TRADITIONAL LIVESTOCK PRODUCTION AT THE MONTENEGRIN KATUNS

Milan Marković, Emil Erjavec, Božidarka Marković, Luka Juvančič, Dušica Radonjić
Presentation outline

- Brief overview on the traditional livestock production at Montenegrin mountain pastures (*katuns*)
- The project KATUN in a nutshell
  - Motivation, idea and concept
- The KATUN project *results*
  - Comprehensive survey and work with the producers
  - In-depth interviews
- The main finding and conclusions
Brief overview on the traditional livestock production at katuns

There are around 500 katuns in Montenegro (Spasojević, 2006),

✓ significant number of them are still used, but at a much lower scale (smaller number of households).

Non written rules for using mountain pastures

✓ villages or larger groups had defined areas for the summer settlements:

Scope:

✓ Decreasing trend in total number of animals (the sixties of 20th century about 600,000; in 1991 - 480,000; in 2010 - 227,000 heads of sheep) has implied decrease in using katuns;

✓ In 2010 there were 2025 households (eligible for the subsidies) moved from villages to the ‘katuns’, with a minimum of 5 LU (13,647 animals of cattle, 88,065 adult sheep, 5,207 goats and 1,789 horses)
Brief overview on the traditional livestock production at katuns

Products:

- The main products are meat and milk.
- Meat: lambs and beef, placed to the market mainly as live animals.
- Milk is processed into different traditional dairy products (cheese or skorup, depending of the region)
- Skorup - very specific full-fat product that cannot be classified as either cheese or butter, even it has features of both.

Value of products and production

- As a source of household’s incomes, dairy products are very important (price of 1 kg of ripened (old) Skorup from ewe’s milk can go up to 25€)
- BTF estim: total value of production at katuns (meat and milk) is above 8 million euro (6 mio dairy products and 2.5 mio live weight of animals)

Sustainability

- A long term trend in using the katuns is decreasing. Future of the katuns relying only on traditional livestock rearing and production of the traditional products IS COMPLETELY UNPREDICTABLE.
Valorising the Montenegrin Katuns through sustainable development of agriculture and tourism

Distribution of the katuns in Montenegro
The KATUN project in a nutshell

**Why the katuns?**

**Multi-values and functions for society**
- High diversity in landscape, biodiversity, agriculture, and in areas of high natural value farmlands;
- Extremely high percentage of meadows and pastures in the total country agricultural area (around 90%) can be used by rearing ruminants;
- *Katuns* provide a number of economic, social and environmental benefits; also untapped potential for adding-value (leisure industry);

**Abandonment of resources**
- The abandonment of the *katuns* and other negative trends in mountains

**Missing research**
- Very scarce: only descriptive data can be found, lack of the research on *katuns* covering all domains (technology, social sciences, economics)
The KATUN project in a nutshell

**What are the starting points?**

- **New challenges** in front of rural society and opportunities of EU integration for mountain regions, at the same time new opportunities given by the new CAP 2014-2020;

- **Raising interest and demands** of the tourism for mountains beauties of Montenegro;

- Necessity to recognise the needs and **generate the tools and mechanisms** for sustainable development and preserving of rural heritage at Montenegrin *katuns*;

- Maintain the **mountains alive and preserve their richness** is a good contribution to the concept of sustainable development of Montenegro.
The KATUN project in a nutshell

**The concept of the KATUN project**

**The main goal:** to provide knowledge bases for sustainability of the mountain agriculture and to enhance its competitiveness, to preserve the cultural heritage of rural areas and boost the agro-tourism at the *katuns*.

**Detailed objectives:**

- Knowledge and innovations’ transfer to the agriculture and agro-tourism;
- Generate entrepreneurship in the mountainous agriculture;
- Achieve the new level of sustainable cultural heritage protection;
- Demonstrate interdisciplinary and multidisciplinary research and longer-term collaborations with the international RTD partners.

**Three main pillars are in the core of the KATUN Action plan:**

a) traditional livestock production and marketing of the products;

b) social dimension and rural heritage at the *katuns*; and

c) diversification of economic activities (sustainable agro-tourism)
Valorising the Montenegrin Katuns through sustainable development of agriculture and tourism - KATUN

CASE STUDY AREAS

Durmitor

The Kuči mountains
THE KATUN PROJECT RESULTS

The methodology used in the survey

*Questionnaire: categories of the questions*

A) Data on agricultural holding
- Resources in the village, type and volume of agricultural production;
- Livestock – species, number, breeds;
- Farm incomes including support

B) Data on household
- Family members: gender, age, education, profession, involvement in farms activities etc.

C) Data and information on staying at katun
- All relevant data: distance to village, location, livestock, equipment, production, marketing of products, opinion on the challenges and future plans;
- Data on agro-tourism facilities and perspectives
The survey results

The general data and results on staying and production at katuns

<table>
<thead>
<tr>
<th>ITEM</th>
<th>KUČI</th>
<th>DURMITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of households interviewed</td>
<td>54</td>
<td>42</td>
</tr>
<tr>
<td>Distance from village to katuns</td>
<td>12 - 70 km</td>
<td>3 - 15 (few 70 km)</td>
</tr>
<tr>
<td>Average age of the holders</td>
<td>55 years</td>
<td>52 years (35-75)</td>
</tr>
<tr>
<td>Duration of stay at katuns</td>
<td>4 – 5.5 months</td>
<td>2 – 3.5 months</td>
</tr>
<tr>
<td>Share of production at katuns in total annual production</td>
<td>50-65% of cheese</td>
<td>75% of skorup 35% of cheese</td>
</tr>
<tr>
<td>Volume of selling of products at katuns</td>
<td>&lt; 5% of dairy products</td>
<td>30 -70 % of dairy products</td>
</tr>
</tbody>
</table>

**Incomes from agriculture in total household incomes** (mainly 10-15 thousand euro)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>up to 90%</strong></td>
<td><strong>around 90%</strong></td>
</tr>
</tbody>
</table>

The survey was carried out from 1st July to 1st Sept. 2015
## THE KATUN PROJECT RESULTS

### The survey results

### Land used and livestock resources

<table>
<thead>
<tr>
<th>ITEM</th>
<th>KUČI</th>
<th>DURMITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used agricultural land, ha/holding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Kuči: 60% own; 40% rented</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>- Durmitor: 50% own; 50% rented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of holdings rearing SHEEP</td>
<td>48%</td>
<td>50%</td>
</tr>
<tr>
<td>Sheep: flock size</td>
<td>102</td>
<td>93</td>
</tr>
<tr>
<td>Share of holdings rearing CATTLE</td>
<td>91%</td>
<td>100%</td>
</tr>
<tr>
<td>Cattle: herd size</td>
<td>7.3</td>
<td>7.8</td>
</tr>
<tr>
<td>Share of holding taking animals from other owners</td>
<td>25% (avg. 200 sheep)</td>
<td>20% (mainly sheep)</td>
</tr>
<tr>
<td>Compensation for keeping and using other owners’ animals</td>
<td>Milking of ewes and use of that milk</td>
<td>30€/sheep for 3 months</td>
</tr>
</tbody>
</table>
THE KATUN PROJECT RESULTS

The survey results

Production and marketing of the dairy products

<table>
<thead>
<tr>
<th>Product</th>
<th>% of households produce</th>
<th>Production kg/holding/year</th>
<th>Sale, kg/holding</th>
<th>Price, €/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DURMITOR katuns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>Skorup</code> (cow milk and/or mixed milk)</td>
<td>85</td>
<td>280</td>
<td>130</td>
<td>15-18</td>
</tr>
<tr>
<td><code>Skorup</code> of sheep milk</td>
<td>15</td>
<td>180</td>
<td>100</td>
<td>18-20</td>
</tr>
<tr>
<td>Cheese - white soft</td>
<td>83</td>
<td>640</td>
<td>360</td>
<td>3,5-5</td>
</tr>
<tr>
<td>Cheese - <code>Prljo</code></td>
<td>55</td>
<td>250</td>
<td>120</td>
<td>3-4</td>
</tr>
<tr>
<td>KUČI katuns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuči cheese – old /mature</td>
<td>85</td>
<td>1700</td>
<td>1200</td>
<td>4-6</td>
</tr>
<tr>
<td>Kuči cheese - fresh</td>
<td>60</td>
<td>1650</td>
<td>1200</td>
<td>3-4</td>
</tr>
<tr>
<td>Mješavina</td>
<td>25</td>
<td>170</td>
<td>100</td>
<td>12-13</td>
</tr>
</tbody>
</table>
### Marketing of live animals

<table>
<thead>
<tr>
<th>Category of animals /product for market</th>
<th>Price, €/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KUČI</td>
</tr>
<tr>
<td>Calves (130-180 kg live weight -LW)</td>
<td>3,0</td>
</tr>
<tr>
<td>Veal meat (≈ 70-80 kg / head)</td>
<td>5,5</td>
</tr>
<tr>
<td>Beef cattle and cows (350-650 kg LW)</td>
<td>0,8 – 1,6</td>
</tr>
<tr>
<td>Lambs:</td>
<td>2,8</td>
</tr>
<tr>
<td>(35-40 kg LW)</td>
<td></td>
</tr>
<tr>
<td>Ewes and rams (55 – 110 kg LW)</td>
<td>100-120€/head</td>
</tr>
</tbody>
</table>

"Valorising the Montenegrin Katuns through sustainable development of agriculture and tourism - KATUN"
THE KATUN PROJECT RESULTS

The survey results

Living conditions at the katuns

<table>
<thead>
<tr>
<th>Item</th>
<th>KUČI</th>
<th>DURMITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities for living</td>
<td>Stone or brick buildings</td>
<td>Wooden huts - 55%</td>
</tr>
<tr>
<td>Road infrastructure</td>
<td>Mostly macadam</td>
<td>Macadam or asfalt</td>
</tr>
<tr>
<td>Electric power supply</td>
<td>27% no power supply</td>
<td>48% no power supply</td>
</tr>
<tr>
<td></td>
<td>56% linked to power line</td>
<td>4% linked to power line</td>
</tr>
<tr>
<td></td>
<td>17% solar panels</td>
<td>48% solar panels</td>
</tr>
<tr>
<td>Water supply</td>
<td>55% rainwater</td>
<td>43% rain or snow water</td>
</tr>
</tbody>
</table>

![Image of living conditions at the katuns](image-url)
Details from the surveyed KUČI katuns
Details from the surveyed DURMITOR katuns
Valorising the Montenegrin Katuns through sustainable development of agriculture and tourism - KATUN

THE KATUN PROJECT RESULTS

The survey results and findings

The perspectives and plans from the producers point of view

<table>
<thead>
<tr>
<th>ITEM</th>
<th>KUČI</th>
<th>DURMITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>To continue without changes</td>
<td>31%</td>
<td>43%</td>
</tr>
<tr>
<td><strong>To extend and enlarge production</strong></td>
<td>57%</td>
<td>29%</td>
</tr>
<tr>
<td>To reduce production</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>Share of the households interested in tourism</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Number of households already provide a kind of tourist services</td>
<td>-</td>
<td>4 (9%)</td>
</tr>
</tbody>
</table>
THE KATUN PROJECT RESULTS

In-depth interviews: concept

The aim:
- To go step further after survey – to allow producer to reflect to all relevant issues

The survey dominant questions:
- Quantifications and concrete answers to specific question about situation and opportunities of katuns regarding production, economic, social and policy aspects

The in-depth interviews:
- To encourage farmers to make a story about their lives at katuns, their tradition, focusing on the future

Carring out:
- Number of interviewed producers: Durmitor – 7; Kuči – 8
- Kombined teams: Slovenian (BF) + Montenegrin experts (BTF + FTHM)
- Middle of August 2015, minimum 3 hrs per household
The main findings (1/3)

Current state of the katuns

- A plenty of pasture resources for much bigger number of grazing animals
- Infrastructure to/at katuns is not at satisfactory level
- Rearing of sheep and cattle are dominated, other species occasionally, few pigs to use whey, horses for timber...
- Big heterogeneity in cattle breeds (purebred and crosses), in production capacity and performances
- Facilities for housing of livestock are not appropriate
- Mechanisation: generally it is better at Durmitor than at KUČI area
- Market channels are not stable, fluctuate very much, what creates problems in selling the products
- Facilities for production of dairy products are still very traditional (hygienic standards sometimes questionable, many improvisations?)
- Males are mainly new knowledge and information takers, dairy products (cheese and skorup) manufacturing are in female hands (lesson learned from the work with farmers (trainings))
The main findings (2/3)

Mountain pastures and livestock sector are facing uncertainty: environmental, technical and socio-economic challenges. Due to the negative trends (threaten to be completely abandonment many of katuns) future of traditional livestock production IS NOT PROMISSING.

Hence, the KEY FACTORS for further development of the katuns are:

- Development of the livestock sector in the valeys and villages (katuns are highly dependent on the state of livestock sector generally);
- Distance from katuns to the village and market - quality of roads to allow normal access;
- Minimum requirements in technical equipment (supply of electricity, water ...);
- Needed hygienic standards for milking ewes and cows, making and storing dairy products;
- Stable and reliable channels for marketing of products;
The main findings (3/3)

The KEY FACTORS for further development of the katuns (cont):

✓ To sell most of the katun produce 'on the plate' (on the spot, or locally);
✓ Launching new activities: tourism, inclusion in local economy;
✓ Real perspectives for young family members and the whole family satisfaction;
✓ Readiness of farmers to collaborate among themselves
✓ Legal status of the katuns should be regulated
✓ Adequate support from government and local administration
✓ Redefining the role of national parks
✓ Preserving tradition, customs and rural heritage
✓ Producers organisations and products to the consumer needs
Conclusions 1: The issues addressed to the PRODUCERS

- Minimum investments to improve hygienic conditions
- To keep authenticity and originality in breeds of livestock, type of production, buildings;
- Try to sell most of the katun produce 'on the plate';
- Young generation – to provide social life;
- To organize farmer around the authentic product/s;
- Collective actions – to find and use different ways of support
- Initiative networking and links of the producers with tourism agencies, service providers etc.
Conclusions 2: The issues addressed to the DECISION MAKERS*

- Recognition of the value of katuns
- KATUN infrastructure – unavoidable priority
- Support for the organization (operational costs)
- To increase support for using mountain pastures
- Investment support in barns (in villages) and equipment at katun
- Support for trainings, for young generation, females and shepherds
- Legal frame for katuns, hence for agro tourism
- Katuns in national parks (NPs accelerators not inhibitors for the development)

* DMs: Ministry of the Agriculture and Rural Development; Ministry of Sustainable Development and Tourism, local governance and others
Conclusions 3: The issues addressed to the RESEARCHERS AND EXTENSIONIST (AKIS)

- Authenticity (traditional technologies, native breeds, ecosystem services) is of the prior interest
- Societal challenges highly ranked in research agenda
- Educational programs (to include mountain livestock production to regular programs of high schools and faculties)
- To provide knowledge exchange and innovation via different channels, primarily on spot trainings
- Networking and constant dialogue with decision makers
- Comparative study on ways of support in other countries
- To enhance and strengthen projects similar to KATUN
Thank You for Your Attention