A thematic network on High Value Farming
Learning, INnovation & Knowledge

LEARNING AREA « Western Stara Planina »
(Bulgaria)

A BASELINE ASSESSMENT

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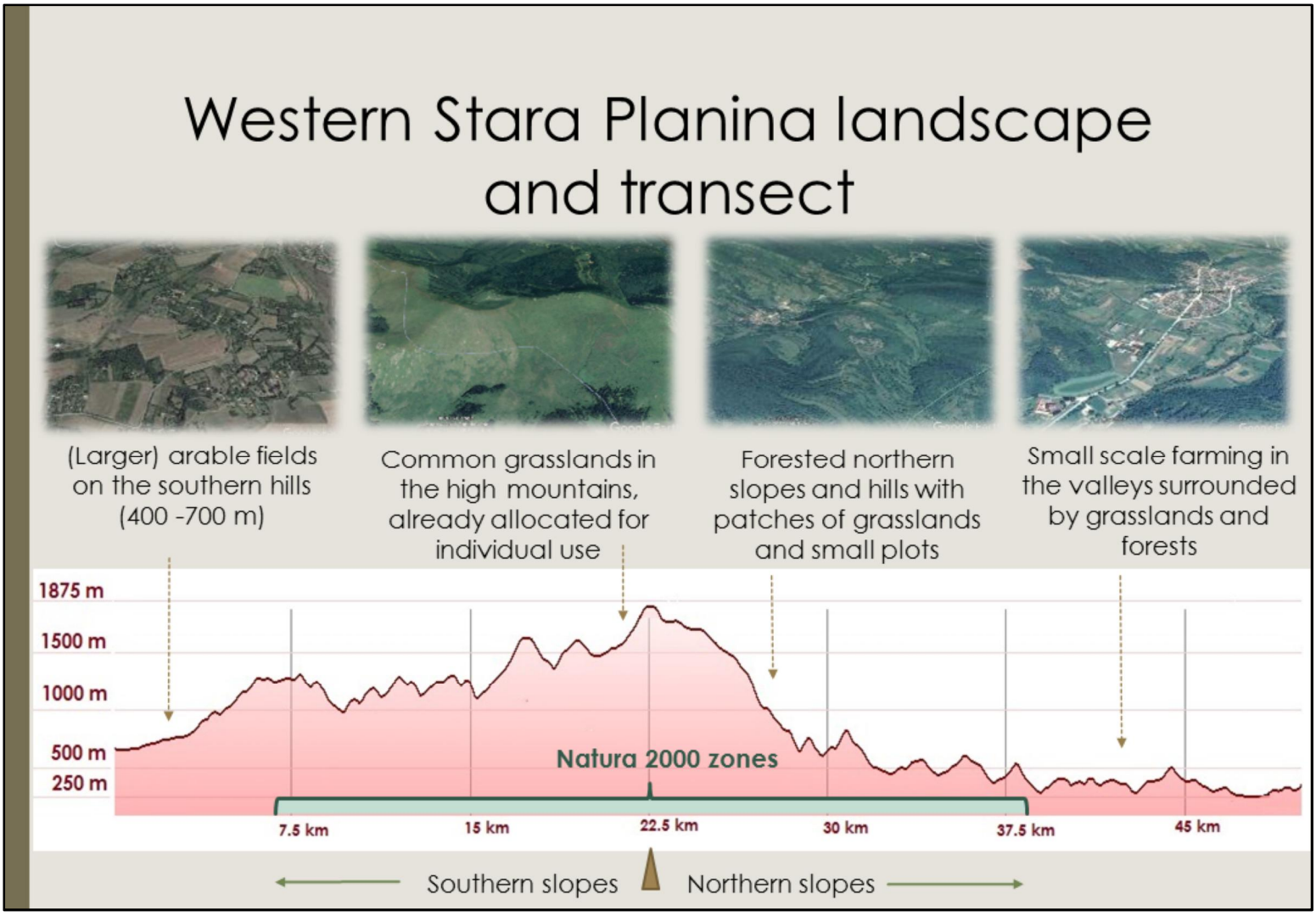
Limits and key characteristics

- Western Stara planina Learning Area is situated in north-western Bulgaria on the border with Serbia. It is predominantly a mountainous area of exceptional beauty and biodiversity richness.
- It covers five municipalities (LAU1 level) from two administrative districts on an area of 1662 km²
- The closest municipal center – Godech is only 50 km away from Sofia, while the most distant one is 130 km away. Nevertheless, the area is known as the poorest region in Bulgaria.
- The land use in the LA is divided almost equally between forests (48%) and agriculture (47%).

Western Stara Planina is an exceptional region from many perspectives. It is a High Nature Value farming and forestry area with biodiversity richness of national, European and global importance. Geographically, it is close to Sofia. It hosts one of the first spa resorts in the country and the famous Chiprovski carpets. Yet, it is a part of the poorest NUTS II region in the EU, tourism of all its forms is still underdeveloped and depopulation is significant.

At the same time, some of the most innovative HNV farming initiatives have developed in this area. This is due to two developments: the conservation importance of the region attracted the focused efforts of multiple environmental NGOs. Their approach was/is on promoting sustainable economic development that would keep farmers farming. This was positively welcomed by some local farmers who had spent some years working abroad (in various sectors) and came back to the area to start farming. In their communication with the « traditional » local farmers, the new comers acted as agents of change.

Now the territory had a certain social dynamic which nourishes various innovative ideas for development, which is of interest for the HNV-LINK project.



- **Small scale farming in the valleys**

Arable lands in the region are small by area determined by the semi-mountainous relief. Some areas are used for cereals, others are vegetable gardens, available mostly in the proximity of settlements, situated in the river valleys. The favorable micro-climate of the river valleys makes them suitable also for perennial crops (fruit orchards).

The orchards are in extensive land use. Often they border on more or less natural habitats (riparian willow-alder forests, meadows, common lands, oak forests, marshlands). These perennial crops are ranked as HNVF Type 2, but rare plant species do not occur there.

- **Forested slopes with patches of grasslands and small plots**

About 60% of these areas are covered with forests, which makes forestry an important regional sector. The rest of the 40% are farmlands, more particularly grasslands. Part of them is covered with natural (primary) grass vegetation (alpine or high mountain pastures, riparian meadows, stony and rocky terrains), others are of semi-natural character (secondary grasslands), shaped by man by removing forest cover.

Xerothermic grass communities occupy the largest area in the low-mountain and mid-mountain zone of the Western Stara Planina. They are used for grazing but are often fractured by scrub communities or rocky terrains. Mezo-xerophitic grass communities develop on comparatively deep gray forest soils. Some of them have a secondary origin, occupying the original place of former oak forests. They are located at the outskirts of forests or slopes above the river valleys, which provide minimal air humidity. They retain their freshness till the middle of July and are used as hay-making meadows and pastures.

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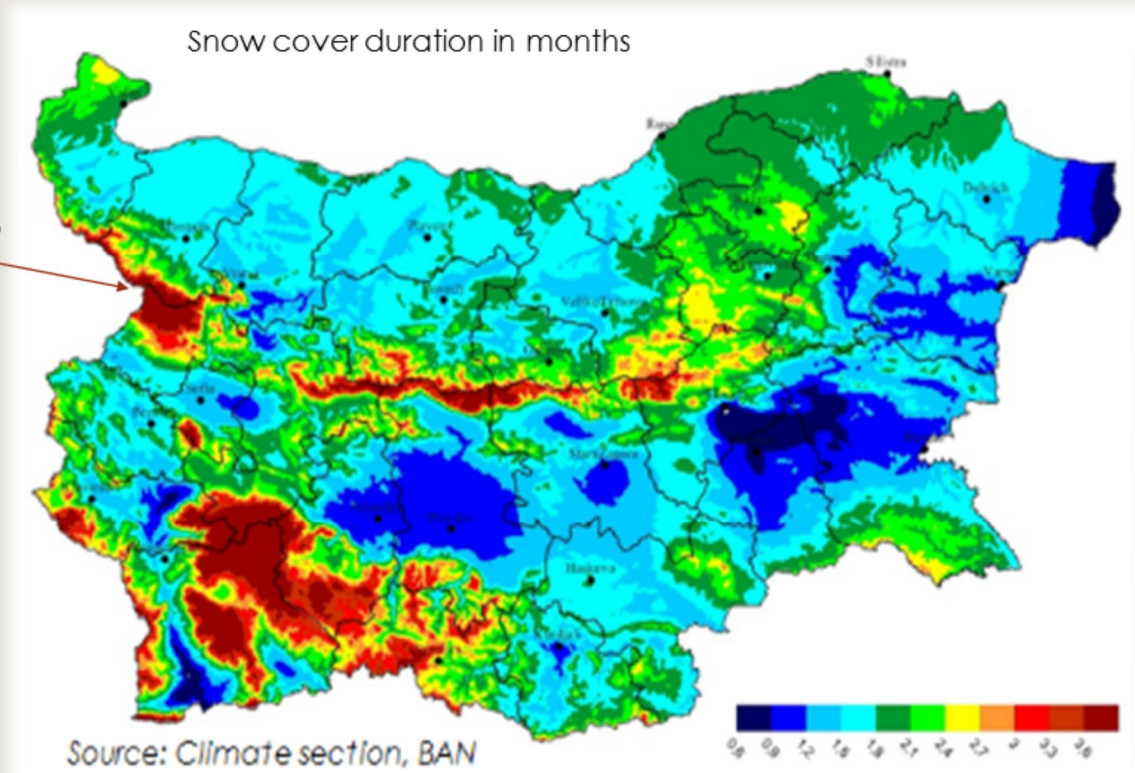
- **Common grasslands in the high mountains**

Alpine or high mountain pastures are widespread above the upper tree line on dry to temperate humid mountain-meadow soils with different depths, and exceptionally on silicate ground rock. They embrace the ridge parts and slopes with different inclination and exposure of the peaks Midzhur, Vrazha Glava, Kopren, Kom and Todorini Kukli.

Alpine pastures with comparatively better qualities can be dominated by violet meadowgrass (*Bellardiochloa violacea*), *Sesleria comosa*, common bent grass (*Agrostis capillaris*), broomy (*Festuca paniculata*) and powerful fescue (*Festuca valida*). These slopes are an important habitat of some rare species, included in the Red Book of Bulgaria - lilium (*Lilium jankae*), narcissus anemone (*Anemone narcissiflora*), spotted (*Gentiana punctata*) and yellow butterwort (*Gentiana lutea*). These farmlands belong to HNVF Type I.

- **(Larger) arable fields on the southern hills**

The relief on the southern hills allows to form larger arable fields, which are used for growing cereals, maize, rapeseed, etc. Even if they are larger for the LA scale, at national level, these cereal producers are small or mid-sized semi-intensive ones.



Area	Altitude (m)	Average temperature (°C)			Precipitation (mm)
		January	July	Annual	
Mountain ridge	1400	– 5.0	14.0	4.8	1100-1600
Northern slopes	400	2.1	22.0	11.0	800-900
Southern slopes	700	– 2.3	32.0	9.6	593

Overall, Western Stara planina region is characterised by moderate continental climate.
However, variations occur with altitude:

- The mountainous areas have long, cold winters and mild summers
- The hills and lowland areas to the north have mild winters and summers
- The southern hills have cold winters and hot summers.

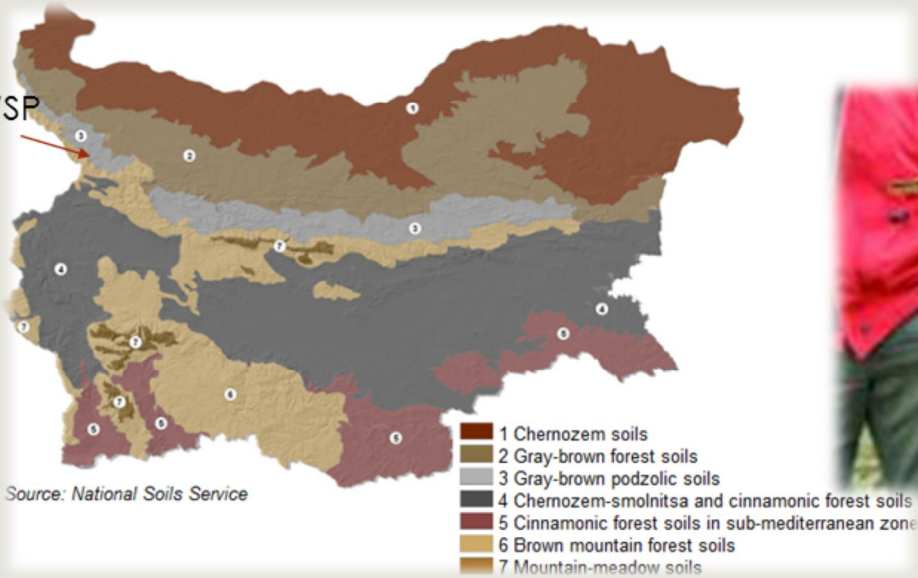
The great difference in the altitude (which in the Berkovitsa region is on average about 400 m, but at Midzur peak reaches 2 168 m) as well as the presence of different soil and rock types are determining the vegetation diversity in the region and hence the farmlands' biodiversity.

The difference in the altitude leads to differences in temperature and water regimens, both driving factors on the duration of the vegetation period. For example at the foothills of Western Stara Planina in regions of Berkovitsa, Chiprovtsi and Varshets the annual rainfall is about 800 – 900 mm, while on the Kom Peak and in the Petrohan region it reaches to 1600 mm in some years, thus in the high mountains zone there is higher rainfall.

The low parts of the Western Stara Planina region have a temperate-continental climate with maximum rainfall in spring and summer seasons (May – July).

In the higher areas precipitation is high in spring and early summer, and in autumn.

Vegetation



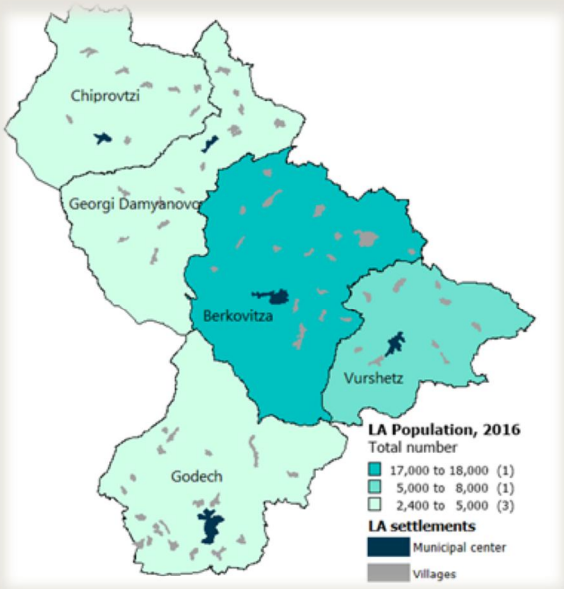
- The main soil groups in the LA are brown mountain forest soils, grey-brown podzolic soils and some chernozem soils in the southern hills.
- The climate and soil resources are very suitable for livestock breeding especially in the alpine pastures.
- In the lower areas the conditions are suitable for crop production.
- Vegetables are grown on the alluvial soils along the rivers, while orchards and fodder crops are typical for the higher parts.

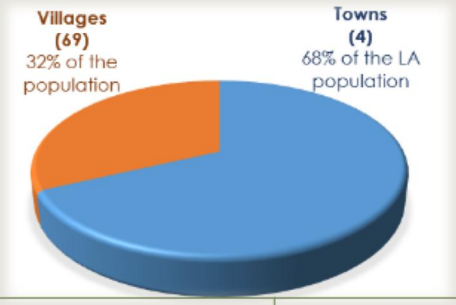
The duration of the vegetation period in mountain pastures and meadows is comparatively short: 5-6 months (April – October), but the favorable rainfall regimen contributes for their freshness and greenery to last nearly 4 months.

Lower areas have a vegetation period of 8-9 months (March – November), but the high temperatures and the scanty rainfalls provide meadows and pastures for freshness for not more than 2 months. In these lower areas the hay-making of meadows should not be later than the end of June. Delay in hay-making worsens the meadows' quality, because of the invasion of weeds, which possess the ability to give minimum two generations for a vegetation period.

In the beginning of the summer (beginning of July) meadows and pastures in lower West Stara Planina dry up and become yellow, while at the same time plants in mountain meadows and pastures are in blooming.

Human geography





Population (number)	Settlements (number)
0 to 100	38
101 to 500	28
501 to 2 000	4
2 001 to 10 000	2
over 10 001	1

- The total population in the LA in 2016 is **35 676** located in 73 settlements.
- The majority of the settlements have a population of less than 500 people.
- The average population density is 21.5 people/sq.km compared to 31.5 for all rural areas and 65.5 for the country.

The area is known for the ethnic cultures and traditional festivals, crafts and cuisine of the ‘karakachans’ and the ‘torlaks’ including the famous Chiprovtzi hand-made carpets. A lot of these traditions are related to the farming systems practised in the past – sheep grazing in the mountainous pastures, wool used to produce the carpets and local herbs and flowers used to colour the wool.

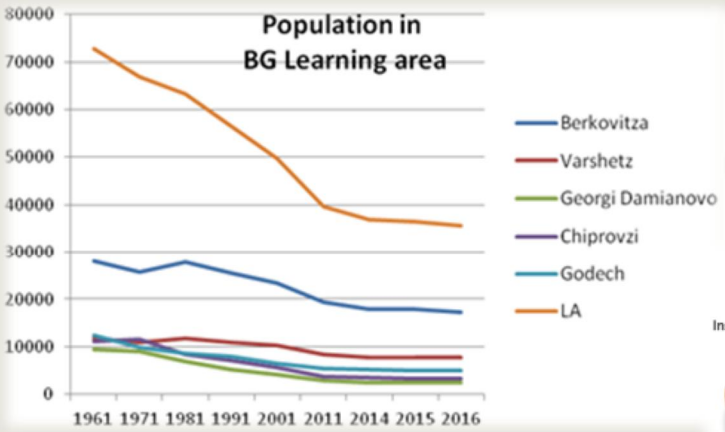
Population decrease in the region is observed since the early 1960s. In the mountainous areas and municipalities - Georgi Damyanovo, Chiprovtzi and Godech this process was evident from the early 1970s to late 1980s during the period of "developed socialism" and industrialization of the country economy.

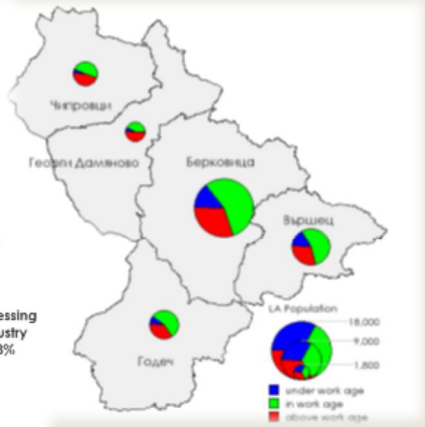
In the early 1980s an increase of population is observed in the lowland municipalities (Berkovitsa and Varshets), where besides agriculture, light industry and forestry are developing with good pace. Nowadays, the population is half it used to be in the 1960s. Half of the villages have a population of less than 100 people, mostly pensioners.

There are four small towns in the LA which are the development “hubs” of the territory. Todays production, processing and service facilities are located there. The villages are depending on farming (a majority of semi-subsistence farms) and social payments (pensions or unemployment support).

The roads are mountainous with many turns and steep slopes, so the access to the area is unfavourable, especially during winter.

Human geography





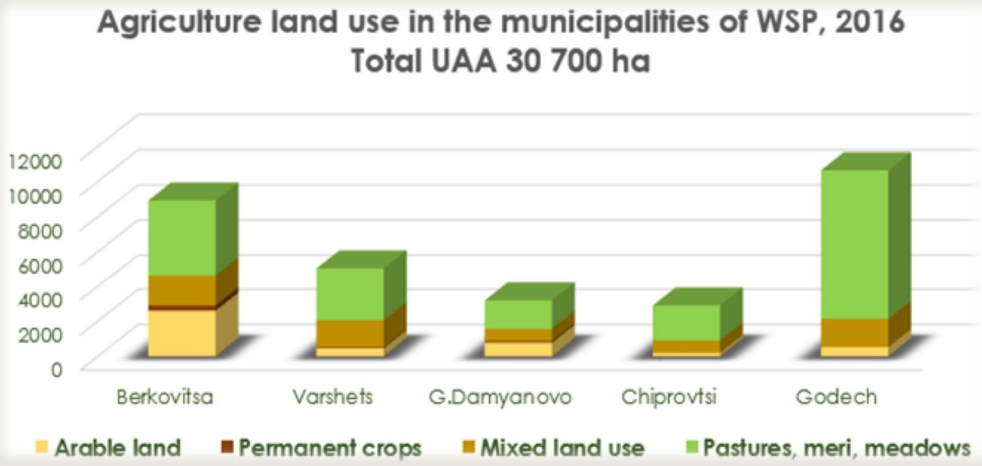
- Depopulation is ongoing in the LA and in two municipalities the people above working age are already predominant.
- The employment structure in the LA reveals that the processing industry and the service sector provide most of the private sector jobs (38% and 22%)

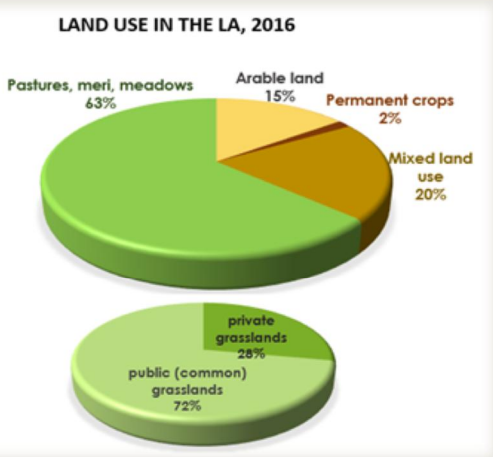
The public sector jobs (administration, education, social and health services) are very important in the LA, representing 35% of all jobs.

The official jobs in agriculture and forestry are only 5%, a figure that 'masks' the hidden engagement in farming by part-time farmers or retired people and/or people on unemployment support.

The share of unemployed in the LA is between 15% and 35% which is among the highest in the country. The side effect of it is that people lose their working habits and come to rely on social payments. a

Agriculture key facts: Land use





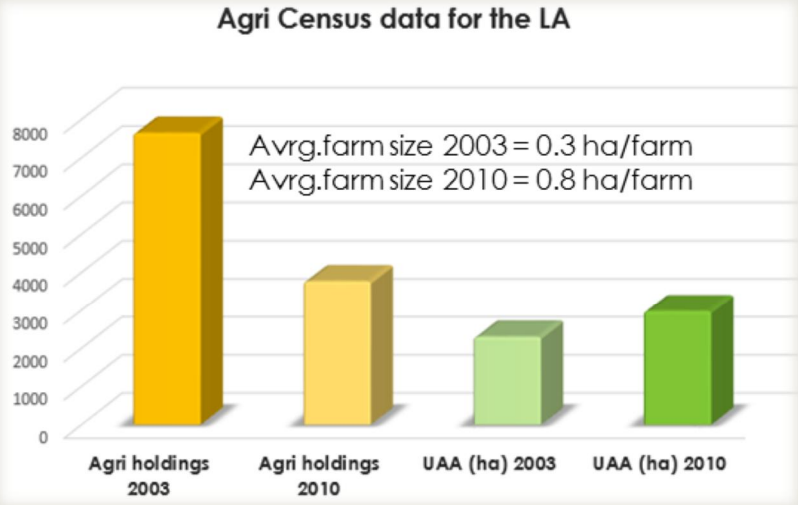
- The mountanous relief and climate determine the land use in the LA – the majority of the UAA is pastures and meadows (63%), of which common grasslands are 72%.
- Mixed land use (20% of UAA) is a result of the small scale farms and is located nearby the settlements and in the river valleys
- Overall, arable land is limited (15%) and is mostly in the lowlands
- The economically important permanent crops are represented mostly by strawberries and raspberries in Berkovitsa municipality.

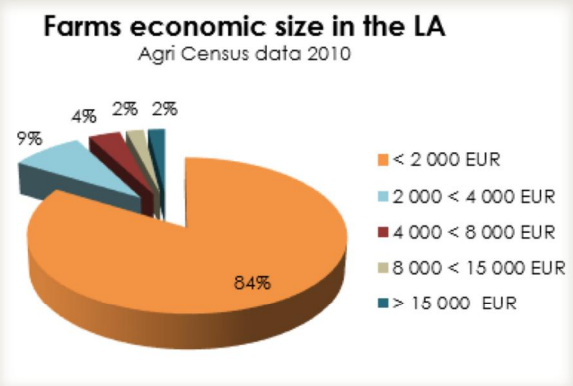
The utilized agricultural area in the LA is dominated by pastures and meadows many of which are public. Historically, they were used as common grasslands but the introduction of the CAP Pillar I payments led to changes in the use. The rules of the allocation of municipal pasture changed frequently but the current rules give priority to livestock farmers from the municipality.

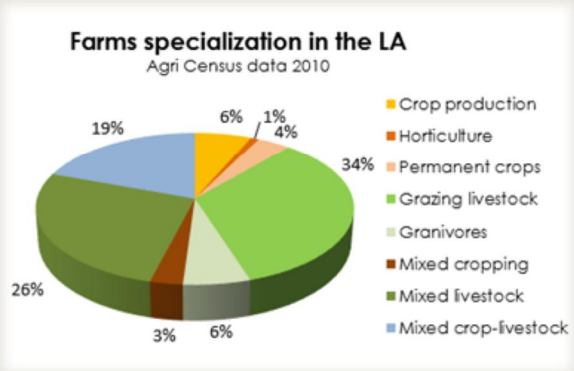
The result of the new requirements and rules is allocation of the most « fit » grasslands for individual use to farmers applying for CAP payments.

The pastures in worse conditions in terms of scrub / tree encroachment are designated for common use by subsistence farmers in the villages that do not apply for subsidies.

Agriculture key facts: Farm types and size





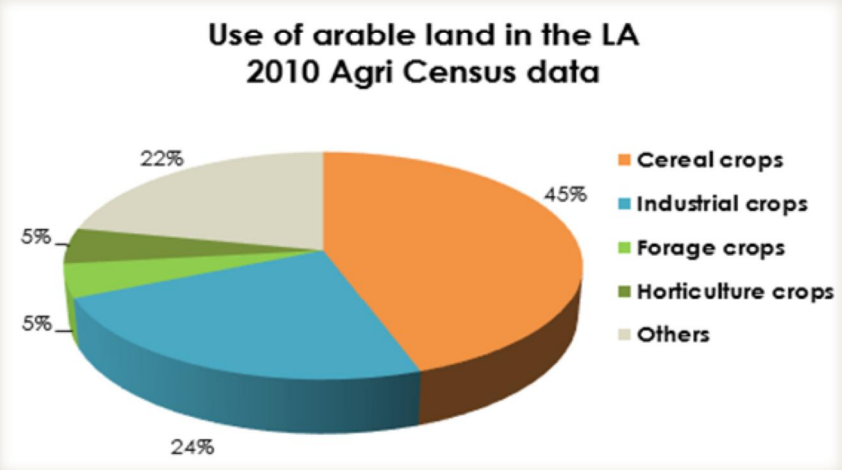


- The majority of farms are small both in size and economic units, below the threshold for CAP support of 1 ha.
- More than half of the farms are in livestock grazing and mixed farming systems.

The high nature values of the LA are maintained by the dominant farming systems in the region – grazing livestock (34% of all farms), mixed livestock (26%) and mixed crop-livestock farms (19%).

However, the more profitable systems (economic size of more than 15 000 Eur) are in crop production and horticulture.

Agriculture key facts: Crop production

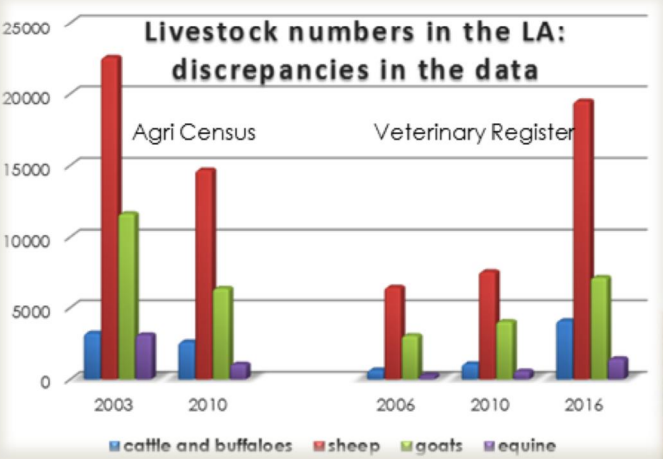


- The soil types in the lowlands are suitable for cereals production but larger scale farms are hampered by the rugged relief.
- Rapeseed production is a new trend in the lowlands of the LA.

Arable land covers only 15% of the UAA in the LA. Nevertheless, the production systems on them replicate the farming model promoted by the CAP Pillar I payments – cereals and industrial crops. A new crop in the LA, as elsewhere in Bulgaria, is rapeseed cultivation, produced mostly for biofuels and less for oil)

The combination of climate, soils and altitude in Berkovitza municipality is favourable for the production of strawberries and raspberries, which has been restored in the last decade after the abandonment in the post 1989 period. The strawberry fields are mostly organic, and despite the more intensive organic system – strawberries from Berkovitsa is a recognised image for tasty strawberries.

Agriculture key facts: Livestock production



- Overall, the numbers of all types of livestock are increasing after the accession to the EU due to the introduction of coupled support schemes in 2014 and the revision of the rules for the allocation of municipal grasslands in 2015.
- Grazing sheep is the typical farming system in the LA.
- The local sheep breeds are Repliana and Karakachan sheep, whose numbers are increasing due to the agri-environmental payments.

Sheep breeding is typical for the municipalities in the LA. Prior to 1989 there were around 200 000 sheep in the area. There was a huge drop in these numbers after the dissolution of the cooperatives post-1989. It is only in the recent years that the number of livestock started increasing due to two main stimulus. The introduction of the coupled support schemes in 2014 and the revision of the rules for the allocation of municipal grasslands in 2015, which allow farmers with grazing animals to get the rights for grazing without tender procedures.

In 2016, there are 19 504 sheep, 7185 goats, 7185 cattle and 1446 equine according to the data in the Veterinary Registers. Sheep and goats are bred mainly for meat, while cows are raised mainly for milk. Repliana and Karakachan local sheep breeds are typical for the area and their number is increasing (mainly due to the AE support). Sheep and goats are grazed throughout the year on the mountain grasslands and around the settlements (in winter). Sheep breeds are not with high productivity. The average productivity is 40 litres of milk/year, which is not enough to meet the requests for the national support schemes (70 litres/sheep/year). The average price of the sheep milk is between 0,61 EUR/litre and 0,71 EUR/ litre if sold to the dairies that operate in the region. The price can reach 1,02 EUR/litre if the milk is sold directly to the final customers.

Lambs are sold at 3.58 EUR/kg. The demand for lambs is high. Farmers believe that they can sell as much lambs as they have. The market for the sheep wool is limited or almost non existing even though the famoush Chiprovtzi carpets are produced in the region. Most farmers do not sell the wool, a few sell it in Sliven (South Bulgaria) at 0,51 EUR/fleece. Several farmers are also registered to process dairy products on their farms and to sell the products directly to the final customers. Some of them are supported by the Swiss HNV project in the regions to by equipment for their on-farm processing units.

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Cow milk is sold to 3 or 4 big dairies “Mogila”, “Parshevitza”, “Slivnitza”, “Voinov”. Prices depend on the milk quality and quantity. The average price for 2016 was 0,27 EUR/ha. Many of the dairy farms were unable to meet the increased legal, food safety and hygiene requirements and are currently transforming to suckler cows. Although the consumption of beef and veal meat is not typical for Bulgaria the number of the farms for suckler cows is increasing. The meat is sold mainly in Sofia.

Most of the grazing livestock farmers do not have a problem with selling their products, but the income is not sufficient to continue with their agricultural activities because of the too small farming units. EU and national support schemes are of key importance for the continuation of development of the livestock breeding in the area.

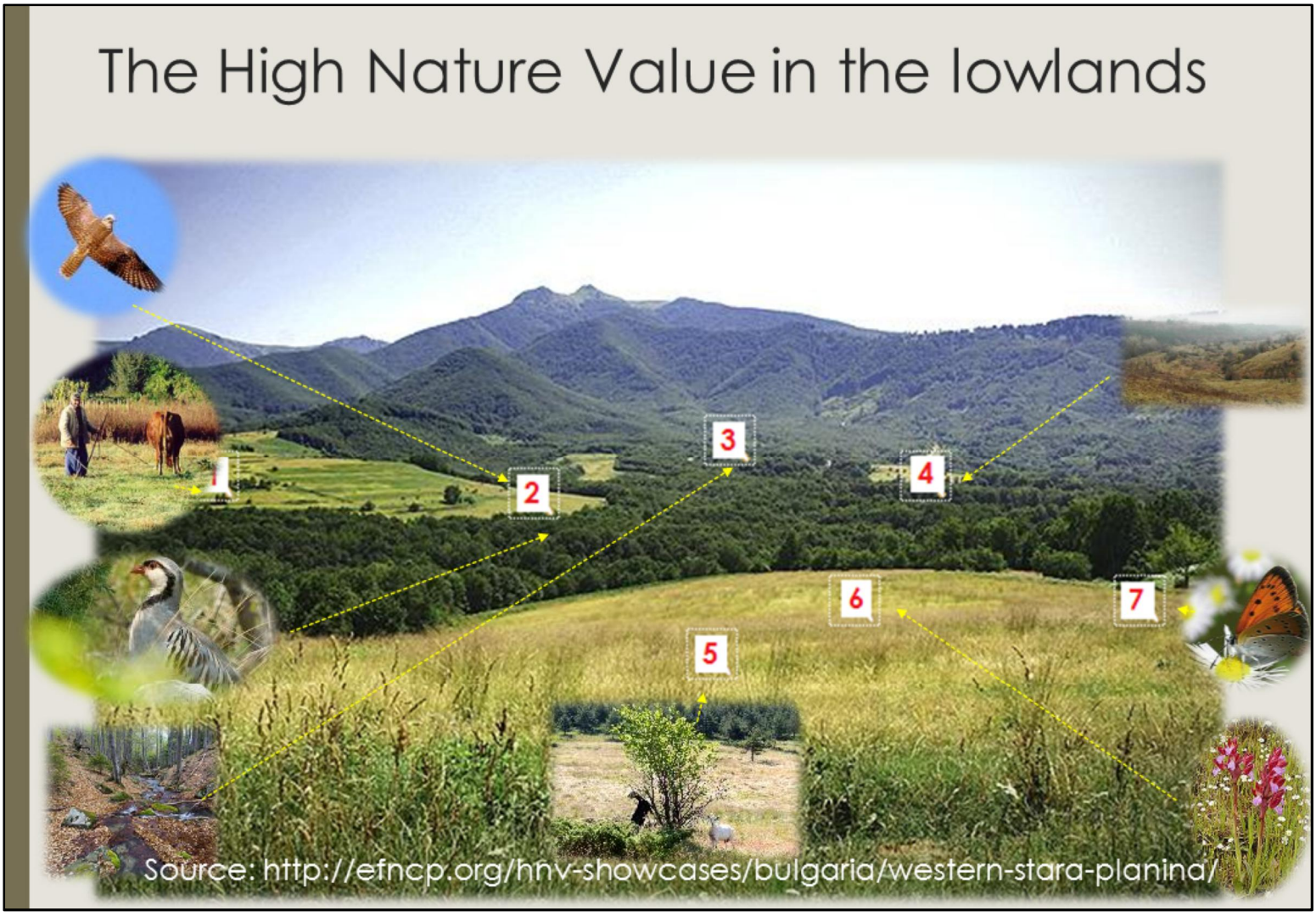
The High Nature Values of Western Stara Planina

The extensive character of agriculture in general and livestock breeding in particular, the low population density, the mountain relief and the proximity to the border with Serbia (which had a special access regime limiting economic activities in the past) have influenced positively the biodiversity in Western Stara Planina.

The designation of seven Natura 2000 sites in the region (5 SPAs and 2 pSCI) underline the high nature value and conservation importance of WSP.

The territory hosts many rare plants included in the Red Data Book of Bulgaria and protected by international red lists and conventions (IUCN, CITES) such as *Himantoglossum caprinum* , *Eranthis bulgaricus*, *Ophrys, Astragalus wilmottianus, Alchemilla straminea.* Medicinal plants are an important part of the regional flora but are often subject to strong anthropogenic pressure: harvesting for commercial purposes or personal use - *Adonis vernalis, Linum austriacum*, *Asarum europaeum*, *Linum austriacum*, *Hypericum cerastoides.*

Animal species are representative of the Middle European and Euro-Siberian fauna. Many are included in Natura 2000 *(Bombina variegata* , *Lucanus cervus*, *Coturnix coturnix*, *Lanius collurio*, *Emys orbicularis)* or are included in the Red Data Book of Bulgaria and protected by international red lists and conventions (IUCN) (*Canis lupus*, *Ichthiosaura alpestris, Lynx lynx, Falco cherrug, Crex crex).*



[1] Mosaics of low-intensive arable land and orchards near settlements. Grazing takes place on fallow land and crop residues. In many places they are adjoined to riparian forests, meadows, marshland or coppice. This is a valuable habitat for certain butterfly species and song birds, but threatened because of the limited socio-economic opportunities in rural areas.

[2] The pastures and meadows of Western Stara Planina are semi-natural habitats of great importance for the conservation of raptors such as saker falcon (*Falco cherrug*), short-toed eagle (*Circaetus gallicus*) and golden eagle (*Aquila chrysaetos*); wet meadow birds such as corncrake (*Crex crex*); and shrubland birds such as rock partridge (*Alectoris graeca*) – all priority species according the EU Birds Directive. Egyptian (*Neophron percnopterus*) and griffon vultures (*Gyps fulvus*) have already disappeared as the number of sheep (and thus carrion) has fallen.

[3] A large part of WSP is covered by forests. Half of the deciduous forest consists of beech (*Fagus sylvatica* and *F. moesiaca*), and some are classified as ancient forests aging 100-320 years. Coppice forests with oak (*Quercus frainetto*, *Q. cerris*, *Q. dalechampii*) and European hornbeam (*Carpinus betulus*) are omnipresent in the proximity of settlements. The coniferous forests consist of some pine plantations as well as ancient spruce forests (*Picea abies*). Forests in the region are threatened by quarrying, unsustainable forest management, massive illegal logging, as well as plans for large-scale ski resorts.

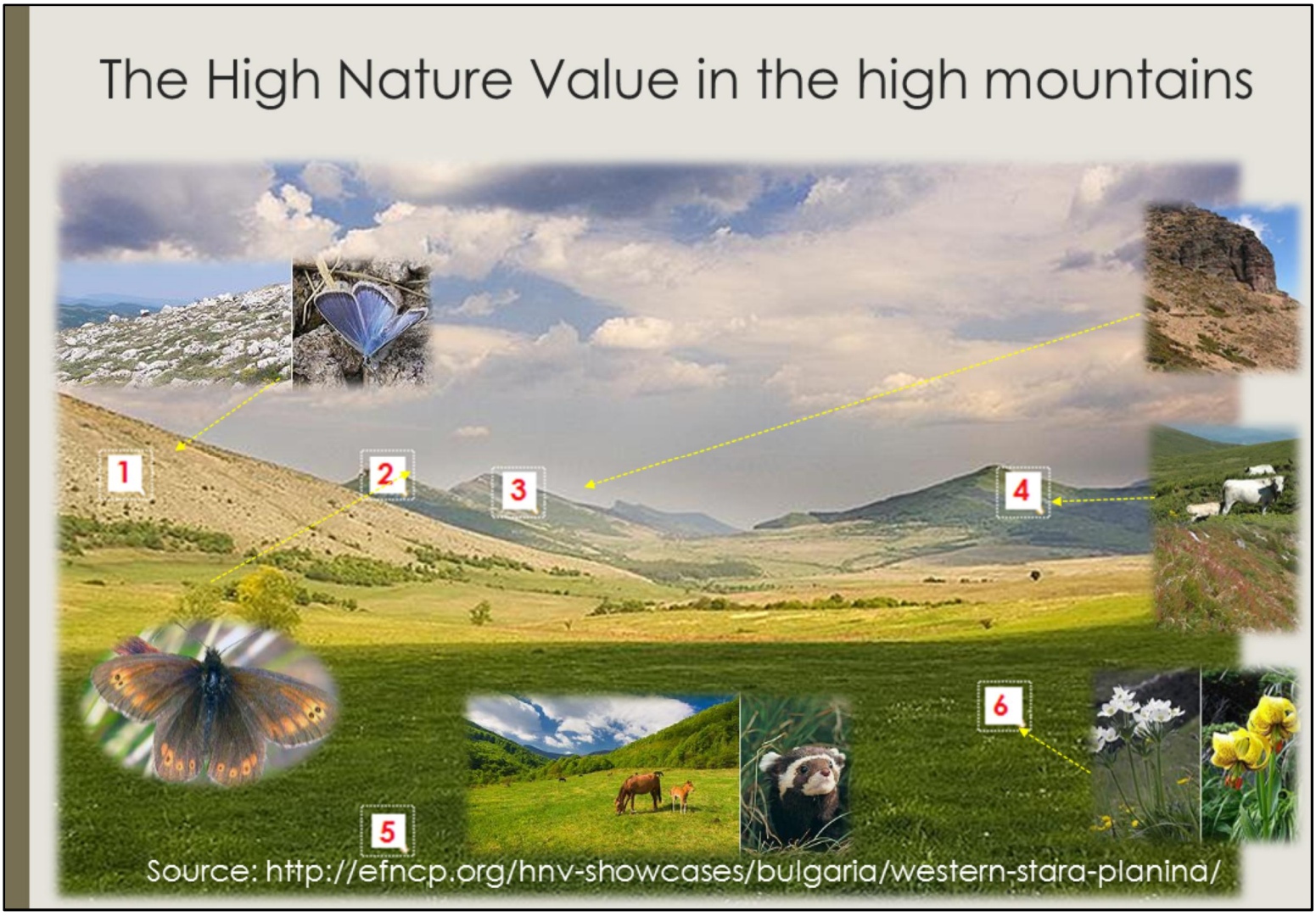
[4] The region underwent a dramatic drop in livestock numbers in post-1989 period (over 90%). Abandonment of low-intensity grazing was particularly serious on grasslands at longer distances from settlements and at higher altitudes. It had a negative impact on floristic biodiversity and results in a structural change from an open to a closed landscape (scrubland, forests) which in turn has impact on fauna species. Many long-term abandoned grasslands had converted to forests and were even re-classified as forests in the land registers.

(continuing...)

[5] Semi-natural dry grasslands on calcareous substrates are the most widespread grassland type in the low- and mid-mountain zones of the region. They are traditionally used for pasturing, but on semi-dry soils mowing takes place. Cessation of agricultural activity and undergrazing resulted in scrub invasion by dog rose (*Rosa canina*), blackberry (*Rubus*), hawthorn (*Crataegus*), wild pear (*Pyrus communis*) and the subsequent loss of the habitat.

[6] The xerothermic grass communities are important for orchids, and are classified as priority conservation habitat type 6210 Semi-natural dry grasslands and scrubland fasciae on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites). The following orchids can be found in the LA: usual (*Orchis morio*), buggy (*Orchis coriophora*), singed (*Orchis ustulata*), crimson (*Orchis ustulata*), trident (*Orchis tridentata*) and butterfly-blossom (*Orchis papilionacea*) orchid.

[7] Mesophile meadows develop on periodically flooded river terraces in river valleys up to 700-800 m altitude and are classified as Lowland hay meadows (6510). These grasslands depend on late mowing or grazing at about 1 livestock unit per ha and no or limited fertilisation to conserve their floristic richness. Depending on their proximity to settlements they face abandonment, undergrazing or overgrazing. Where they are to some extent nitrified or ruderalised, large copper (*Lycaena dispar*, listed in the Appendix II of the Habitats Directive 92/43) feeds on plants such as docks and sorrels (*Rumex*).



[1] Rocky slopes at high altitudes provide a limited grazing resource. Rare plants such as *Androsace obtusifolia* (a rock jasmine) can be found, as well as the rare and threatened butterfly false eros blue (*Polyommatus eroides*).

[2] Bulgarian ringlet (*Erebia orientalis*) is a Bulgarian and Serbian endemic butterfly. In Bulgaria it is confined to the alpine grasslands of Stara Planina, Rila and Pirin above 1400m, often in the proximity of the tree line.

[3] The most widespread high-mountain grassland type in WSP are the *Nardus grasslands* which occur above the tree line on siliceous, dry and poor soils. Large areas of these alpine pastures are dominated by mat-grass (*Nardus stricta*), a grass with relatively low nutritional qualities. They have a great floristic diversity, and are classified as Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas, 6230 according the Habitats directive. Grazing at low stocking densities is necessary to maintain the habitat.

[4] Along ridges and slopes of shallow (up to 10 cm) and stony soils, often also like spots among mat-grass pastures, communities of mountain low shrubs are formed, dominated by European Blueberry and Bog Bilberry (*Vaccinium myrtillus* and *V. uliginosum)*, *Bruckenthalia spiculifolia*, low greenweed (*Genista depressa*), broom seeds (*Genista sagittalis*). This type of vegetation is not so preferable for grazing. Communities of low shrubs have increased their area, especially after burning down of siberian juniper (*Juniperus sibirica*) in the past. Due to the severe decline in livestock numbers in the previous decade the opposite process started and the Juniper vegetation has increased significantly occupying its old habitats, especially along the dry ridge parts. This type of farmlands is ranked as HNVF Type I, the habitats belong to 4060 Alpine and Boreal heaths.

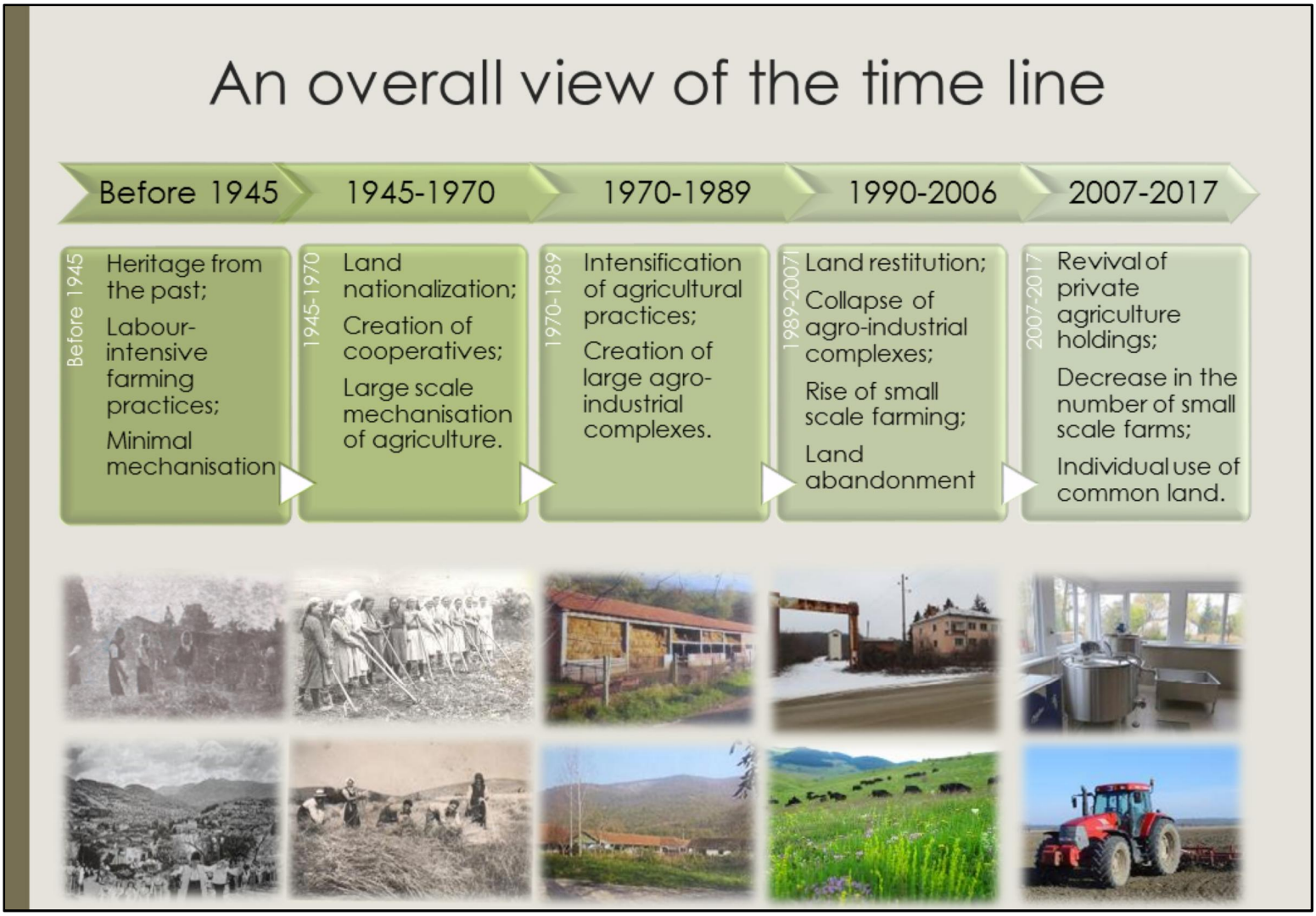
(continuing...)

[5] Dry to temperate-humid grasslands at an altitude between 1000m and the tree line are common in the WSP and classified as 6520 Mountain hay meadows. They are relatively productive semi-natural grasslands as they develop on well-moistened soils, with good forage qualities and a vegetation period of up to 6 months. They are appropriate for hay-making, but are nowadays more commonly used for pasturing, or abandoned. Their deep soils provide good nesting opportunities for the European souslik (*Spermophilus citellus*) and its predator the marbled polecat (*Vormela peregusna peregusna*).

[6] Narcissus anemone (*Anemone narcissiflora*), spotted gentian (*Gentiana punctata*) and great yellow gentia (*Gentiana lutea*) and a lily **(***Lilium jankae*) occur in temperate-humid mountain hay meadows and are listed in the Red Book of Bulgaria. Mowing or grazing at low intensity is necessary to maintain their habitat in a good condition.

The time line

- Explaining the present with the past



The timeline is divided to five periods on the basis of the main developments related to agriculture at national level.

[1] Before 1945: Characterised by extensive farming systems and semi-subsistence farms

[2] 1945 – 1970: Nationalisation of land and production resources for the creation of cooperatives. The first period of real intensification of land use through mass introduction of mechanisation.

[3] 1970 – 1989: Further intensification and specialisation of agriculture production by aggregating the cooperatives into Agro-Industrial Complexes.

[4] 1990 – 2006: The period started with a transition from socialist planning system to market economy. Land restitution to the heirs of the previous owners and the dissolution of the cooperatives led to significant land abandonment and rise of subsistence and semi-subsistence farming. There was almost no public support to farming in this period.

[5] 2007 – nowadays: Started with accession to the EU on January 1st, 2007 and introduction of CAP support. The Pillar I payments- SAPS scheme stimulated the return to farming. Subsistence farms decreased by half and new private agriculture holdings emerged.

Heritage from the past

- The pre-modern legacy up to 1945

The rural society

- In this period 80% of the population in Bulgaria was in rural areas. There were no big towns in the LA so the share of rural population was even higher here.
- The railway services started developing and the road network was being paved, which improved significantly the access to the region in early XXth century.
- At that time, one of the settlements – Varshetz was getting famous as the first spa resort in Bulgaria, which led to development of tourism in the region.

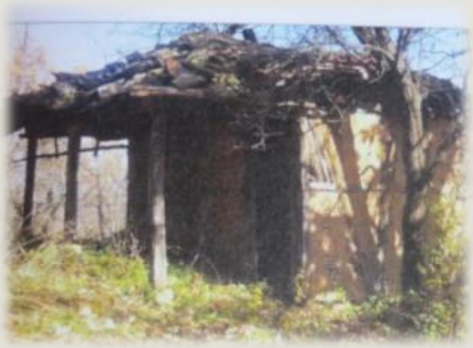
Nevertheless, there were not many job opportunities outside farming and poverty was widespread.

The state policy aimed to reduce it by adopting regulations for providing land to the poor and/or landless people so that at least they can sustain their needs. An upper limit on the land ownership was introduced.

A law from 1906 provided inheritance rights to women – they could get a third of the land of their brothers.

Farming

Men and Women, Farms, Products, Markets



A hut near Meliane village

Bulgaria		1926	1934	1946
Agricultural holdings	no.	750 000	884 869	1 100 000
Average farm size	ha	5,7	4,9	4,3

- Mainly subsistence farming within the extended family;
- Extensive farming systems with high demand for labor and limited mechanization;
- Overall, many small farms with high land fragmentation due to the existing tradition to divide the land between the heirs.
- In the 1930's and 1940's the economic situation of villages improved.
- In 1913 the share of the marketed production was 43%, and increased to over 50% by 1941.

Extensive agriculture was a leading sector of the economy of the LA. Before 1878 sheep breeding was very well developed because of the high demand on the Turkish markets for meat, leather, wool, milk and milk products. After the independence of Bulgaria in 1878, the majority of the land owned by the Turkish population was sold to Bulgarian peasants. Due to the limited funds, they bought relatively small land parcels, which led to land fragmentation and creation of small and medium scale family farmers.

In the period 1900-1912 the land was further fragmented due to the increasing population in the villages and thus, the increasing number of land heirs.

Before the Balkan and First World wars farming was primitive and very extensive – the increase in the agricultural production was reached by an increase of the arable land and the number of livestock. Prior to 1940, more than 63% from the farms in Bulgaria were between 0.1 ha and 5 ha (Varshetz newspaper, October 1938)

The first voluntary cooperatives emerged in the late 1930s in the area. They were mainly groups of the extended family members and their neighbours that united to for the agricultural work like harvesting, mowing, etc.

In sheep breeding, a very popular form of cooperative was “bachia”, where a group of farmers produced together cheese.

Landscapes and environmental value


ВЕТЕРИНАРНИ

Veterinary news presenting analysis on the number of grazing animals and consumption of meat in Vurshetz municipality for the period 1930-1939

Bulgaria	1897	1926
Common grasslands (ha)	970 200	152 400
Arable land (ha)	2 975 000	3 628 000

- In Bulgaria, but also in WSP, the arable land was usually divided in 2 fields:

  the first field was used to cultivate wheat, corn, fodder.
  the second field was resting and used for grazing the animals.
- The household's usual practice was to have one house in the village, where the family lived during the winter and a "hut" in the mountains where the animals were grazed in the summer months. There were some arable land and orchards (plums, apples, etc.) near the huts too.
- Some of the alpine grasslands already had encroachment processes and local newspapers were citing expert's recommendations to clear the grasslands in the 1940's.

In the LA, the focus was on sheep breeding. The herds were around 10 sheep. Cows and buffalos were used as draft animals. Goat breeding importance was increasing.

There was limited mechanization - mainly replacing the wooden plows with iron plows. The mechanization started increasing mainly due to the credit policy of Bulgarian agricultural and cooperative bank. However, a limiting factor for the mechanization was not the land fragmentation, but the cheap (even free) working force which made it more feasible to use the family labour than to invest in machinery.

An article in Varshetz newspaper (1938) presented a good overview of the problems and perspectives to livestock breeding in Varshetz municipality.

"The main reasons for the reduction of livestock in Varshetz Municipality are:

- ü Reduction in the municipal and state pastures due to relocation for other uses;
- ü Strict protection of forest sites from cattle breeding which is leading to reduction in livestock numbers;
- ü The economic crisis led to a reduction in livestock;
- ü The improvement of the quality of livestock breeds led to a reduction of the animal numbers.

(continuing...)

Reasons for the development of the livestock in Varshets municipality:

- Varshetz is developing as the only spa resort in northern Bulgaria and is visited annually by over 20,000 guests. During the summer months the demand for meat, milk and milk products is increasing significantly and their long-distance delivery is difficult and expensive;
- Poor conditions for cash crops, limited arable land and rough terrain are an obstacle for land consolidation and mechanization, so buffalos and oxes will remain the main driving force;
- Poor soil quality in need of manure that cannot be replaced by costly chemical fertilizers;
- The large pastures, after being cleaned of the bushes and equipped with shelters and water supply, will create good conditions for sheep breeding and dairy production in the region;
- The cool climate and the high meadows are among the most favourable conditions for sheep breeding and dairy production in the region;
- The nutritious food products for local population will raise the living standard of the population in the region;
- The abundance of feed allows the development of a much larger and modern livestock breeding. A proof of this is the fact that dozens of cars with meadow hay are exported from the region each year. The hay can be used for feeding more animals and the manure can be spread on the poor arable soils."

Period 1

- 1945 – 1970 Land nationalisation and creation of cooperatives

Changes in the rural and social context

- Land and production resources were nationalised in two phases:
  - During the first phase the maximum size of land ownership was reduced from 30 to 20 ha.
  - The second phase started with mass nationalisation of land, equipment and livestock animals.
- The Labour Cooperative Agricultural Holdings were created. The former farmers became workers in them.
- The mechanisation of agriculture was stimulated by the government.
- This led to freeing up labour force from agriculture for the development of industrial sectors.
- Despite the overall increase in the population, rural ppopulation started decreasing and in 1970s the urban population outnumbered the rural.

Land nationalization was enforced with the Law on Labour Land Property which decreased the upper limits for (arable) land ownership from 30 ha to 20 ha. The maximum non-labour land property was 10 ha per family.

The limit for the forests and grasslands was 5 ha for the hilly and flat areas and 10 ha for the mountain areas.

The outcome of the upper limits on private land led to establishment of a “State Land Fund” which accommodated all nationalized land. During the first phase it started with 56,400 ha and increased to 243,800 ha including the land owned by municipalities, churches, cultural centers and schools. This first phase impacted only the owners of larger farms, which were not many in WSP.

In the second phase of mass land nationalization almost all agriculture land was in the State Land Fund. When the Labour Cooperative Agricultural Holdings (LCAHs) were established they were allocated land from the State Land Fund from their region. They had on average 250–300 ha of arable land and had the right to use state and municipal land. In general there was one LCAH per village, which managed the local land.

The main instruments for regulating the private vs LCAH agriculture production were the Sowing Plans. This systems was giving rights to farming peasants to keep maximum 600 g wheat/day/person and 200 g maize. Farmers were also obliged to sell 1/3 of their hay; ¼ of the wool and all leather at regulated prices that were 1/3 of the market prices. The newly introduced legislation and tax systems gave preferences to the cooperatives (LCAHs).

Livestock was also nationalized. After entering the LCAHs, farmers were allowed to have only 1 cow/buffalo and up to 5 sheep/goats which led to a reduction in livestock numbers in the area for a short period.

In 1947, a law to nationalize the agricultural equipment was adopted. The nationalized equipment was the basis for creation of 70 State Mechanization Centers in 1950 that provided services to the LCAHs in a planned manner.

The mechanization of agriculture freed labour force for the industry, which was a priority for the government.

The population of Bulgaria increased in the period, but rural population started to decrease. In 1970’s for the first time the urban population became more than the rural.

Agricultural development in the period 1

Arable land allocated for private use was 20 – 30% of the total village arable land.

The plots for private use were located near the settlements and formed the mosaic landscape around them. They were used mostly for fruit and vegetable production for family needs.

Land use change in two LA villages	Tuden		Shuma	
	1956	2016	1956	2016
Arable land	384	546	251	501
Land for private use	123	-	101	-
Total arable	**507**	**546**	**352**	**501**
Meadows	124	136	186	192
Pastures	299	245	503	310
Pastures with scrub & abandoned arable	23	111	57	9
Total grasslands	**446**	**492**	**746**	**511**
TOTAL	**954**	**1039**	**1098**	**1013**

- Cooperatives (LCAHs) had annual production plans. Some of them introduced new crops not typical for the region (for example tobacco).
- Livestock breeding continued to play an important role. Alpine grasslands were used for grazing of cooperative's livestock from May to October.
- Some of the existing 'bachia's were transformed into dairies. The products were sold mainly to the distributing companies in Sofia and the big cities.

The main driving forces for that period were land nationalization and the introduction of the central planned economy. Every decision by the LCAH was in fact regulated by a decision of the Ministry of Agriculture. State regulation and legislation of the economy in general and agriculture in particular became the norm.

The state policy for agriculture was focused on modernization meaning mechanization of all possible production processes. However, this was possible mainly in the lowlands and had less effect in the LA in this period. There, a lot of the production processes were still done manually.

The LCAHs formed bigger herds of livestock animal that were grazing on the alpine grasslands in the summer months.

The intensification of arable production aimed to gain maximum yields and to ensure the supply of food to the increasing urban population and for export to other socialist countries. However, in the LA due to the mountainous relief, this happened in a limited extent.

Consequences on land use and biodiversity

- The mountainous relief prevented the large scale mechanisation of production practices. Most of them were still performed manually, hence there were no significant negative effects on the landscape and species.
- The new crops that were introduced in the region were at small scale which localised any potential effects.
- Furthermore, it is a border region to Serbia, so the access to a belt of 20-50 km wide along the border was strictly regulated and the economic activities were minimal.

Overall, the cooperative livestock flocks and herds that developed in the 1950s and 1960s were sufficient to maintain the grasslands from scrub encroachment.

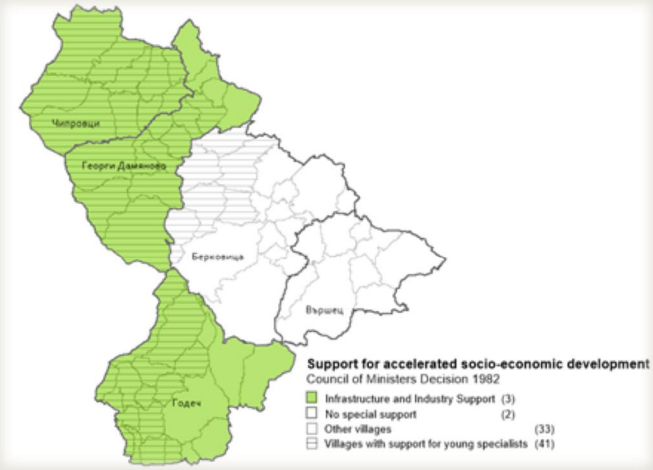
Forestry activities were performed following 10-year management plans and considered the natural characteristics of the forests and forest pastures well.

Period 2

- 1970 – 1989 Agriculture intensification and creation of Agro-Industrial Complexes

Changes in the rural and social context

In 1977, a Party decision increased the role of local authorities by providing them governance functions in terms of local infrastructure and social development.



- 1982 Council of Ministers decision provided targeted support to less developed, border and mountainous regions on the basis of programmes for accelerated socio-economic development:
- Industrial enterprises were opened in the municipalities from these regions to provide employment opportunities in rural areas.
- Young specialists (under 45 years) and families were given support to settle in selected villages.

The peak number of people in the LA was in 1981: 63 292 people, after that it started declining (to slightly above 35 000 today). The year of peak population in Bulgaria was 1985 - 8,95 million people.

The support for border and mountainous regions was divided in two parts:

The first one was focused at municipalities in which local administrations were provided support to improve the infrastructure and to open facilities/workshops of various industrial enterprises.

The second type of support was directed at selected villages in the municipalities for young specialists and families to settle in them. The types of specialists listed in the regulation were teachers, doctors, livestock breeders, agronomists, etc.

The type of support provided was one-off support for the settling; transport costs; easier access to housing or permissions for construction, etc.

The level of support depended on the size of the family (number of children).

The rural economy in this period was characterized by further intensification of the agricultural production and rapid development of the industry. Almost in each region an industrial enterprise was created and the population was engaged there.

The LCAHs and the State Machine Centers were merged and Agro-Industrial Complexes (AIC) were created. State agricultural enterprises (SAE) and large livestock breeding complexes were also created. The total number of cattle in Bulgaria reached 2,350,000 in 1989 and the number of the sheep increased to 18 million heads.

During that period the production of agriculture increased by intensification. New, more productive breeds replaced the traditional ones: 5 new cattle breeds, 1 buffalo breed and 8 sheep breeds/crossbreeds were created during that

period.

Agricultural development in the period

- The cooperatives were grouped into larger Agro-Industrial Complexes (AICs). Each AIC had to develop also industrial activities to provide for diversified employment in the rural areas.
- In this period rural households were allowed to have their own farm/livestock. The limits for livestock numbers were not observed strictly, thus permitting private farming practices to develop.

Statistical data from that period is very limited, but several interviews with farmers and former AIC workers provided insightful information:

A former worker of the Agro-Industrial Complex "Gavril Genovo" (Chiprovtzi) municipality recalls:

In 1978, the agricultural land of Prevala village (which has the biggest share of pastures in Chiprovtzi municipality) was included in AIC Gavril Genovo. In1979-1980 several AICs were grouped and the AIC "Beli Mel" was created. Later, it was transformed to Livestock Breeding Complex "Beli Mel". They had 9-10 sheep herds with around 250 sheep/each. Usually one family was taking care of one herd. Lambs were exported to the Arab countries by ship-loads. There were 2 dairies – in Beli mel and Gorna Luka."

One of the biggest and most successful Agro-Industrial Complexes was in Varshets municipality. Its former director Mr. Anton Mateev (1979-1992) describes:

The agro-industrial complex (AIC) Varshetz had 8000 ewes, 2000 lambs for repair and 800 cattle, of which 150 heifers in the village of Gorno Orizovo and a fattening facility in the Cherkazki village. A working unit for perennials was created in Cherkazki. All villages of the municipality had sheep pens – a total of 50 solid buildings with electricity, water and asphalt roads. 12 000 people lived in the municipality between 1979 -1992. 1200 people worked at AIC Varshetz: 500 permanently occupied in production and 200 temporary seasonal field workers. The AIC was a separate legal entity, which was managed by a general meeting of cooperative members. The Chairman and the Deputy Chairmen were elected. One of the deputy directors was an agronomist and was responsible for the plant growing and the other was a chief engineer and was responsible for the livestock breeding.

Pasture complexes for fattening calves were established and rotational grazing was practiced there. 300 ha pastures were fenced and plotted and 30-days rotational grazing was done. Calves at 80 kg were taken to the pastures in April and grazed until October when they weighted 250 kg.

(continuing...)

Sheep were moved out from the pens in April to the summer folds in the mountain and returned in October.

The village of Ozirovo had a herd of 300 goats as well as a pig farm with 500 sows for fattening.

There was a construction crew of 35 people on the farm that was responsible for the maintenance of buildings and infrastructure within the AIC structure. The other structure was the motor transport brigade with 40 people and 40 trucks for moving and transport of the farm produce. The AIC had 1000 ha of own forests.

The AICs were encouraged to develop some industrial activities as well. Around 300 people were employed in the industrial unit of AIC Varshets. The activities were very diverse.

Overall, the most profitable structures of the AICs were the industrial activities. In AIC Varshets, they provided over 0,5 Million EUR annual profit.

Each working unit and each settlement had a production plan. The produce was sold through the NARcoops – an independent commercial business structure. The meat was given to the RODOPA meat processing structures, lambs were exported at 1,5 EUR per live weight to Italy and Greece by foreign trade departments. The milk was sold to dairies for processing. Manure was transported and sold in Vratsa, while they were buying 2500 tons of grain per year from Zlatiya region (near Danube river) for animal feed.

One animal breeder kept 120 sheep with average yield of 40 liters per sheep.

In the 1980's the structure of the production was revised to more profitable crops. The three main crops were:

- Strawberries - grown on a family chord on 0,1 ha per family. It was allowed to work on the field during working hours. All of the produce was bought by the AIC and the yields reached 30,000 kg/ha.
- Pastures and hay production. The AIC managed 800 ha of meadows and 1000ha of pastures, municipal property, which were mowed for hay. It had a contract with the company for recreation and culture. Each house that accepted tourists had to agree to mow 0,3 ha/year for each tourist in the house. Tourists and guests participated in the gathering hay with their hosts. 2000 tons of hay were sold each year to ships that exported lambs to the Arab countries, Italy and Greece.
- Rosehip was one of the most profitable crops. 800 acres with two varieties of rosehip (Rosa Canina and Rosa Rugosa) were cultivated for the AIC under a contract with the Institute in Plovdiv. The wild rosehip is the most unpretentious plant for this place and weather conditions. It grows on rocky places, it is a permanent crop which can be harvested until the first snow. The AIC sold it to the Netherlands and to a jam production plant in Plovdiv.

Once all other agricultural activities were completed the workers were sent to pick up the rosehip fruits.

Meadows were mowed with mowers. In 1984, 20 mowers were bought from Italy. Pastures were mown by hand and lawnmowers.

Manure from dairy farms was used on the vegetable gardens.

The AIC produced 500-600 kg sheep yogurt a day, that was sold to tourist in clay pots throughout the year.

The system applied on the fields did not allow the same crop to be sown more than two years. Crop rotation was applied, to repeat barley on the same place was an exception. Fallow land was kept, in order to let soil rest after canopy crops.

In the mid-1980s private farming activities (so called farming activities for personal use) were fairly widespread. Each family had around 20 sheep. It received feed grains and the hay for rearing the animals. The family was obliged to sell certain quantity of milk and meat to the AIC. Collecting points for the purchase of meat and milk existed in each village. Up to 3000 lambs were bought out from private farms per year. The teachers, doctors and dentists in each village were also rearing animals. The AIC had to produce poultry as well. It gave the forage to the AIC Godech and private farmers to tend and fattened chickens and then bought the meat - about 80-100 tons of meat.

An example for private livestock breeding is a Karakachan family in Berkovitza that used to have 350 sheep before 1945. In the 1980s they kept 150 sheep. Nowadays, the family farm has 450 sheep and manages 26ha of grasslands.

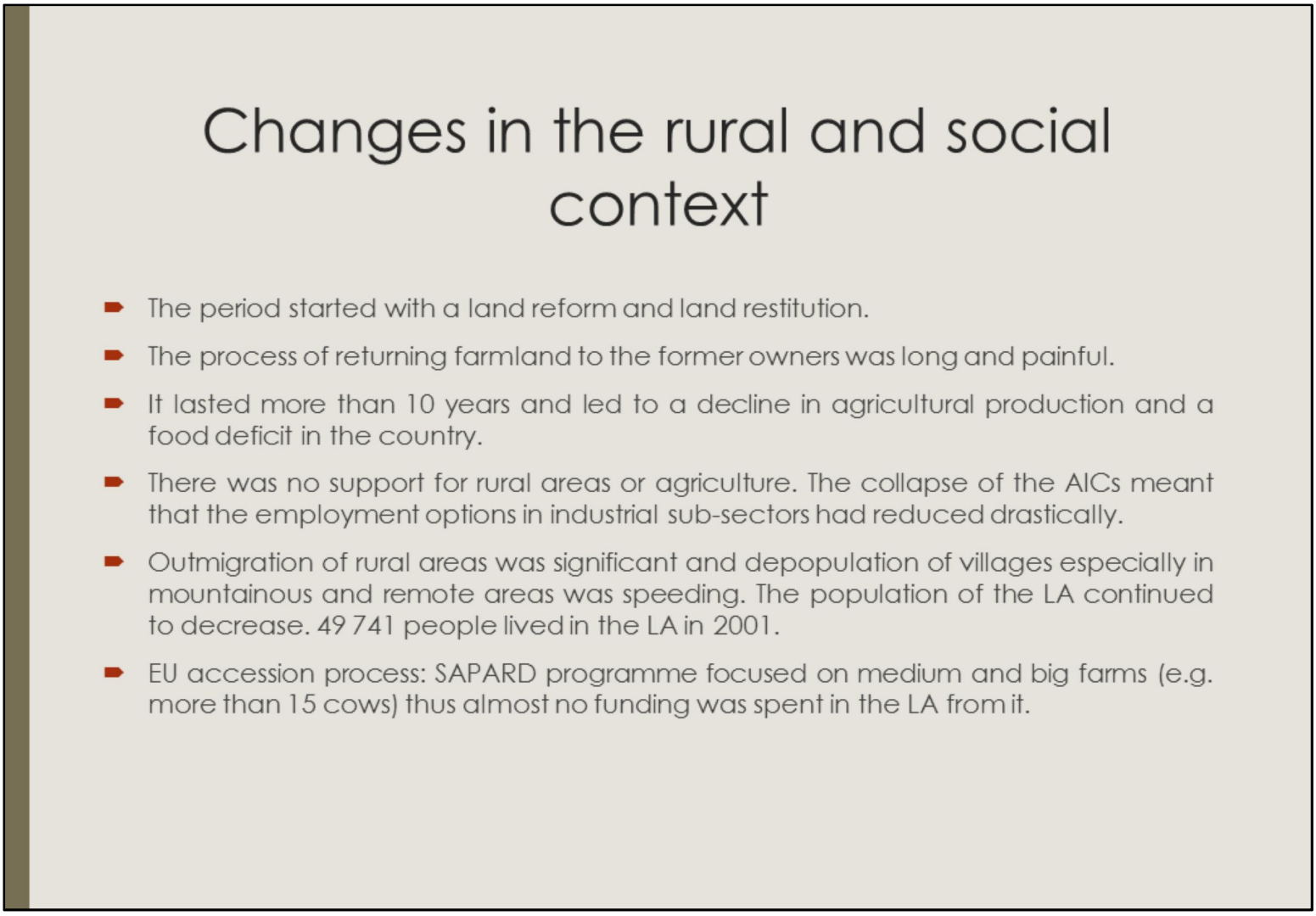
Consequences on land use and biodiversity

- The rapid intensification and mechanization that took place in the period did not affect that much the mountain regions and the LA.
- The use of mineral fertilizers for the crop production was typical for the lowlands not on the sloppy and mountainous terrains.
- Most of the local farmers think that the condition and composition of grasslands in that period was better compared to the situation today:
- "There was no need for cleaning the pastures, this was done by the sheep."

Overall, in this period agriculture production in the lowlands was intensified, while the mountainous livestock breeding was still utlizing the available grasslands – pastures and meadows that were in the AICs.
The allocation of land for private use for both fruits and vegetable production and small-scale livestock breeding and the use of mountain pastures in the AICs contributed to the formation and maintenance of the mosaic character of the landscape.

Period 3

- 1990 – 2006
- Transition to market economy and accession to the EU



By the end of 1998, about 80% of the agricultural land was restituted, title deeds were issued for approximately 23% of the agricultural land. Land restitution was a precondition for the development of the private farming sector. However, the private agricultural development was hampered by lack of funds for machinery, seeds, livestock, etc. leading to reduction of the average yields in crop production. This changed its structure by increasing the share of products of high demand - vegetables, potatoes, grain, corn, etc. There was no support for agricultural production at that time.

The cooperatives were de-composed, land was restituted, livestock was allocated the heirs of the LCAH members. Since most of them lived in the cities already, the livestock was slaughtered, and only in rare cases they were sold or kept as subsistence activity. Processing units were privatised and many of them were subsequently destroyed.

Land restitution process resulted in high land fragmentation, followed by massive land abandonment. Many arable lands naturally turned into grasslands. The drastic reduction of livestock led to grasslands abandonment, especially of the alpine and remote grasslands. Municipal lands increased by the so called “residual land”- land that was not claimed hence not restituted to its owners.

EU accession support in agriculture started in 2000. There were many subsistence and small farms but SAPARD programme was focused on medium and big farms (e.g. more than 15 cows) that were considered to be more viable at that time.

Agricultural development in the period

- Agriculture Census 2003 data reports 7644 agricultural holding in the LA with an average farm size of 0.3 ha/holding.
- Farms were mainly subsistence and semi-subsistence.
- There were 3,235 cattle and buffaloes, and 22,554 sheep.
- Livestock was grazed on the municipal grasslands mainly near the villages. Municipal grasslands were used as common lands by all livestock owners in the settlements.
- Alpine and remote grasslands were abandoned. Some arable lands were also abandoned thus transforming to meadows and pastures.
- The abandonment of the grasslands motivated some of the current livestock farmers to start their activities to maintain the grasslands.

The accession negotiations that Bulgaria had the EU ignored the reality of the thousands small scale and subsistence farms in the country. The Bulgarian administration was inexperienced or unwilling to make the efforts to adapt the legislation to the farming realities in the country.

The harmonization of the agriculture acquis was focused on the interests of the few large scale producers and processors. This had a very negative effect on the small-scale dairy and meat processing units that existed in the rural areas. The majority of them were closed because of the hygiene requirements and the lack of adequate support to meet them. The closure the local dairy had a detrimental effect on many small livestock farms as they had no systematic local market for the milk. By 2006 most of the small herds were sold or slaughtered.

Consequences on land use and biodiversity

- The drastic decrease of grazing animals led to severe scrub encroachment on grasslands.
- Some grasslands were permanently transformed into forests.
- The closure of the mosaic landscape and thus the loss of specific and conservation important habitats was alarming.
- An initiative to declare it trans-boundary Nature Park has developed. However, a Nature Park « Stara planina » was declared on the Serbian side; the Bulgarian one was proposed as a Natura 2000 area (BG1040 Western Stara Planina and Predbalkan).

There were two trends that were observed in this period:

- The abandonment of pastures, especially the remote high-mountain ones, led to scrub encroachment and natural reforestation on more than a third of the territory.
- The abandonment of arable land, remote and around village, make it possible for local livestock breeders to use it as grazing land. As a result, it turned to pastures.

The identification of Natura 2000 zones in the region (and elsewhere in the country) was carried out in this period, where the abandonment arable land was used as pastures and the abandonment pastured were transformed to forests. Nowadays, many of the land owners of the former abandoned arable land re-convert it to arable, including in Natura 2000 zones. At the same time, the forested pastures are transferred to the forest land category.

Period 4

- Present times

Changes in the rural and social context

A village with less than 100 people in G.Damyanovo municipality

Source: Google Street View

Source: Google Street View

The main square in Chiprovtsi.

Municipal centers are still the ones attracting most of the infrastructural RDP funding

The population of the LA continued to decrease – down to slightly above 35 000.
The villages are inhabited mainly by pensioners, while young people migrate to Sofia or municipal/district centers.
In 2014 the unemployment rate varied between 15 and 35% in the different municipalities in the LA (amongst the highest in Bulgaria).

The schools, medical care and other services are concentrated mainly in the 5 municipal centers.
There are only 2 hospitals (in Varshetz and Berkovitza) and 4 medical centres in the LA.
The kindergartens are 12 with 966 children, half of them are in Berkovitza. There are 17 schools in the LA.
The LA is part of the poorest NUTS II region in the EU.

Almost no diversification of the agricultural activities – although the region has outstanding landscape beauty and is famous for its activities, in 2014 there were only 11 accommodation establishments .

Agricultural development in the period

Scrub clearance to make the land eligible for SAPS support

The LA has 3561 farms –mainly livestock farms, but also mixed farming systems; small and medium farms.

Due to the previous abandonment and the encroachment processes many of the grasslands are not included in the UAA – LPIS layer “Land in good agriculture conditions”;

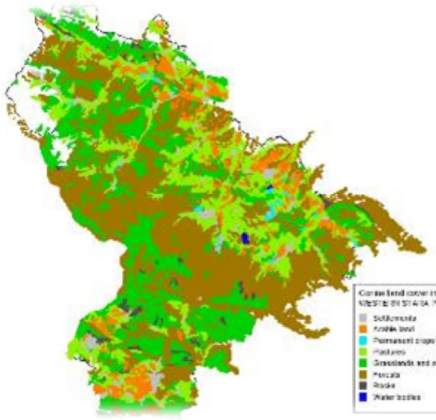
‘Subsidy’ driven agriculture – most of the grassland are “cleaned” to fit in good agricultural condition by mowing (without real production) and in some cases by ploughing; Easy grazing by horses becomes popular in the LA;

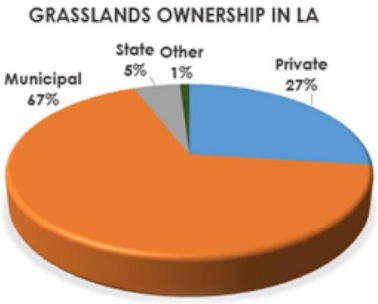
Increased legal and food safety and hygiene requirements – many of the dairy farms do not meet this requirements and are currently transforming to suckler cows;

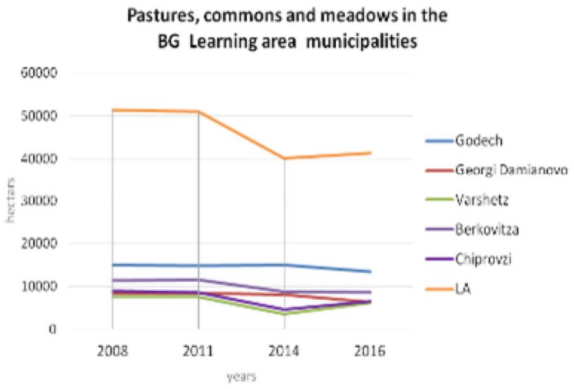
Direct sales legislation was introduced; farmers markets are organised in the recent years; regional municipal brands are being discussed and piloted;

Small and medium livestock breeders begin to form associations to defend their interests.

Consequences on land use and biodiversity







- At landscape level, the land use is a mosaic of forests, pastures, arable, scrub and rocks.
- The long-term low intensity use has maintained the high biodiversity in the LA, to the extent that in the previous period the abandonment was the biggest threat to open habitats.
- In the current period, the demand for land has increased due to the subsidies, so there is a possibility for strong intensification of the open spaces especially after the loss of around 10,000 ha to forests and/or arable land.

In general the pastures in the region always had some scrub on them, so over-clearing of the "unwanted vegetation" may destroy some of the traditional landscapes. At the same time, the scrub/tree overgrown grasslands are very expensive to re-open.

The majority of the grasslands are public – municipal and state, and historically were used as common pastures in a tradition system. In the new period this has changed, due to the need to have a legal right to be able to claim CAP subsidies. As a result, the old system for truly common use of pastures has in practice disappeared. Instead, the municipal grasslands are allocated for individual use. Priority is given to farmers from the same settlement/municipality who must have grazing animals. The allocation ratio is determined in a state regulation (for high productivity and low productivity pastures) to prevent misuse of the public grassland.

A negative consequence of this is the impossibility to consider the pastures' carrying capacity in the allocation process, because of the legally set ratio of number of animals per hectar of grassland. The effects on the biodiversity from the transition from common to individual pastures use is still not accessed. The Bulgarian Society for Protection of Birds (BSPB) recommends to maintain the pastures by grazing and mowing and minimize the use of shredders (cutting machines) in order to maintain the high nature values of the area.

The business as usual scenario

- Where do we go in 2030 in the current situation?

The rural development and social driving forces

The main economic sectors (apart agriculture) are:

- Light industry: food (meat processing, milk processing, bakery, bottling of mineral water, soft drinks production, deep freezing of agricultural products); production of electric appliances, sewing industry and carpet production, chemical industry
- Logging and wood processing industry.
- Services including tourism: the high share of protected areas is a pre-condition for touristic activities, recreation, collection of natural products.

Main actors:

- Small and medium enterprises
- Municipalities
- Local action groups : Western Stara Planina (Chiprovzi, Georgi Damianovo, Chuprene, Rujintzi municipalities) and Berkovitza-Godech

The geographical location (near Sofia), the natural features (especially the mineral springs in Varshets and Godech) and cultural heritage create prerequisites for development of various forms of tourism - rural, cave, biking, spa, hunting, cultural, religious and others. However, the restructuring of the ownership of tourist facilities in most resorts and complexes was made by people unfamiliar with the tourist business. Poor coordination between the new private owners, state and local governments, financial instability and small economic incentives from the state further worsened the situation in the tourist sector. New initiatives are emerging and there are some trials in developing tourist products between the different municipalities in the LA (Varshetz, Godech, Berkovitza).

Four municipalities of the LA have local action groups (LAGs) and have developed strategies for community led local development:

The strategy of the LAG Berkovitza-Godech (2014-2020) is approved for implementation and includes measures from the EAFRD. Its strategic objective is to make the territory a dynamic rural area with improved quality of life by promoting entrepreneurship and efficient use of local resources.

The strategy of the LAG Western Stara Planina (Chiprovzi, Georgi Damianovo, Chuprene, Rujintzi municipalities) has already undergone public hearings and has to be submitted for approval in the next call for proposals. The strategy includes measures from EAFRD and Structural funds (Operational programme Environment (EFRD) Operational programme Human resources development (ESF), Operational programme Innovations and competitiveness (EFRD). Its strategic objective is improving the quality of life and competitiveness of the local economy and ensuring a balanced and sustainable local development through more employment opportunities and social inclusion, implementation of integrated measures for business development and entrepreneurship, construction and renovation of social and cultural infrastructure and conservation and promotion of local identity, cultural and historical traditions, environment and biodiversity.

Neither of the LAGs builds its strategy explicitly on the HNV characteristics of the territory. The analysis and strategies development were outsourced to consultancy companies from outside the region, which could be one reason that HNV values are not integrated. Another reason is that for municipal authorities HNV farming as it exists today is not a basis for development, but a remnant of the past.

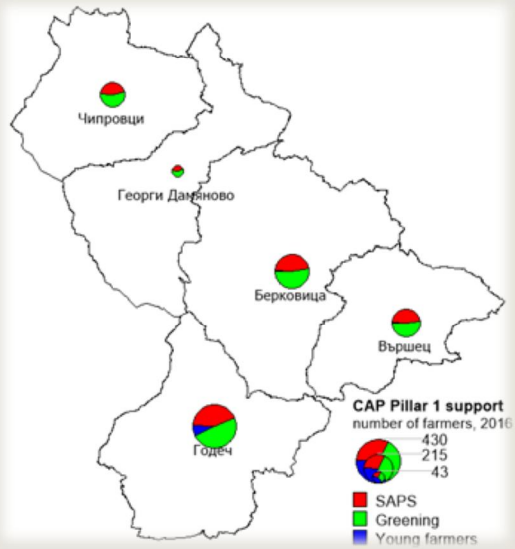
Varshets municipality does not have a LAG since its population is less than the requirements for registration. The vision included

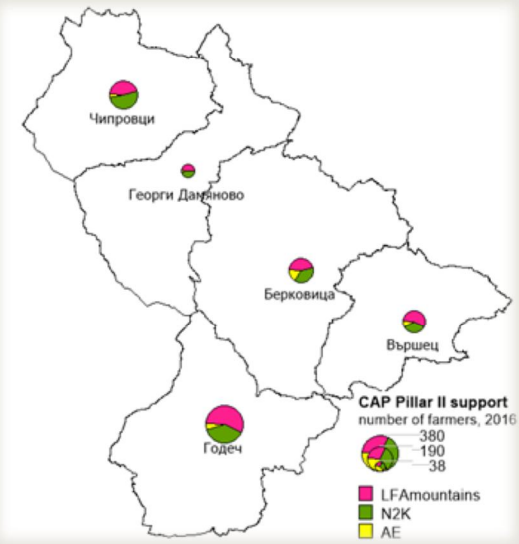
in the Plan for the development of the municipality is to make Varshets a national brand for natural and spa tourism, attractive and peaceful place to live in, with sustainable economic development and environmental care.

The economic driving forces Food chains and market

- Main driving forces for agricultural development:
- National and EU support schemes, since the market income is insufficient to continue the livestock breeding activities;
- The development of tourism activities and the increasing demand for quality food products is a niche for the future development of the LA. There are already some initiatives of local brands and direct sale to final customers and restaurants in the area. Even if small scale still, they provide perspectives for the future.
- Main limiting factors:
- Aging of the labour force: In 2010 over 46% of the LA farmers were over 64 years old and 26% were between 55-64 years.
- Governance and rules for allocating municipal grasslands – setting up fair rules supporting local livestock breeders.
- Limited investments both in on-farm processing units and tourist infrastructure.

The policies and political driving forces





- Main measures that impact the HNV farming systems:
- SAPS support and greening payments.
- Coupled payments for livestock and for fruits, vegetables and protein crops.
- LFA payments for mountainous and other areas.
- Natura 2000 payments depending on the management restrictions for grassland.
- Agri-environmental payments: restoration and maintenance of HNV grasslands

The programs and financial instruments for the implementation of various policies are planned at national level - policy for rural development, regional policy, human resource development, economic competitiveness, environment, climate change and biodiversity conservation. All programs and policies give priority to financing projects in the territory of northwestern Bulgaria, where the LA is situated.

The implementation of various policy measures for rural development also has an essential role for the agricultural sector and the improvement of services and life in rural areas. There are a number of already implemented investment projects in the LA for modernization of farms, introduction of new technologies and production processes, training of farmers, creation and modernization of processing capacities. Measures for improvement of the age structure of farmers are applied and starting aid for setting up young farmers and small farms is available. Such support is particularly important for the local communities in mountainous regions where there are no opportunities for credit and financial investments in agricultural activities.

Coupled payments are provided for dairy cows; suckler cows and heifers; ewes and she-goats and buffalos. Support for dairy and suckler cows and ewes and she-goats that are registered in breeds' registers is higher. Coupled support is offered also for fruits, vegetables and protein crops.

(continuing...)

Natura 2000 measure is designed for sites with designation orders in force and where there are specific restrictions on agricultural land use. The payments depend on the restrictions that are listed in the designation orders as well as the geographical situation of the site. For grasslands the payments vary between €17 and €108/ha. Payments for Natura 2000 sites in ANC are lower than the areas that are not designated as ANC (the assumption being that the loss of income is lower).

The commonest restrictions for grasslands in Natura 2000 sites are:

- Ban on the removal of landscape features (hedges, single and group tree)
- Prohibition of mowing before 1 July
- Prohibition of ploughing and afforesting meadows, pastures and commons and turning them into arable land and/or permanent crops.
- Prohibition on the use of pesticides and fertilisers in pastures and meadows.
- Prohibition of mowing before 15 June or 15 July (depending on the region) from the periphery to the centre with fast-moving technology.

The commitments under Natura 2000 measure are annual, so that many farmers prefer to apply for that measure rather than undertaking a five-year agri-environment commitment. However, payments under Natura 2000 measure are lower than those available in the HNV AE scheme.

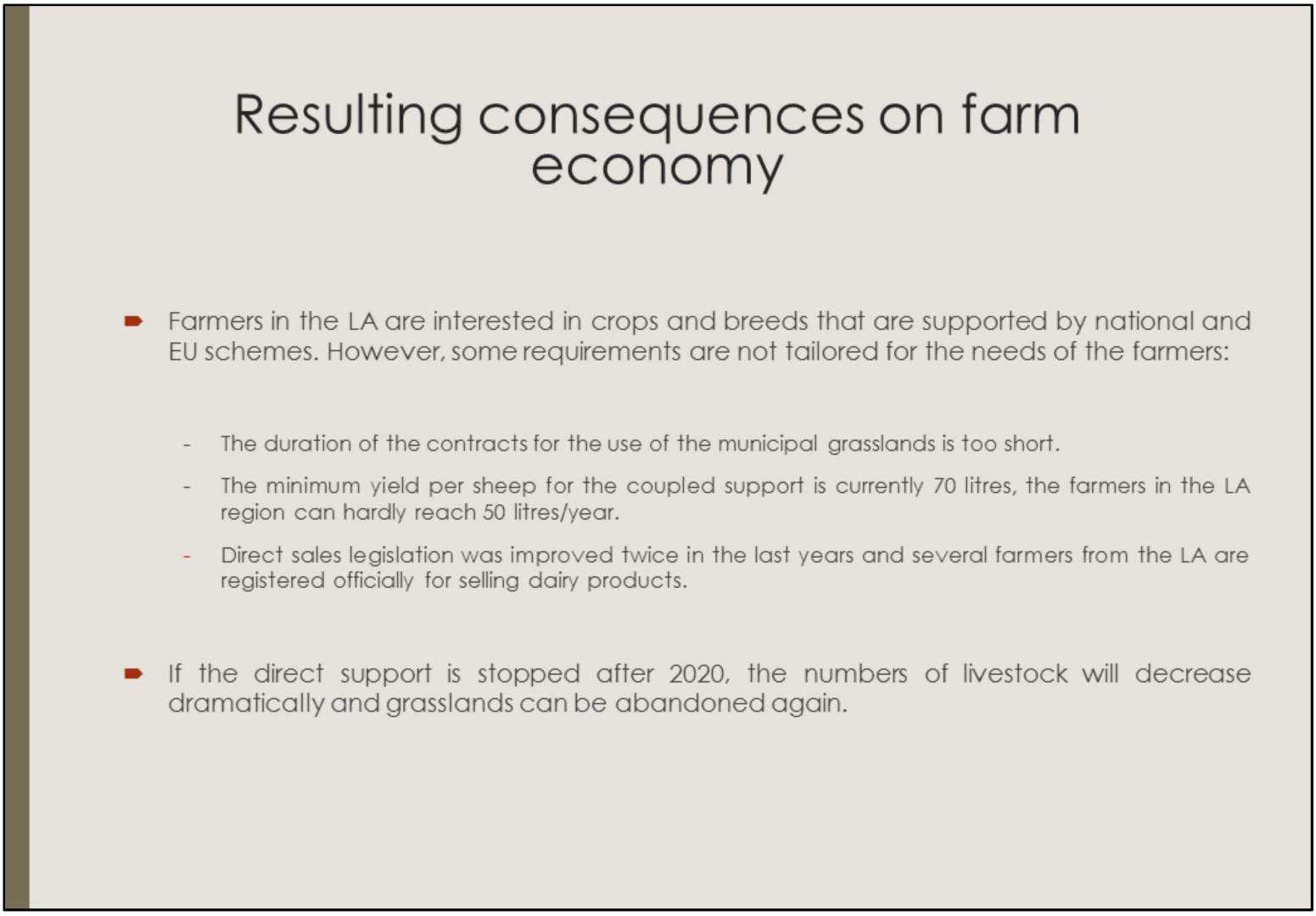
Agri-environmental payments

The Restoration and maintenance of HNV grasslands scheme is applicable to all grasslands in the HNVF layer throughout the country. Farmers' commitments are for a minimum period of 5 years and every year they declare whether the grassland parcels would be mown or grazed.

The payment rate for mowing is €113.15/ha and the management requirements comprise prohibition on the use of mineral fertilisers and plant protection materials; restrictions on the timing for the first mowing in lowlands and in

mountainous areas; restrictions on the mowing approach – it must be by hand or by a slow mowing machine from the centre to the edge of the parcel, or from one side to the other; as well as a requirement for removing mown grass from the field or for gathering it in haystacks.

The payment rate for grazing is higher – at €126.8/ha and the management requirements comprise prohibition on the use of mineral fertilisers and plant protection materials; as well as a recommended grazing density between 0.3 -1 LU/ha.

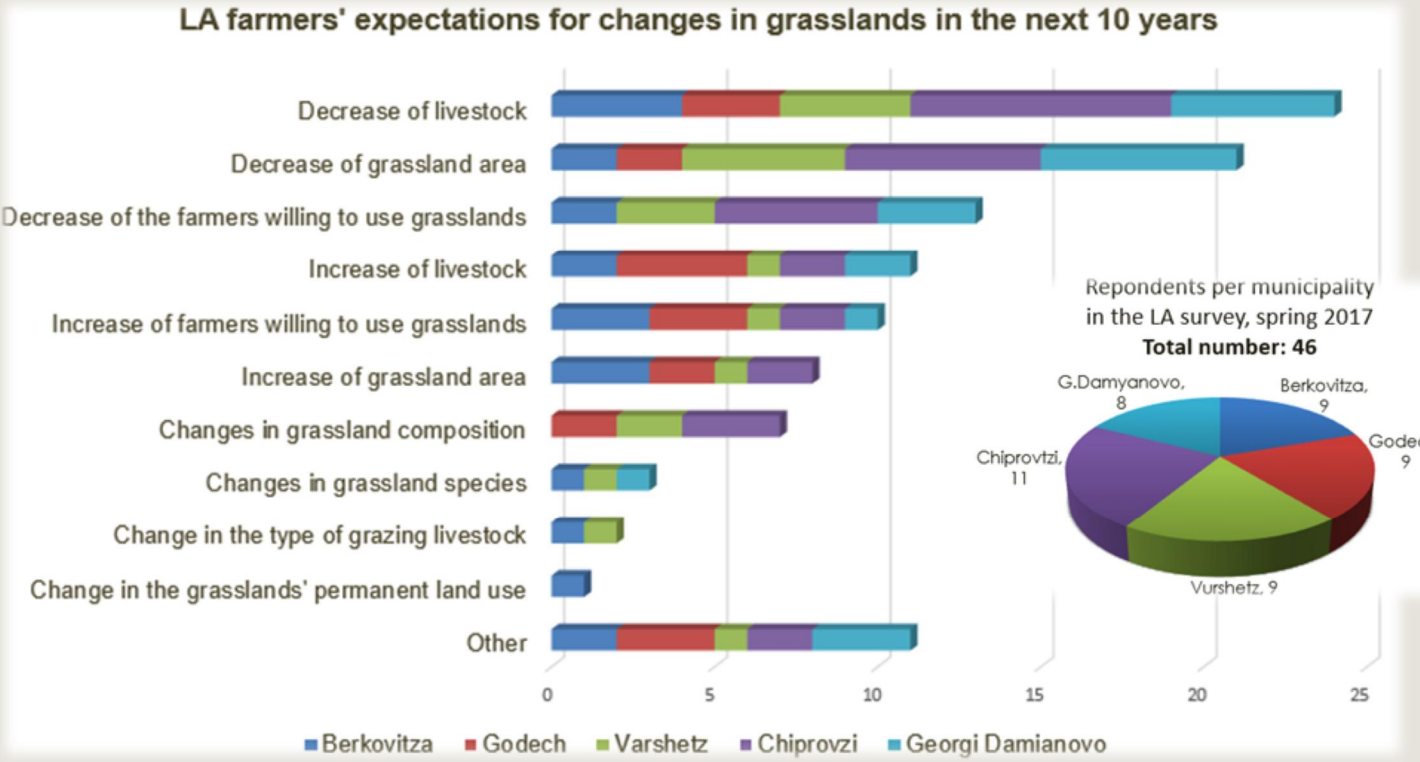


The main problem for the area is rapid depopulation and aging population and lack of a qualified working force in agriculture. Therefore, we believe that there is no threat of intensification in the area. Even if the livestock continues to increase with the same speed and levels it will not reach the numbers from the past when the grasslands were maintained by the grazing animals. The lack of labour force (especially shepherds) is leading also to changing the grazing livestock practices into indoor breeding farm enterprises.

The direct sales registrations in the LA is due to the support provided by a 5-year project implemented by the Bulgarian Society for the Protection of Birds and other NGOs in Bulgaria, funded by the Swiss Development Cooperation. The support was both financial, technical, and advisory to help farmers go through the process.

Resulting consequences on land-use and biodiversity

- "Meadows will become pastures, pastures will become forests"



The survery was carried out in early spring 2017 in the municipalities of the LA. The number of respondents is 46. Over 60% of them stated that grasslands were important for their livestock, although the livestock farmers were 50% of all (there were also some hobby and/or subsistence livestock owners). The other respondents comprised representatives of agricultural offices and municipal authorities, NGOs, processing and other businesses.

The expecations of local farmers for the changes in the grasslands in the next 10 years vary in the LA. The farmers from the two more remote and smaller municipalities – Chiprovtzi and Georgi Damyanovo expect a significant decrease in the number of livestock and grasslands. They have less hope for an increase in the livestock farming. Comparing their expectations to the CAP subsidies received, we observe that they already have a decrease in the numbers. Of course, there are also farmers believing in the opposite trend in these municipalities too.

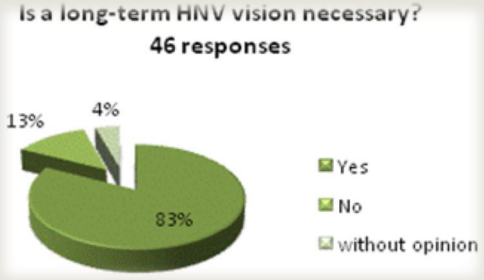
The farmers in the two municipalities with highest numbers of supported farmers – Godech and Berkovitsza are split in their expectations for decrease/increase trends. These are also the municipalities in which young farmers were supported and there is more hope in them.

Overall, the farmers in the LA fear that if livestock support does not continue, the consequences for the pastures and landscape will be negative.

The HNV vision

- Managing biodiversity landscapes for a vivid society

Biodiversity-rich landscapes: how will they function in 2030?



- Vision: Agricultural modernization taking into account natural and cultural heritage in the region
- Farming activities and production methods reflect the specificities of the LA: pastoralism, maintenance of the landscape and nature values, protection of natural sites and protected areas, but also HNV farmland outside the protected areas; all farmers have access to grasslands near their farms. Long-term contracts for municipal pastures. Forests and grasslands routes and watering places are restored.
- Farmers (medium-size, family farms) are well informed, open to novelties providing better biodiversity conservation, using appropriate equipment, applying new technologies.
- Cooperation and interaction between all stakeholders to increase social cohesion, rediscovery of local traditions and events that lead to joint initiatives for promoting and marketing local products: local brand, direct marketing and direct contact with consumers, better promotion and services linked to tourism development.
- Stable and understandable legal framework and flexible administration both at local and regional, and national level.

The vision presents integrated economic, social and environmental development of the region. The farms' production is in compliance with the natural conditions of the region respecting local traditions and applying environmental, natural processing/canning/packing/drying etc. methods. Production is organized in small and medium facilities available and affordable for the farmers' capacity in the region.

Provision of appropriate specialized training for agricultural producers and local community (raising awareness on the nature conservation, better practices and technologies, administrative and legal obligations, utilization of the opportunities for self-sufficiency in food, energy and others (solar panels, composting systems, etc.).

Cooperation and interaction (mutual, informal) between all of them increases social cohesion; rediscovery of local traditions and events. The joint activities could be supported by a network of sectoral associations, unions, etc.

There is a stable and understandable legal framework and flexible administration either at local and regional and national level.

(continuing...)

Local stakeholders want to see the following elements in the vision:

•Increased number of animals both cows and sheep (extensive/traditional grazing and livestock breeding); diversification of the animals, e.g. buffaloes.

•Long-term contracting about pastures and meadows for common use (owned by the public authorities); to be rented on the basis of long term contracts.

•Consolidated and proper land management (improved grass cover and grassland productivity where the balance between restoring abandoned grasslands and extensive management of grasslands needs to be closely monitored); rotational grazing (control over the density of the animals and duration of the grazing on one place); control over / stopping non-nature friendly agricultural practices (pesticides use, burnings of stubbles and pastures) etc.), no abandonment, no ploughing up of Natura 2000 sites and the pastures and meadows.

•Maintenance and reasonable use of infrastructure – water sources (facilities), forest/fields roads/paths (ensuring the access to pastures for the livestock) etc.

•Complex preservation of natural resources and biodiversity following good practices: specific mowing periods applied for Natura 2000 areas, as well as innovations as electric fences (other equipment e.g. mobile dairy facilities, manure handling etc.)

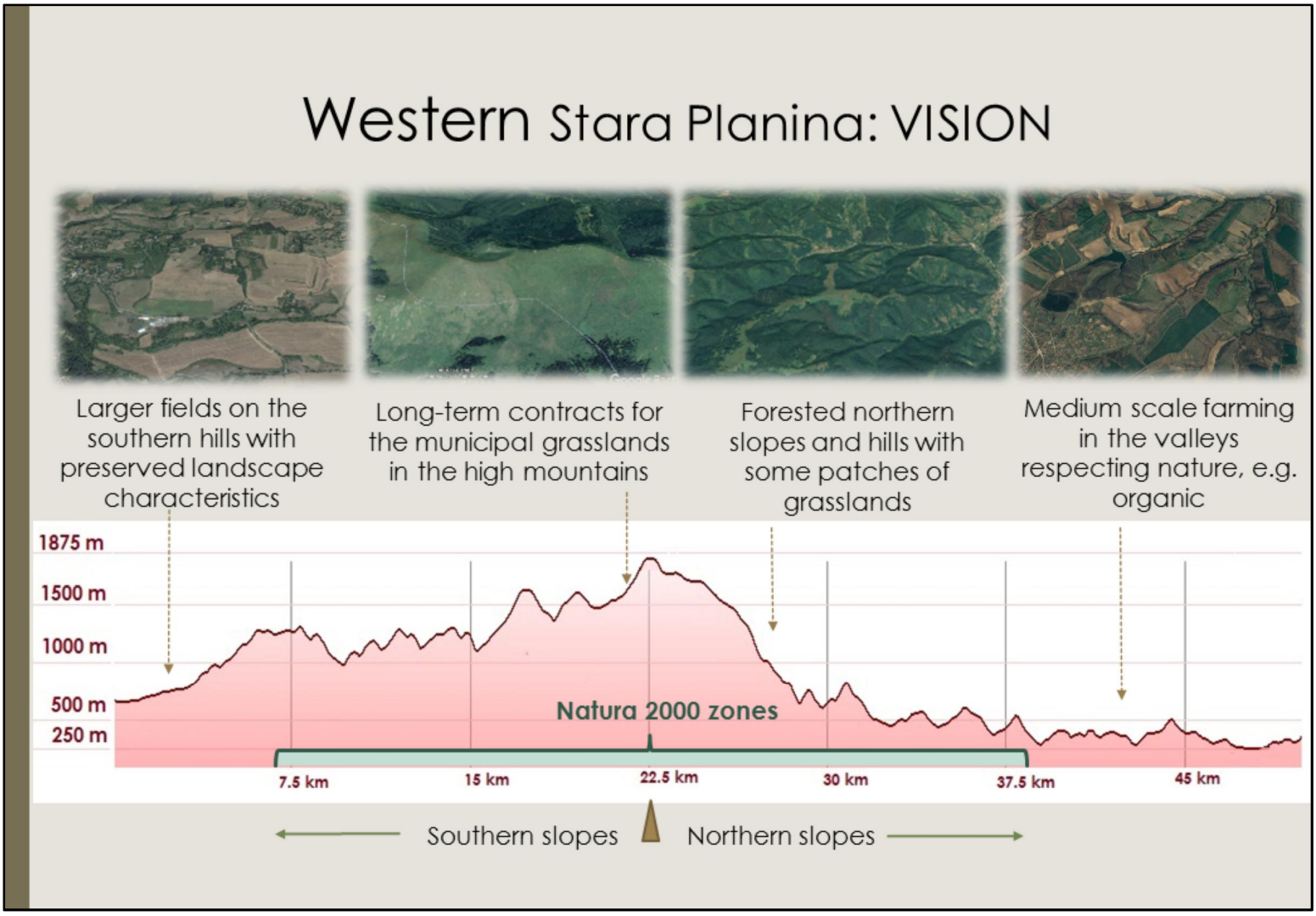
•Diversification of agricultural practices and activities – transition to organic farming; oil extraction from juniper; tourism (rural); interactions with foresters.

•Better educational and training activities even organized by the farmers and locals, better communication (e.g. set up regional forum etc. for experience exchange, consultations); youth activities, including young farmers exchanges

•EU subsidies arranged to support real farms (the species and number of animals to be determinant factors)

•Primary processing and direct sells (either farmers' markets and regional stock exchange); cooperation (producer organizations); certification (local identity and marketing; grazing farming products; HNV is still not recognized as a label)

•Institutional stability and informed local administration with direct contact with the farmers; understandable and durable legal acts; consistency between different policies: agricultural, food, credit etc.; regional strategies and programs; community actions for pastures cleaning and preservation (local waste management).



o **Medium scale farming in the valleys respecting nature**

The medium-scale family farms respect the semi-mountainous relief and natural conditions. Some areas are still used for cereals, others are vegetable gardens and orchards. The need to sustain income for families requires better farm management. Organic farming spreads to other production systems (not only strawberries).

o **Forested slopes with patches of grasslands**

Forests are likely to increase, so forestry continues to play an important role. The small arable patches are likely to disappear with the reduction of small farmers. The patches of grasslands that are likely to sustain are those natural (primary) grasslands (alpine or high mountain pastures, riparian meadows, stony and rocky terrains) that do not depend on human activities.

o **Common grasslands in the high mountains**

The contracts for individual use of municipal pastures are longer (minimum 10 years) to allow farmers to invest in shelters and watering points for the livestock.

o **Larger fields on the southern hills**

The relief on the southern hills allows to form larger arable fields, which are used for growing cereals, maize, rapeseed, etc. Nevertheless, the landscape features and characteristics such as field boundaries, forested patches, are preserved and maintained.

What does need to be addressed for the HNV vision?

- Social and institutional constraints:

Depopulation and ageing of farmers is a major constraint for the development of the region.

The municipalities of the LA are in the lists of underdeveloped areas ever since 1982 so the challenges are long-standing:

-Depopulation and aging population.

-Lack of labour force/shepherds; migration of working age population

-Lack of interest for agricultural activities; no continuation between generations (the work load is too high; most of the HNV operations require manual work);

-Limited cooperation and support between farmers and administration;

-Insufficient information to farmers.

-Poor infrastructure and services.

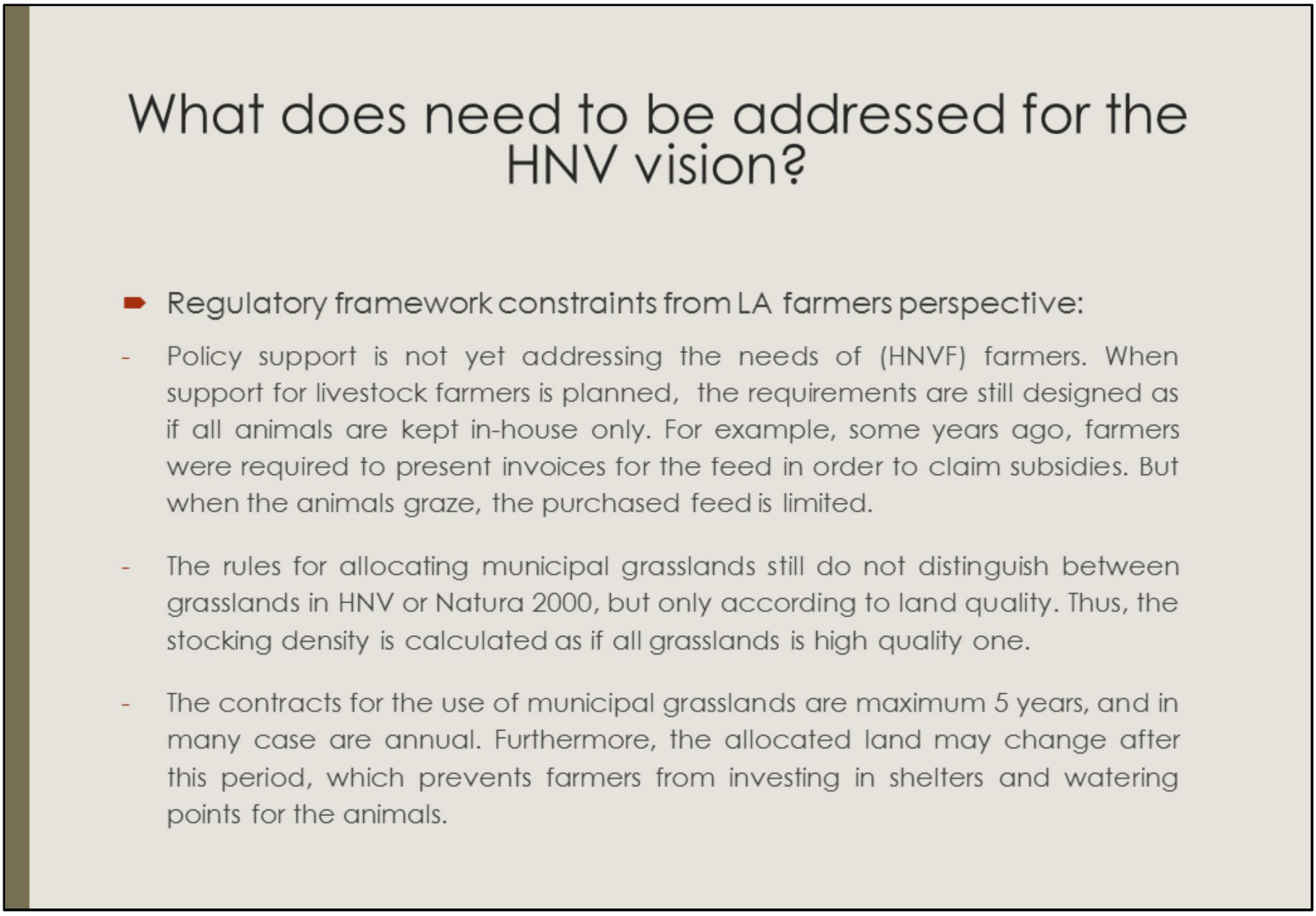
-Insufficient studies from (collaboration with) research/education institutes on the production techniques, economy, environmental protection on the farm.a

-Poor quality of rural life - the overall situation in the region and its image as the most underdeveloped region in the EU

The LA nowadays seems to have three centers for potential development, the three towns – Berkovitza, Godech and Vurshetz. Two of them work together in a local action group to make the territory more viable. Vurshetz has its focus for development as a spa territory. Chiprovtzi is the most distant municipality but has the famous Chiprovtzi carpets. Looking at the territory from afar it seems it has the main strongholds for viable development.

However, the depopulation of the territory is the main barrier for its development. The high share of unemployed people (15%-35%) indicates a problem with employment opportunities. However, the problem in the region is deeper than that. Many people in working age got used to the (low) social security payments and are unwilling to get a job that demands them working. Livestock farmers in the LA complain that despite the relative high salaries they offer for shepherds/herders they still have problems hiring reliable people. This forces them to keep flock/herd sizes that they can care of with their family labour only.

Furthermore, in terms of cooperation and collaboration, individual actions still prevail. At the same time, there are some encouraging examples of cooperation between people such as the registration of a cooperative “Food from the Balkan”; collaboration between 3 farmers working in the high mountain pastures to maintain the road during the winter and clear it from snow to access their farms; as well as discussions for registration of a slaughtering facility for direct sales of meat products.



The frequent changes in the legislation and support measures/levels are one of the biggest problem for livestock farmers. It not only prevents them from longer planning of the farm's business; but also puts them in demanding compliance situations. The procedures and rules for farmers have to be simplified, which requires coordination between different instruments: support mechanisms, advisory services, subsidies, etc.

The support for livestock breeding is insufficient in comparison to arable farming. Coupled support for livestock farmers was only introduced in the last couple of years which was a life-saving injection for the sector. However, the coupled support will not continue for long, hence the overwhelming farmers' expectations for the decrease of livestock and livestock farmers in the next 10 years.

What does need to be addressed for the HNV vision?

- **Product and market constraints**
  - Direct sales legislation has improved, but still needs to be more flexible and to include also plant products
  - Organized farmers markets are only in Sofia and very big cities
  - Lack of processing units and bureaucratic procedures/checks
  - Farmers do not possess enough knowledge and skills for direct sales, direct contact with consumers etc.
  - A regional brand for the territory is discussed for some time, but requires dedicated action, skills and cooperation.

Farmers' market
"Food from the Balkan"
Traditional products from Western and Central Balkan
Saturday 9.00 – 14.30

It is only in the last 5 years that the Bulgarian public administration started considering the option for small scale production and processing on the farms. The first ordinance regulating it was adopted in 2010 with many weaknesses. It has been changed/imporved several times since then. There are around 70 on-farm dairy processing units officially registered in Bulgaria and 10% of them are in WSP (around 3% of Bulgarian territory).

The simplification and streamlining the legislation and controls for direct sales will be highly beneficial for the local farmers who are exploiting this development opportunity.

What does need to be addressed for the HNV vision?

- Farming techniques and technologies:

- Abandonment (especially in mountain areas), mountainous terrain that do not allow standard mechanization
- New technologies and techniques that take into account Natura 2000 requirements are limited or do not exist
- Limited choice of (knowledge about) products for plant/animals protection/prevention/treatment tailored for HNV farming practices
- Nature friendly technologies for removal of bracken and juniper

Who are the actors to get involved in the process? How?

HNVF vision is possible only if all interested people work together!

Actions and understanding of all stakeholders both in and outside the region are needed:

- ü HNV farmers, including young farmers and innovators,
- ü public bodies and NGOs,
- ü agriculture advisory services, local administration (municipal authorities),
- ü state administration (starting from their representatives at local level),
- ü consumers, society

should combine their efforts for the sustainable development of the LA.

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- This presentation is based on a large number of books, reports, articles and web pages, few of which are peer-reviewed.
- The list below represents only a selection of the material consulted in printed or pdf format.

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