APPROACH TO IMPLEMENTING THE HNV INDICATOR IN NAVARRA (NORTHERN SPAIN)

Good Practice Workshop
Preparing the assessment of High Nature Value Farming in Rural Development Programmes 2014-2020

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• With the aim of monitoring the Rural Development Programme of Navarra 2007-2013:

• The regional Government of Navarra (Northern Spain), implemented two studies: “Identification, characterization and monitoring of High Natural value Farming Systems in Navarra”:

  • The first study in 2009 to calculate the indicator of the year 2008
  • The second one in 2016 to recalculate the indicator of the year 2013 (currently in progress, using the methodology of 2008)
• HVNF were assumed to be as defined in the documents from the European Evaluation Network for Rural Development (2008):

  • TYPE 1: areas with a high proportion of **semi-natural vegetation**.

  • TYPE 2: areas in a **mosaic structure** with low level of intensification.

  • TYPE 3: areas that support **rare species** or a high proportion of European or World **populations**.
IDENTIFICATION OF HNVF IN NAVARRA

• **Land use map** created specifically for this project, at a 1:5,000 scale.

• Sources of information used:
  • **SIGPAC**
    (plot limits, ~1M plots)
  • **CAP declaration**
    (annual crops)
  • **Land Use map**, 1:25,000
    (pastures and meadows)

• Division of Navarra in cells of 1km², to work at a landscape rather than plot level.
• TYPE 1 areas:
  • Agrarian semi-natural land uses (grassland), and non semi-natural (meadows, crops...)
  • % of semi-natural agrarian use in each 1km² cell
IDENTIFICATION OF HNVF IN NAVARRA

- TYPE 2 areas:
  
  - Mosaic of crops under extensive farming practices
  
  - Low average patch size (ha)
  
  - High density of borders (km/ha)
  
  - High index of diversity of Simpson
IDENTIFICATION OF HNVF IN NAVARRA

• TYPE 3 areas:
  - 11 experts in flora and fauna were consulted, to know whether the survival of different species depended on a farming activity type
  - The answer was positive in the case of **STEPPE LAND BIRDS**
IDENTIFICATION OF HNVF IN NAVARRA

- HNV areas: selection of the most valuable areas

**TYPE 1**
Cells of 100% of the agrarian land use semi-natural

**TYPE 2**
Cells with high values of mosaic indexes: \( >x + \sigma \)

**TYPE 3**
Existing cartography of steppe land birds

HNV areas Navarra
Type 1 + 2 + 3
IDENTIFICATION OF HNVF IN NAVARRA

- From HNV areas to **HNV systems**: CLUSTER analysis

Cluster analysis, high levels of...

- Grassland, meadows, sheep (Latxa), dairy cattle
- Grassland, pastureland, scrubland, meat cattle
- Orchards, crops, sheep (Navarra breed)
- Fallow land, crops, sheep (Navarra breed)
IDENTIFICATION OF HNVF IN NAVARRA

Cantabric region (Types 1 & 2)

Pyrenees (Type 1)

Mediterranean mountains (Type 2)

Plains of the Ebro Valley (Types 2 & 3)

Approach to implementing the HNV indicator in Navarra
MONITORING HNVF:
At level of region (or country)

- The Government of Navarra is going to monitor the RDP 2007-2013 at the beginning and the end (2008 and 2013). The methodology is the same in both years of calculation.

- In 2008, not one but a net of indicators were calculated.

- The indicators of 2013 will be the baseline for the RDP 2014-2020.

<table>
<thead>
<tr>
<th>Field</th>
<th>Indicator</th>
<th>Value in Navarra (2008)</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>HNVF hectares</td>
<td>332.329</td>
<td>hectares</td>
</tr>
<tr>
<td></td>
<td>% over the total territory</td>
<td>31.98</td>
<td>%</td>
</tr>
<tr>
<td>Characteristics of farms</td>
<td>Number of autochthonous livestock units</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sheep</td>
<td>124.261</td>
<td>LU</td>
</tr>
<tr>
<td></td>
<td>Cattle</td>
<td>88.562</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horse</td>
<td>30.618</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horse</td>
<td>5.081</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% over the total LU</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>Sheep</td>
<td>54.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cattle</td>
<td>91.53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horse</td>
<td>27.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horse</td>
<td>27.39</td>
<td></td>
</tr>
<tr>
<td>Average patch size</td>
<td></td>
<td>4.90</td>
<td>hectares</td>
</tr>
<tr>
<td>Edge density</td>
<td></td>
<td>0.20</td>
<td>km/ha</td>
</tr>
<tr>
<td>Simpson Diversity Index</td>
<td></td>
<td>0.72</td>
<td>No unitsfrom 0 to 1</td>
</tr>
<tr>
<td>Census of the target species</td>
<td>Great bustard* (<em>Otis tarda</em>)</td>
<td>30</td>
<td>Number of individuals</td>
</tr>
<tr>
<td></td>
<td>Black-bellied Sandgrouse* (<em>Pterocles orientalis</em>)</td>
<td>450 - 750</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pin-tailed Sandgrouse* (<em>Pterocles alchata</em>)</td>
<td>400 - 450</td>
<td></td>
</tr>
</tbody>
</table>

Approach to implementing the HNV indicator in Navarra
MONITORING HNVF: At a farming SYSTEM level

• Not one, but several indicators

• In 2011 the Cantabric HVN system was studied, and currently the Mediterranean mountains

• Typical HNV farm in the Cantabric area:
  …… farmer of about 50 years old, with a farm size of 14,5 has and Latxa sheep breed. He maintains a livestock density of about 1 LU/ha, he mows brackens, low use of inputs, he keeps landscape elements in his plots, ……

• Useful to design future management schemes. For example, currently a pilot project is taking place to maintain the HNV areas of the Mediterranean mountains
• **Information required to assess trends:**

  • Monitoring several years allow to assess changes. To compare data from two different years, the **same methodology** should be used.

  • **Spatial distribution** of the information in all the territory allows to know **WHAT** changes **WHERE**. In Navarra, we will know how much the semi-naturalness changed in which cells (Type 1), and how the mosaic values evolved in the last years.
• Challenges and gaps:

• In Navarra we haven’t done a final map with a GRADIENT of values from low to high. **How to combine** the values of Type 1, Type 2 and Type 3 in a single gradient map?

• There is no common methodology at a European level, so the data between countries or regions are **not comparable** at the moment.

• We know about HNV areas / plots / systems, but is it difficult to characterize the **FARMS** that support HNV.
Main lessons learned:

- The Type 1, 2, 3 approach is suitable to Navarra.
- The initial brainstorming can be high. The approach taken in Navarra cost 1,200 hours in 2008, and 400 hours in 2013.
- A non-complicated methodology is preferable to understand and interpret the results. For example in Navarra the combination of 3 indexes in Type 2 identification worked well, but in some cells the results were difficult to interpret.
- Using data that is updated frequently for all the territory allows to repeat the process whenever needed. In Navarra, the data used is updated every year for all the territory.
¡GRACIAS!!

VIELEN DANK!!