



DECEMBER 11, 2014

# What is the Socio-Cultural and Economic Value of Mediterranean Mountain Agriculture?

*Alberto Bernues*, Norwegian University of Life Sciences

Traditional agricultural activities have suffered a notorious recession in recent decades in many Euro-Mediterranean regions. This recession originated in changes in the type and intensity of land utilization, such as intensification of the management system, reduction of grazing and abandonment of remote rangeland areas. Consequently, a general process of vegetation encroachment and landscape closure is happening.

The “Sierra y Cañones de Guara” Natural Park is a protected mountain area located in Northeast Spain that constitutes a representative example of this process. Today, about half of the park consists of private and communal shrub rangelands, and the main agricultural activity is grazing livestock, with some agriculture (olive trees and cereals) in more favorable areas. The park constitutes a Special Protected Area (EU Birds Directive) that includes three Sites of Community Importance (EU Habitats Directive). Originally created to protect scavengers, which are highly dependent on carcasses of domestic animals for feeding, the park attracts many visitors due to its rich geological (canyons, caves, etc.), cultural (prehistoric and megalithic art, traditional buildings, villages, etc.) and natural heritage (endangered species, diversity of landscapes, scavengers and other

birds of prey, etc.).

In highly multifunctional landscapes like this one, the current debate is about shifting the emphasis of the agricultural policies toward the supply of public goods. Therefore, the efforts to quantify the biophysical effects of agricultural practices on the environment and to integrate relevant agri-environmental indicators into policy design are increasing. However, studies that simultaneously consider all ecosystem services delivered by agriculture and value them from different perspectives, are still missing.

In a **recent study**, researchers from the Norwegian University of Life Sciences, CITA-Spain and Wageningen University were able to elucidate the socio-cultural and economic values of a number of ecosystem services, previously defined in biophysical terms, in “Sierra y Cañones de Guara” Natural Park. They combined deliberative (focus groups) and survey-based stated-preference methods (choice modeling) to, first, identify the perceptions of farmers and other citizens of the ecosystem services provided by mountain agriculture and, second, to value these in economic terms according to the willingness to pay of the local (residents of the study area) and general populations (region where the study area is located).

In a first stage, the deliberative research showed that the cultural services (particularly the aesthetic and recreational values of the landscape), supporting services (biodiversity maintenance) and some regulating services (particularly fire risk prevention) were clearly recognized by both farmers in the area of study and urban residents, with different degrees of importance according to their particular interests and objectives. The availability of high quality food products linked to the territory was also highly valued, especially by urban citizens.

In a second stage, local and general population respondents were asked to choose their most preferred policy scenario among three alternatives. The *status quo* scenario corresponded to the current delivery of ecosystem services previously identified, whereas the *liberalization* (reduction of agri-environmental support) and *targeted support* (additional funding to agri-environmental schemes) scenarios represented different combinations of levels of ecosystem services delivery.





Current scenario



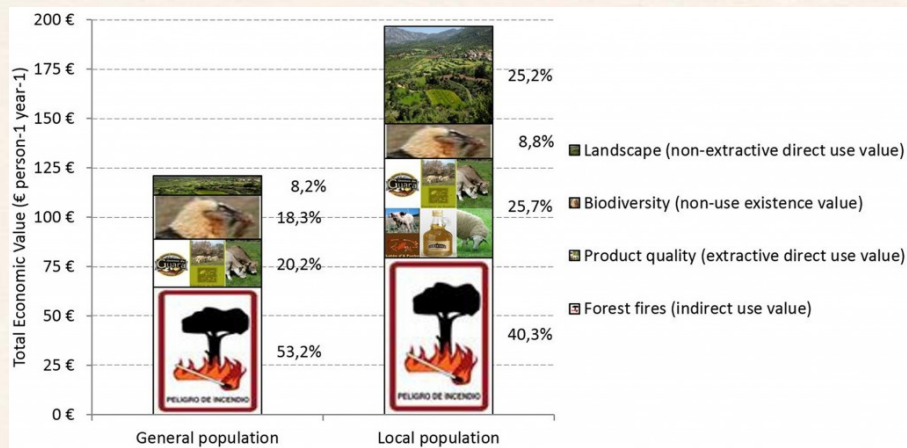
Liberalization scenario



Targeted support scenario

*Agricultural landscape varies according to the socio-economic and policy scenarios. Photos: Alberto Bernues*

The analysis of responses allowed obtaining a ranking of ecosystem services, as well as the willingness of the society to pay for their delivery. The prevention of forest fires ( $\approx 50\%$  of total willingness to pay) was valued by the general population as a key ecosystem service delivered by mountain agroecosystems, followed by the production of specific quality products linked to the territory ( $\approx 20\%$ ), biodiversity ( $\approx 20\%$ ) and cultural landscapes ( $\approx 10\%$ ). The value given by local residents to the last two ecosystem services differed considerably ( $\approx 10$  and  $25\%$  for biodiversity and cultural landscape, respectively). The authors were able to obtain the Total Economic Value of Mediterranean mountain agroecosystems that was  $\approx 120\text{€}$  per person per year, three times the current level of support of agro-environmental schemes (see graph).



*Ranking of ecosystem services and Total Economic Value for the local and general populations. Current level of support is 45€ per person per year.*

The authors conclude that there is a large underestimation of the socio-cultural and economic values of ecosystem services of Mediterranean mountain agroecosystems, the welfare loss linked to environmental degradation in these areas and the cost of inaction. It is therefore necessary to value public goods in monetary terms to compensate farmers in an equitable way for their delivery. By individualizing support, monitoring and valuing objective indicators for ecosystem services and targeting particular agricultural practices, so-called “green” subsidies may truly become Payments for Ecosystem Services.

## READ MORE

***Socio-Cultural and Economic Valuation of Ecosystem Services Provided by Mediterranean Mountain Agroecosystems***

## SHARE



## MORE FROM

***Alberto Bernues***

## MORE IN

***Europe From Others in Exploring the Evidence, Landscapes Around the World***

## PREVIOUS



*December 10, 2014*



## We Cannot Learn from Habitat Restoration without Funding Monitoring

NEXT



NO COMMENTS

### *Leave a Comment*

Enter your comment here...

.....  **SUBMIT COMMENT**

Notify me of follow-up comments by email.

Notify me of new posts by email.

©2014 EcoAgriculture Partners

EcoAgriculture Partners serves as the secretariat for the Landscapes for People, Food and Nature Initiative.

Website by Cstraight Media

