continue with the current situation. To further protect forests, one needs to either enforce the forest stakeholders interested in protecting forest regeneration, or raise awareness amongst the other two groups about the damage the large game animals cause to forests, which eventually will undermine the habitat of these animals. The paper is advocating for "multi-functional forest management", that takes into account both the sustainability of game and the sustainability of forests themselves.

Andersen O., Wam, H., Mysterud, A., and Kaltenborn, B. 2014. Applying typology analyses to management issues: Deer harvest and declining hunter numbers. Journal of wildlife management, 78: 1282-1292.

Brard, L., 2000 (ed.). La chasse en droit compare. Société française pour le Droit de l'Environnement. Ed. L'Harmattan, 384 p.

Cirelli, M. T. (2002). Legal trends in wildlife management (Vol. 74). Food & Agriculture Org..

Côté, S.D., Rooney, T.P., Trembley, J.-P., Dussault, C. & Waller, D.M. (2004) Ecological impacts of deer overabundance. *Annual Review of Ecology and Systematics*, **35**, 113–147.

Danks, Z. D., & Porter, W. F. (2010). Temporal, spatial, and landscape habitat characteristics of moose—vehicle collisions in Western Maine. *The Journal of Wildlife Management*, *74*(6), 1229-1241.

Fromageau, J., 2000. Genese du droit de la chasse dans les pays européens. La chasse dans le droit compare. L'harmattan.

Fuller, R. J., & Gill, R. M. A. (2001). Ecological impacts of increasing numbers of deer in British woodland. *Forestry*, *74*(3), 193-199.

Gerber, J-D., Knoepfel, P., Nahrath, S., Varone, F. (2009). Institutional resource regimes: towards sustainability through the combination of property-rights theory and policy analysis. Ecological Economics 68, 798-809.

Gill, R. (1990) *Monitoring the Status of European and North American Cervids.* The Global Environment Monitoring System Information Series 8. United Nations Environment Programme, Nairobi, Kenya

Goubert, P. et Denis, M., 1964. 1964. 1789, Les Français ont la parole. Cahiers de doléances des États généraux présentés par Pierre Goubert et Michel Denis, suivis d'un glossaire pratique de la langue de quatre-vingt-neuf. Paris: Julliard.

Phillip, S., et al., 2009. Is legislation a barrier to the sustainable management of game species? A case study of wild deer in Britain. Journal of environmental planning and management, 52, 993–1012.

Schulze, E.D., O. Bouriaud, J. Wäldchen, N. Eisenhauer, H. Walentowski, C. Seele, E. Heinze, U. Pruschitzki, G. Danila, G. Marin, D. Hessenmöller, L. Bouriaud, M. Teodosiu, 2014. Ungulate browsing causes species loss in deciduous forests independent of community dynamics and silvicultural management in Central and Southeastern Europe. Ann. For. Res. 57(2): _-_ 2014. http://www.afrjournal.org/index.php/afr/article/viewFile/273/339

Snow, N. P., Porter, W. F., & Williams, D. M. (2015). Underreporting of wildlife-vehicle collisions does not hinder predictive models for large ungulates. *Biological Conservation*, *181*, 44-53.