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in

Kyriazopoulos A.P. (ed.), López-Francos A. (ed.), Porqueddu C. (ed.), Sklavou P. (ed.).  
*Ecosystem services and socio-economic benefits of Mediterranean grasslands*

Zaragoza : CIHEAM

Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 114

2016

pages 345-348

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=00007543>

To cite this article / Pour citer cet article

Ragkos A., Karatassiou M., Georgousis Z., Parissi Z., Lagka V. **A traditional route of transhumant flocks in Northern Greece: Cultural aspects and economic implications.** In : Kyriazopoulos A.P. (ed.), López-Francos A. (ed.), Porqueddu C. (ed.), Sklavou P. (ed.). *Ecosystem services and socio-economic benefits of Mediterranean grasslands*. Zaragoza : CIHEAM, 2016. p. 345-348 (Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 114)



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# A traditional route of transhumant flocks in Northern Greece: Cultural aspects and economic implications

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**Abstract.** Transhumance is still practiced in Greece, however a general trend of intensification of production often compels transhumant farmers to adopt innovations and modern standards. Within this context, only vertical flock movements are done by foot, while for longer distances trucks are generally used. This study presents the traditional route which was followed in the past by Sarakatsans – an ethnic group inextricably woven with the transhumant system in Greece, who spent winter in the plains of Chalkidiki (Central Macedonia) and moved to the mountain Kaimaktsalan in Western Macedonia in the summer (almost 250 km). Drawing from personal interviews of families who experienced these movements, we detect aspects of the everyday life of these people. Each stop (“konaki”) in this 24-day movement was linked with a particular chore: cheese making and selling, raw milk sales, shearing etc. The economic implications from the potential use of these traditional routes nowadays are two-fold. First, using partial budgeting, we conclude that considerable savings occur if farmers avoid the costly use of trucks; second, the costs of re-establishment and maintenance of these routes could be counterbalanced by alternative uses or the generation of environmental services.

**Keywords.** Extensive livestock farming – Mountainous rangelands – Sarakatsanoi.

## *Une route traditionnelle des troupeaux transhumants dans le nord de la Grèce : Culture et économie*

**Résumé.** La transhumance est encore pratiquée en Grèce, mais une tendance générale d'intensification de la production oblige souvent les éleveurs transhumants à adopter des innovations et des normes modernes. Dans ce contexte, seulement les mouvements “verticaux” sont faits à pied, tandis que pour les longues distances les camions sont généralement utilisés. Cette étude présente la route traditionnelle qui a été suivie dans le passé par les Sarakatsans - un groupe ethnique pratiquant traditionnellement la transhumance en Grèce -, qui passaient l'hiver dans les plaines de la Chalcidique (Macédoine Centrale) et se déplaçaient à la montagne Kaimaktsalan en Macédoine occidentale pendant l'été (près de 250 km). En menant des entretiens personnels avec des familles qui ont vécu ces mouvements, nous détectons les aspects de la vie quotidienne de ces personnes. Chaque arrêt (“Konaki”) de ce mouvement de 24 jours a été lié à une corvée notamment: fabrication et vente du fromage, vente de lait, tonte des animaux, etc. Il y a deux types de conséquences économiques pour la réutilisation potentielle de ces routes traditionnelles. Tout d'abord, en utilisant la budgétisation partielle, nous concluons à des économies considérables si les éleveurs évitent l'utilisation coûteuse de camions. Deuxièmement, les coûts de re-création et l'entretien de ces routes pourraient être contrebalancés par d'autres utilisations ou par la génération de services environnementaux.

**Mots-clés.** Production animale extensive – Prairies montagneuses – Sarakatsans.

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## I – Introduction

Transhumance constitutes a particular system of livestock production, endowed with a highly multifunctional character. One of its most unique features is its high dependence on land use, unlike other livestock production systems, which are attached to land at a lower degree. These

relationships are formidable. First, transhumant farmers cultivate land, either for the production of forage (lucerne) and concentrates (maize and winter cereal) or for the formulation of pasturelands. Second, transhumant flocks base their nutrition on the use of rangelands and particularly on mountainous ones, in order to achieve costs savings from nutrition which can reach up to 47% according to Ragkos *et al.* (2014), thus an integrated regulatory framework for these areas is of the utmost importance. Third, land use design is also important in order to facilitate flock mobilities from winter to summer rangelands because, in numerous cases, flocks and farm families are obliged to pass through cultivated areas, towns, villages and protected areas and the lack of designated routes does not permit them to arrive to their destination.

In Europe, safekeeping transhumances and the routes of flocks receives much interest. In France, multiple efforts are now in force in order to protect and develop the traditional routes of transhumant farmers ([www.larouto.eu](http://www.larouto.eu)), aiming at revitalizing the old paths also for other uses (Gilles, 2002). In Spain, the routes of transhumance have been protected by law since 1974; the law of "Vías pecuarias" of 1995 further protected and recognized these routes as public domain areas with regulated uses, while the report "La trashumancia en España: Libro Blanco" (AA.VV., 2012) recognized 128,543 km of routes covering almost 1% of the total area of Spain. A very interesting example is provided by the City of Madrid ([www.viaspecuariasdemadrid.org](http://www.viaspecuariasdemadrid.org)), where an extensive network of over 600 km of paths is available for flocks but also for recreational activities. In Italy, on the other hand, the routes of transhumant sheep and goat flocks could be found in the central and southern Apennines in the past, but now these movements have been transformed to vertical movements ("transterminance") of a few kilometers from the lowlands to mountainous rangelands of the same area (Pardini and Nori, 2011).

In Greece nowadays there are more than 3,500 transhumant flocks. In the past all flocks were moved on foot but, due to several reasons, most of these movements are now performed with trucks and only local, "vertical" and a very small proportion of long-distance (more than 100 km) movements are still moved on foot throughout the country. This is due to several reasons including a general trend of transhumant farmers to adopt innovations and modern standards, restrictions in land uses, changes in the living standards of farmers as transhumance on foot is demanding, often difficult and time-consuming.

This study presents the traditional route which was followed in the past by Sarakatsans, an ethnic group historically involved in the transhumant system in Greece, who spent winter in the plains of Chalkidiki (Central Macedonia) and moved to the Mount Voras (Prefecture of Florina, Western Macedonia) in the summer. Lately, efforts are made to record these traditional routes, either through personal communications or using old publications (e.g. Loukopoulos, 1930). There are also applications of new technologies in the graphical representation of routes using GIS and multimedia and/or providing useful practical information for potential users (Ntassiou *et al.*, 2015). The implications of the revitalization of these routes, possible alternative uses and policy measures to fund such initiatives were also investigated.

## II – Materials and methods

In order to examine the route followed by Sarakatsans, personal interviews with members of three families who experienced these movements were conducted in 2014. Respondents, who were all over 70 years of age, described the itinerary, the stops ("konakia", singular "konaki") and the tasks performed by farm families everyday during the movement. Through their descriptions important cultural features and historic details were detected.

Almost the whole movement of the flocks took place within the boundaries of the Region of Central Macedonia (RCM). The most important feature of RCM is the high level of agricultural development; there, the largest plain of Greece is situated which, combined with the favourable soil and climate conditions, formulated intensive crop and livestock production systems. The co-existence of transhumance with these systems is very interesting in itself. Nowadays there are

195 transhumant flocks in Central Macedonia rearing more than 71,000 sheep and goats. Most of these flocks perform transterminance within a range of 20-30 km in most cases, thus performing an important environmental role in preserving and maintaining mountainous rangelands. Farms are generally of low productivity, ensuring their survival through milk and lamb meat sales, EU income support policies and cost savings from the limited use of purchased feedstuff. Many farmers produce their own cheese, either for the farm household or for markets.

### III – Results and discussion

The traditional route is presented in Table 1. The whole route is 256 km through the modern road network and the distance can be covered in 3 hours and 53 minutes using trucks. However, the situation was different in the old times, as flocks were able to use mountainous roads, which were more direct. Note that the movements were ceased and abandoned during the 1970s. Each stop (“konaki”) in the 24-day movement from Chalkidiki to the final destination in Mount Voras was linked with a particular task: cheese making and selling, raw milk sales, shearing, etc. The distance covered each day was determined by the particular chores undertaken at that specific day and also by the type of land uses prevailing at that area. For example, they remained around the city of Thessaloniki for several days in order to sell milk and cheese and to buy supplies. Then, from 13 to day 20 they only moved for a few kilometres per day, because they had to pass through fertile agricultural areas, which were cultivated during spring time, therefore they had to be very careful. After day 21, when the route passed through the mountains dividing Western Macedonia from Central Macedonia (Voras), flocks were able to move at a longer distance within a day, because these areas were mountainous with no agricultural uses, which permitted flocks to move faster, and also farmers only manufactured cheese for self-consumption.

**Table 1. The route from Chalkidiki to Mount Voras (Western Macedonia)**

Stops (“Konakia”)	Chores/Tasks	Stops (“Konakia”)	Chores/Tasks
1. Poligyros		13. Gefyra	Milk sales
2. Chalbouki		14. Chalkidona	Milk sales
3. Vatonía (Olinthios river)		15. Giannitsa	Cheese sales
4. Agios Prodomos	Lamb sales	16. Melissi	Milk sales
5. Galatista	Milk sales	17. Kallipoli	Milk sales
6. Vasilika	Cheese sales	18. Lipochori	Milk sales
7. Redestos	Milk sales	19. Rizari	Milk sales
8. Panorama	Milk sales	20. Edessa	Milk sales
9. Thessaloniki (“Seich Sou”)	Milk sales	21. Xanthogia	Cheese making
10. Thessaloniki (“Papafio”)	Milk sales	22. Kelli (“Mpegna”)	Cheese making
11. Diavata	Shearing	23. Skopos	Cheese making
12. Agios Athanasios	Milk sales	24. Koryfi	

This route is not used by flocks nowadays, as the movement is performed with trucks. However, the economic implications from the potential revitalization of these traditional routes nowadays are two-fold. First, using partial budgeting, we conclude that considerable savings occur if farmers avoid the costly use of trucks, because the opportunity costs of human labour are very low. According to survey data (Ragkos *et al.*, 2014) leasing a truck for a distance of 200 km costs 700€- 900€ on average, the price being subject to the fluctuation of petrol prices, which is twice this sum if the size of the flock exceeds 500 animals, which means that two or more

itineraries would be needed. Consequently, medium-sized transhumant farms could avoid up to 1800€ annually if they were able to move their flocks by foot.

The above consideration is a purely economic one, but there are also non-economic benefits from the use of these routes, including the provision of ecosystem services (for example maintenance and protection of biodiversity, reduction in CO<sub>2</sub> emissions etc) and the protection of cultural identities. There is strong evidence that the public attach monetary values to such services (Bernués *et al.*, 2014; Villanueva *et al.*, 2015), which, are nonetheless, not reflected at the prices of products. Therefore, it is logical to expect that significant values would emerge from the revitalization of these routes. For this to happen at an inter-temporal basis, there are several necessary structural adjustments, such as the effective design of land uses, the assurance of cooperation of transhumant livestock farmers with crop farmers cultivating nearby areas with mutual respect to their activities and the revision of the managerial framework of designated protected areas (for instance, NATURA 2000 network).

## IV – Conclusions

The revitalization of this traditional route, also like many more in Greece, could be proven costly, as several highly productive agricultural plots would be needed to remain uncultivated. However, the choice of the correct policies and strategies would help increase the added value of these routes by internalizing externalities, through the development of activities that would bring income and employment to farmers and other involved actors. This way, the costs of re-establishment and maintenance of these routes could be counterbalanced by alternative uses including hiking, eco-tourism and the promotion of the cultural background of these movements. The new Rural Development Program of Greece 2014-2020 provides funding opportunities to interested municipalities through targeted sub-measures of the Measure 07 aiming at the restoration of cultural features in rural areas, the development of local landmarks and the protection of forest roads in mountainous areas.

## Acknowledgements

This paper is part of the project “The dynamics of the transhumant sheep and goat farming system in Greece. Influences on biodiversity” which is co-funded by the European Union (European Social Fund) through the Action “THALIS”.

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