



DoMEsTic

2012-2015

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Transnational Joint Call

Highlights

Mediterranean biodiversity as a tool for the sustainable development of the small ruminant sector: from traditional knowledge to innovation



DoMEsTic
Traditional Knowledge to Innovation

- ❖ DoMEsTic is about biodiversity and farming systems – assessing sensitivities to hazards, and aiming towards the sustainability of the sheep and goat sector. It enlightens the interaction of livestock production systems with the environment, as well as with the social and economical dynamics.
- ❖ What are the means by which preserving the production system diversity can ensure adequate level of income for the farmer and the provision of products to the market at an acceptable price and quantity?
- ❖ Framework to understand the interactions between management and value-adding strategies for local breeds, to facilitate coordination and cooperation between stakeholders, to identify possible tensions and support favorable dynamics.

Objectives

Local breeds

Sheep and Goats

Sustainable production

Adaptation

Collective organization

- ❑ DoMEsTic aimed to investigate the factors that influence the sustainability of sheep and goat production systems, by examining:
 - the components of the production systems,
 - the role of local authorities and the organisation at territorial level,
 - the supply chain and the factors underlying the profile of sheep and goat farmers, with respect to the chosen milk or meat distribution channel.
- ❑ DoMEsTic addresses the management of sheep and goat local breeds, the collective organisation, factors affecting marketing decisions and stakeholders' involvement.
- ❑ The added value of the project is related to the enhancement of available knowledge on the components of the production systems that contribute to the sustainability of the systems, and the development of new methods and models that help to understand the dynamics of local breeds and their role in the rural economy.

Scientific results & innovation potential

- ✓ The main outcomes of DoMEsTic involve methodologies and frameworks developed to support local breeds and enhance their positive impact on rural economies:
(1) Regulatory Framework to establish and reinforce coordination between local actors, (2) Value chain analysis and analysis of the factors affecting marketing and channel choice decisions at farmer's level, (3) Framework with a "checklist" of levels where the breed can play a mediating role between product valorisation and genetic management and, (4) Indicators for the assessment of the sustainability of the production systems as a whole, based on the analysis of collected data.
- ✓ The map of collective organization in each situation was described, identifying the main stakeholders for breed management and product valorisation.
- ✓ The analysis revealed the mediating role of the local breed within the livestock farming system and the value adding process, considering it at both the individual and collective level.
- ✓ The innovation potential of DoMEsTic is linked to the dynamics generated by these tools, enabling increased understanding of the economic, social, environmental and institutional factors that affect the sheep and goat sector, which can be extended to the whole Mediterranean region.

Coordinator

Dr Christina LIGDA

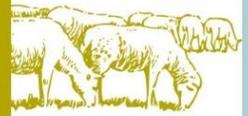
Hellenic Agricultural Organization – DEMETER
Veterinary Research Institute, Thessaloniki

GREECE

chligda@otenet.gr

Partners

- Laboratoire de Recherches sur le Développement de l'Élevage (LRDE), Institut National de la Recherche Agronomique (INRA), Corte, **FRANCE** – lauvie@corse.inra.fr
- Animal Production Unit, Agricultural Research Institute, Lefkosia, **CYPRUS** – georgia.hadjipavlou@ari.gov.cy
- Feeding, Qualification and Environnement in Animal Production, Institut Agronomique et Vétérinaire (IAV) Hassan II, Rabat, **MOROCCO** – a.araba@gmail.com



Production systems

- A case study approach was used as the basis for the research work. Detailed data on the production systems were collected through personal interviews with specific questionnaires to the farmers and other stakeholders. This work aimed to define the main characteristics of the production systems and the resources that contribute to the specificities of the products.

Collective organization

- The map of collective organization was developed by contacting experts in each case. This table registers the different stakeholders, their roles and interactions, the main tools and the main steps identified in the collective action.

Supply chain

- A supply chain analysis was implemented to identify and characterise the main stakeholders involved in the production and valorisation of the products, and their relationships. The work was based on interview data analyses, for a better understanding of the key points of favourable dynamics.

Sustainability

- Sustainability was assessed using specific principles, criteria and indicators classified into three pillars: economic, social and environmental.

Why collaborating?

- The collaboration in the frame of DoMEsTic contributed to the recognition of the diverse and common elements of sheep and goat production systems in the Mediterranean region, the identification of common problems and the development of tools and ways towards the sustainable development of the sector.
- The work plan succeeded in enhancing the interaction between researchers from multiple disciplines and brought new elements in the research that is carried out in this domain at national level.
- The methodologies and frameworks developed aimed at increasing the value of local breeds and their position in the market, and thereby further enhance their uptake in livestock agriculture, with an associated positive impact on rural economies and local communities.

The Corsican sheep

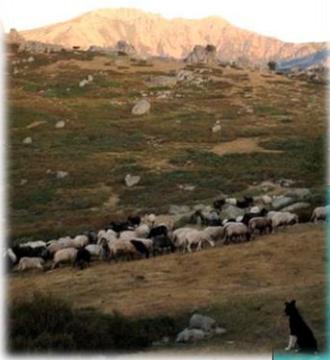


Figure 1. Study areas

Transhumance flock of Katsika sheep breed in Ipeiros mountains, Greece



Morocco: IAV Hassan II

France: INRA, LRDE

Greece: VRI, AGRERI

Cyprus: ARI

Mixed herd of local sheep and goat breeds in a pasture of Eastern Morocco



Cyprus Damascus goats



ACHIEVEMENTS

Links between livestock farming systems, local resources and food products

Farming systems and local breeds

- The main outcomes are related to the analysis of the production systems, their values and challenges. The map of the collective organization described the stakeholders, their roles and interactions, but also the possible tensions between them or absence in certain areas of collective management of local breeds and their value adding process.
- The role of local breeds as a link between the production system and the product, was revealed through the comparative analysis of the case studies.
- In general, the connections between a breed and a product in the specific cases were weak, and as a result, the dynamics of the product do not have direct consequences on the management of a single breed.

Social organization

In the analysis of the collaboration framework among actors, the question of the social organization was crucial in all cases:

- When local breed management and product valorisation are coordinated at national level, difficulties for local stakeholders to get involved in these projects are observed.
- Several stakeholders with different viewpoints on what is the relevant product may confront each other in these projects.
- The collective organization influences the orientation of the specification depending on their weight (size, power).
- When product processing depends on a large proportion of farmers from a single large structure, changes in organization, status and/or practices of this structure can have global consequences on the sector.

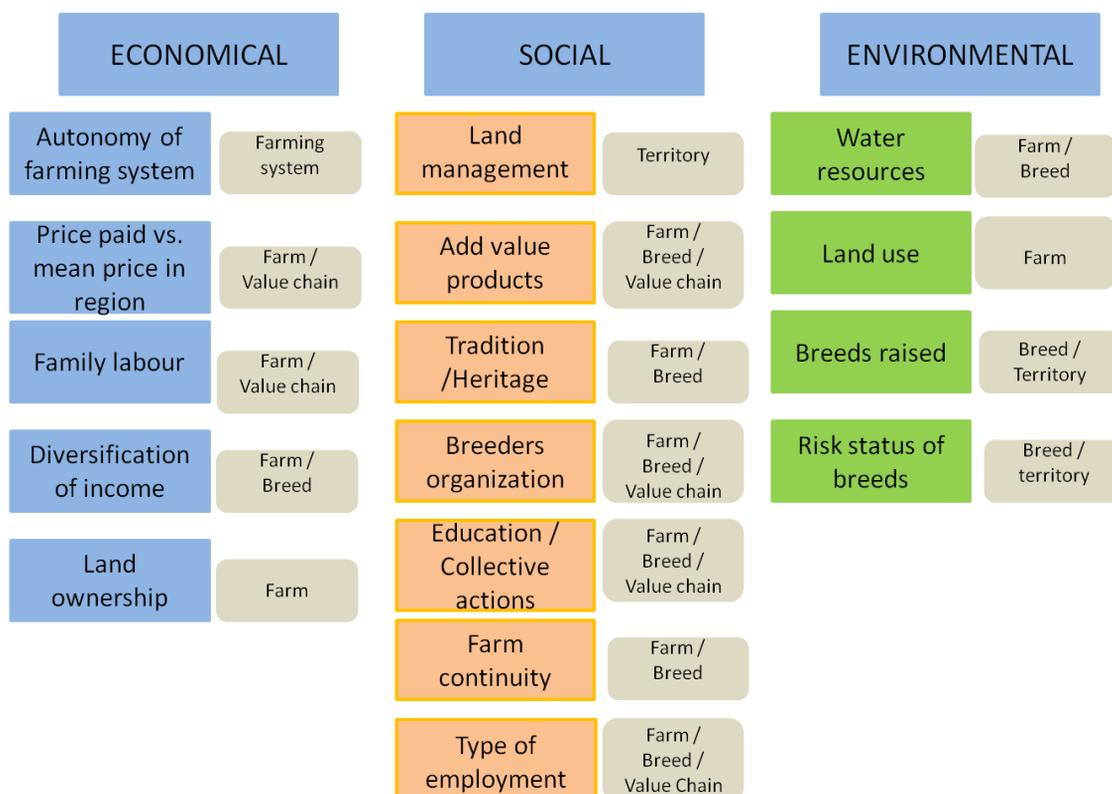


Figure 2. Sustainability indicators and relevance level

Role of local breeds

- The aim of the in-depth analysis was to scrutinize the mediating role of the local breed within the livestock farming system and the product valorisation, both at an individual and collective level.
- The means by which the practices are connected at different levels to maintain coherence among livestock farming systems, local resources (including the breed) and products' selling processes were considered.
- The interactions between management strategies of local breeds and value-adding strategies were used to provide the keys for identifying possible tensions and difficulties, along with positive aspects to support favorable dynamics.

Farmers' profiles

- The identified livestock distribution channels and the factors linked with the production system were analysed, determining the profiles of the farmers and their marketing strategies.
- The core constraints that farmers face were identified and the strategies to follow in order to support the sustainability of the sector were revealed, according to their own views.

ACHIEVEMENTS



Stakeholder engagement

- ❑ Communication with local stakeholders was pursued at several occasions, from the start of the project through the interviews with farmers and during regular exchanges with stakeholders, i.e. cooperatives, managers of the selection schemes, inter-professional organizations, etc.
- ❑ All partners organized small technical visits and meetings with stakeholders. In local workshops and seminars the outputs of the project were presented to the general public.
- ❑ In the final seminar held in Rabat (17 December 2014), 80 participants coming from different institutes, universities, breeding organizations and administration from Morocco, actively participated.
- ❑ The interest of local stakeholders is in the ways practices are connected at different levels to ensure coherence among the livestock farming systems, local resources (including the breed) and products' selling processes.

Next steps

- ❖ Issues that need further investigation concern the development of a methodology to identify existing links between breeds, farming systems and products, which are currently described in more informal ways.
- ❖ The comparative analysis developed to characterize the role of local breeds on linking livestock farming system to products, indicated the necessity to increase existing knowledge on actual livestock populations' management practices.
- ❖ Specific follow-up activities involving the various stakeholders aim to transform the project's outcomes into development actions, which may set an environment benefiting the sheep and goat sector, as these refer to the factors that influence the farming system, the management of local breeds and the exploitation of the products.

Selection practices	Are the quantity and quality of the product and regularity of the production taken into account in the selection criteria?
Reproduction management	Are constraints for selling animals taken into account? Are lambing periods managed based on the time frame for selling products?
Illustration of the product packaging	Are animals present? Are these from local breeds? Are these combined with other elements of the production system?
Selling process	Are local breeds highlighted in the process?
Perceptions of local breeds	<p>Are local breeds considered as:</p> <ul style="list-style-type: none"> Having a positive influence on product quality? A key element of local heritage? A key element of the production system?

Figure 3. "Checklist" of levels where the breed can play a mediating role between livestock farming system and product valorisation

Do you want to know more?

Contact: Dr Christina LIGDA

chligda@otenet.gr

Website:

<http://www.arim-domestic.net>

For more information on the ARIMNet2 Network

www.arimnet2.net

Contact: arimnet@arimnet.net

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Selected publications

- Lauvie A., Hadjipavlou G., Araba A., Casabianca, F., Ligda, C., 2015. The interactions between product valorization and genetic management: applying a common framework to analyze four cases of sheep and goat local breeds in the Mediterranean area, FAO-CIHEAM Sub-Networks on Production Systems and Nutrition on Sheep and Goats, Montpellier
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- Araba A., Boughalmi A., 2015. Evaluation of the sustainability of the Moroccan sheep meat production systems by the IDEA method. Proceeding of the 66th Annual Meeting of the European Federation of Animal Science (EAAP), Warsaw, Poland
- Paoli J.C., Viollet A., Santucci P.M., Gambotti J.Y., Lauvie, A., 2014. Towards a better understanding of adaptation of local breeds to livestock farming systems: an exploratory methodological proposal. *Options Méditerranéennes*. Série A. 108, 501-505

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