Final Seminar
Small ruminant local breeds and sustainable regional development: the challenges in the Mediterranean area
Experiences from the DOMESTIC project

DoMEsTIC: objectives and outcomes

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AIMS AND PROSPECTS

Which actions are needed to ensure competitiveness and sustainability?

- Breeding healthy, disease resistant animals
- Conservation / management of local breeds
- Higher on-farm processing of milk products
- Added value of sheep and goat products
- Positive synergies in breeds-products interactions
- Criteria and indicators to assess the sustainability
- Education, knowledge transfer and extension services
Mediterranean basin is characterized by a diversity in the small ruminant production systems formed by the wide range of feed resources and feeding systems, the diversity of breeds linked to the territory, the various marketing circuits and transformation, …. leading a large variety of products reflecting a natural and typical image.
Four case studies – Field survey (personal interviews)

- Farmers profile
- Farm and production system
- Feeding
- Breeding and reproduction
- Health management
- Performance recording / monitoring
- Products (distribution of products, marketing, prices etc)
- Values and Challenges
WP1: CASE STUDIES

<table>
<thead>
<tr>
<th>Country / Region</th>
<th>Species</th>
<th>Breed</th>
<th>Product</th>
<th>Production System</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fez- Boulemane, Morocco</td>
<td>Sheep</td>
<td>Timahdite Beni Guil, Ouled Djellal, Safra</td>
<td>Meat</td>
<td>Agro-forestry pastoral system</td>
<td>Meat</td>
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<tr>
<td></td>
<td></td>
<td>Crosses from D’man and Beni Guil or Sardi</td>
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<td>Pastoral Oasian Intensive system</td>
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</tr>
<tr>
<td>Corsica, France</td>
<td>Sheep</td>
<td>Corsican (an obligation for PDO)</td>
<td>Meat</td>
<td>Low intensity rangeland /grassland</td>
<td>Dairy products</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Milk</td>
<td>Forage crop intensification</td>
<td>Brocciu whey cheese (PDO)</td>
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<td></td>
<td></td>
<td>Milk lamb</td>
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<td></td>
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</tr>
<tr>
<td>Cyprus</td>
<td>Sheep</td>
<td>Chios, fat-tailed breeds &amp;crosses Damascus</td>
<td>Meat</td>
<td>Agro-pastoral (mixed system)</td>
<td>Dairy products</td>
</tr>
<tr>
<td></td>
<td>Goat</td>
<td>Damascus, Machaeras, other local breeds &amp; crosses</td>
<td>Milk</td>
<td></td>
<td>Halloumi</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Milk lambs /kids</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ipeiros Greece</td>
<td>Sheep</td>
<td>Katsika, Kallaritiko Chios, Lesvos Karagouniko</td>
<td>Meat</td>
<td>Agro-pastoral (transhumance)</td>
<td>Dairy products</td>
</tr>
<tr>
<td></td>
<td>Goat</td>
<td>rizarta &amp; crosses</td>
<td>Milk</td>
<td></td>
<td>Feta (PDO)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Other PDO cheeses</td>
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<td></td>
<td></td>
<td></td>
<td>Milk lambs /kids</td>
</tr>
</tbody>
</table>
WP1: VALUES AND CHALLENGES

E. Sossidou

- to examine the main challenges for the sustainability of the production systems and the specific values of the resources used and the products
ABILITY TO CONTINUE FARMING ACTIVITIES

The age of farmers and the lack of successors is a critical factor for all areas under study, except for Corsica.
INFRASTRUCTURES IN MOUNTAINOUS AREAS

% of respondents

Region-Country

<table>
<thead>
<tr>
<th>Region-Country</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fez Boulenane-MO</td>
<td>9.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>90.7%</td>
<td></td>
</tr>
<tr>
<td>Epirus-GR</td>
<td>3.6%</td>
<td>3.6%</td>
<td>0.0%</td>
<td>10.7%</td>
<td></td>
</tr>
<tr>
<td>Cyprus</td>
<td>3.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>33.0%</td>
<td>82.1%</td>
</tr>
<tr>
<td>Corsica-FR</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>20.0%</td>
<td>56.7%</td>
</tr>
</tbody>
</table>

WP2: COLLECTIVE ACTION AT TERRITORIAL LEVEL

A. Lauvie

- Initiative and main stakeholders
- Organization level of the stakeholders involved
- Number of stakeholders and interactions/ definition of their roles

**The involvement of stakeholders on the territory (including local authorities) and the role of sheep and goat production systems (based on local breeds) in the local development**
WP2 - THE COLLECTIVE ORGANISATION

- The degree of formalization of the link between breed and products
- The effective links between management of products and management of breed
  - Dynamics with the PDO products (weak links with breed management)
- The potential tension between different stakeholders on the territory
WP2 - REGULATORY FRAMEWORK BETWEEN LOCAL ACTORS

F. Casabianca

- **Identify degrees of tensions up to declared conflict**
  - People involved
  - Object (breed, product, rule, …)
  - Since when

- **Identify opportunities for resolve the tensions**
  - Do the people involved speak together ?
  - Does exist an arena where such discussion could be organized ?

- **Possibilities of mediation among actors**
  - Define the actors with such capacity
  - Role of research (missing knowledge)
WP3 – SUPPLY CHAIN ANALYSIS

I. Tzouramani

Value Chain Analysis (VCA) : to understand how actors work and examine the interrelationships between the diverse actors

- Mapping the core processes in the chain
- Main actors involved in the processes
- Flows of products
- Knowledge and flows of information
- Volume of products, number of actors and jobs
- Value at different levels of the chain
- Relationships and linkages between value chain actors
- Constraints and potential solutions
## Review of Assets

<table>
<thead>
<tr>
<th>Country / Region</th>
<th>Physical</th>
<th>Environmental</th>
<th>Institutional</th>
<th>Financial</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco</td>
<td>Poor road network / low compliance with technical hygienic standards</td>
<td>Adapted local breeds</td>
<td>Established organisation for health control, identification etc</td>
<td>Meat prices set by the state</td>
<td>No collective action</td>
</tr>
<tr>
<td>Corsica, France</td>
<td>Good farm infrastructure</td>
<td>Adapted local breeds</td>
<td>Well developed on farm processing</td>
<td>High prices for milk</td>
<td>No trust</td>
</tr>
<tr>
<td>Cyprus</td>
<td>Adequate farm infrastructure</td>
<td>Well-adapted local breeds</td>
<td>Lack of professional organisations</td>
<td>Increased feed prices Low meat prices</td>
<td>No collective action No trust</td>
</tr>
<tr>
<td>Ipeiros Greece</td>
<td>Tradition in sheep and goat farming Quality products</td>
<td>Well-adapted local breeds</td>
<td>Established Research and Regional infrastructures</td>
<td>Increased feed prices Low meat prices</td>
<td>No collective action No trust</td>
</tr>
</tbody>
</table>
WP4: SUSTAINABILITY OF THE PRODUCTION SYSTEM

Indicators and criteria to assess the sustainability of the system

- Structural and economical
- Social
- Environmental

G. Hadjipavlou
## WP4: SUSTAINABILITY OF THE PRODUCTION SYSTEM

### Preliminary table of criteria and indicators

<table>
<thead>
<tr>
<th>Structural</th>
<th>Economic</th>
<th>Social</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of animals / WU; herd size</td>
<td>Farm productivity</td>
<td>Age of farmer</td>
<td>Land use/Marginal areas</td>
</tr>
<tr>
<td>Farm size</td>
<td>Total revenue</td>
<td>Continuity prospects</td>
<td>Ecosystem services</td>
</tr>
<tr>
<td>Land area</td>
<td>Subsidies / total revenue</td>
<td>Intergenerational succession</td>
<td>Resources availability</td>
</tr>
<tr>
<td>Autonomy of farming systems</td>
<td>Price agreed / mean price</td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Animal productivity</td>
<td>Breeders organization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labour</td>
<td>Society’s perception</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diversification activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WP4: SUSTAINABILITY OF THE PRODUCTION SYSTEM

The mediating role of the local breed between the livestock farming system and the product added value (in individual / at collective level)

Propose : A light framework – checklist

- Animal
- Stakeholders
- Products
WP4: SUSTAINABILITY OF THE PRODUCTION SYSTEM

Animal population dynamics

- Evolution of animal population numbers
- Existing adding value projects
- Management of within breed diversity
- Changes in selection criteria
- New dynamics of the animal population
- Access to genetic resources
WP4: SUSTAINABILITY OF THE PRODUCTION SYSTEM

Stakeholders

- Have the add value project bring new stakeholders?
- Are the stakeholders managing the breed and the product the same?
- Are there tensions of legitimacy between stakeholders?

Products from the breed

- New expectancies for the breed (performances, seasonality of production)
- Exclusive (or not) use of the breed
- Formalization of the link (breed – product)
- Other characteristics of the production process with consequences on the breed
WP5: MEDITERRANEAN PLATFORM

The DoMESTic project aims to build a network of the various actors involved in sheep and goat sector in the Mediterranean region.

We focus on the rangeland and pastoral production systems, considering these as vital elements of the Mediterranean region contributing to the protection of the environment and biodiversity, and also to the production of safe and quality products.

We seek that this platform will facilitate the communication between farmers, suppliers, retailers, researchers, administration and other local actors within a region, but also between the different regions in the Mediterranean basin and will open new ways for collaboration, integrating innovation in to the traditional production systems aiming to the sustainable future of the sector.
FURTHER PROSPECTS

Characterisation and adaptation of local breeds

- Address the value of livestock diversity
- Management of livestock genetic resources

Monitoring and warning systems

- Routine use of criteria and indicators

Creation of networks

- Within the regions
- Between the regions
ACKNOWLEDGEMENTS

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  - A. Araba, A. Boughalmi

Farmers participating in the survey

All contributors at local level
Mediterranean biodiversity as a tool for the sustainable development of the small ruminant sector: from traditional knowledge to innovation

Thank you!