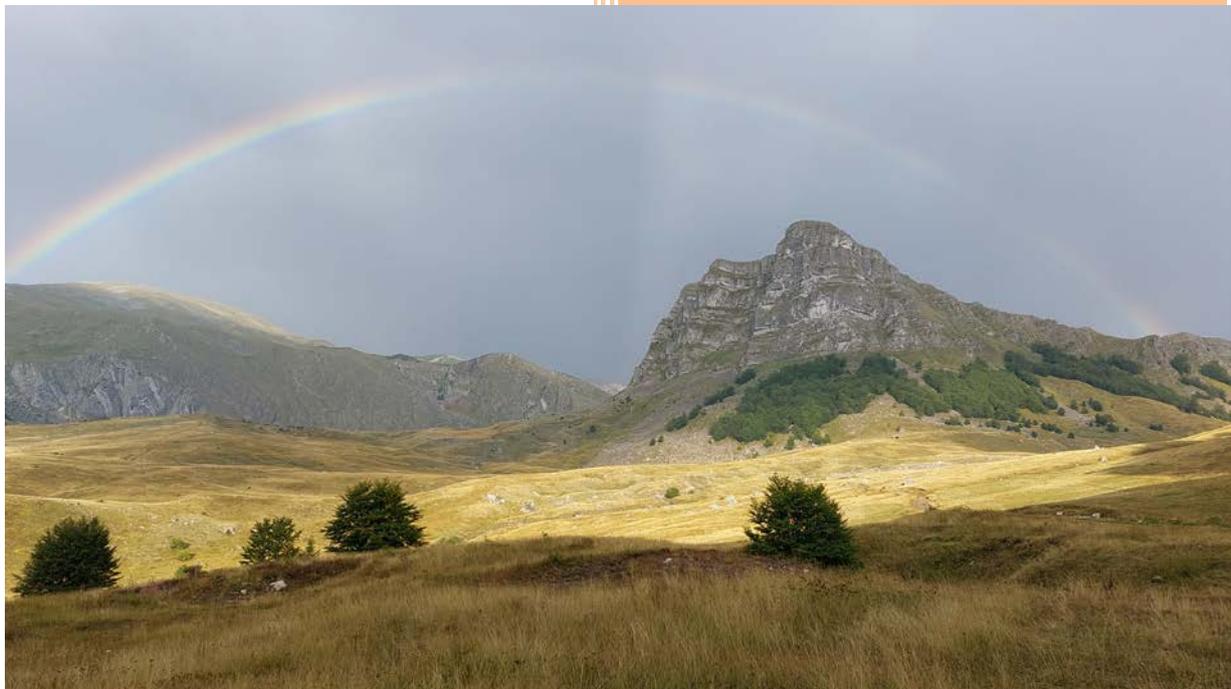




Food and Agriculture  
Organization of the  
United Nations



## Agriculture and Rural Development Strategy of the Municipality of Gacko 2023-2027



# Agriculture and Rural Development Strategy of the Municipality of Gacko

**2023-2027**



*This strategy was developed with the support of Food and Agriculture Organization of the United Nations within the framework of “Supporting Local Agricultural and Rural Development Planning” project (TCP/BIH/3804).*

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## 1. INTRODUCTION

The development of the Agriculture and Rural Development Strategy of the Municipality of Gacko for 2023-2027 (hereinafter the Strategy) was coordinated by the municipal administration and supported by Food and Agriculture Organization of the United Nations (FAO) as part of the project “Supporting Local Agricultural and Rural Development Planning” (TCP/BiH/3804).

The Strategy was developed with two primary goals in mind: to provide a framework for a more dynamic development of the agriculture sector and rural areas in general, and to align the main municipal agriculture and rural development directions with the strategic development frameworks of the Republika Srpska (RS) and Bosnia and Herzegovina (BiH). In this regard, the development measures envisaged under the Strategy are complemented by existing agriculture and rural development measures at the RS level, with efforts made to avoid duplication of measures and achieve effective targeting of funds in accordance with the priority local development needs. The latter were identified by analysing the situation in rural areas and in the agricultural sector of Gacko municipality, while taking account of the comparative advantage of the agricultural sector and the municipality as a whole. The time frame for the implementation of the Strategy is 2023-2027, which corresponds to the current cycle of the new strategic framework at both the RS and European Union (EU) levels.

The Agriculture and Rural Development Strategy of the Municipality of Gacko is more than just a sectoral document: it examines the prospects for rural development through the lens of a broader integrated approach to community development, incorporating the perspectives and needs of various social groups in the development process, and taking into account the economic, environmental and social aspects of sustainability of proposed interventions.

Even though it is adopted at the local level, the Strategy takes into account EU guidelines for the sustainable development of agriculture and rural areas, as defined by the EU Green Agenda for the Western Balkans, the EU Biodiversity Strategy for 2030, the EU Farm to Fork Strategy and the “One Health” Strategy, as well as the SDGs Framework in Bosnia and Herzegovina<sup>1</sup>. Although the legislative framework for the implementation of the principles outlined in these strategic documents is adopted at the RS level, the local administration is responsible for ensuring a framework for the successful adaptation of sectoral stakeholders to new market conditions and for aligning strategic local rural development documents with the frameworks established by the Green Agenda and Sustainable Development Goals.

It is important to note that the Strategy was developed at a time when the agricultural production system in BiH is gradually changing due to competitive pressures produced by regional market integration and market opening to EU countries. Thus, the Agriculture and Rural Development Strategy of the Municipality of Gacko for 2023-2027 is designed to support and facilitate adaptation to anticipated changes in accordance with local development priorities and opportunities. As a result, rural development will become an increasingly important component of agricultural policy, particularly when designing and implementing measures to assist the local population in initiating diversification processes both within agricultural production and by connecting agriculture with other sectors of rural economy.

The Strategy is aligned with the RS Law on Strategic Planning and includes the following sections: introduction, strategic platform, priorities and measures, key strategic projects, description of the

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<sup>1</sup> The SDGs Framework in Bosnia and Herzegovina. December 2020. <https://www.undp.org/bosnia-herzegovina/publications/sdgs-framework-bosnia-and-herzegovina>

internal and external consistency of the strategic document, financial plan and framework for implementation, monitoring, reporting and evaluation of the strategic document. Annexes to the strategic document provide a summary of goals, priorities and measures, as well as a detailed overview of measures. The strategic platform comprises of a situational analysis, a development vision and strategic goals with baseline indicators.

Apart from the RS Law on Strategic Planning, the methodological approach employed in the preparation of the Strategy includes the Methodology for Integrated Local Development Planning in Bosnia and Herzegovina (miPRO)<sup>2</sup>. This methodology calls for the planning process to be implemented in stages, the most important of which are the preparatory stage, the analysis stage and the stage of strategic platform development. FAO Guidelines on Selecting value chains for sustainable food value chain development (2021)<sup>3</sup> were also used in the development of the Strategy.

It is the first time in the municipality of Gacko, that a strategic document defines partnership as a model for its management and implementation. A participatory approach to rural development implies cooperation between the public, business and civil sectors at all stages of planning, implementation and monitoring of development strategies at the local level. In this manner, a greater degree of transparency, inclusion and consensus-building in harmonizing development priorities is ensured, and the framework for financial planning and implementation of development programmes is enhanced.

The integrated approach to the development of the Strategy entailed the inclusion of diverse social groups in the process of planning: representatives from the public sector (municipal departments); representatives from the private sector (farmers, processors, buyers); and representatives from CSOs representing the interests of rural women, milk producers, raspberry producers and beekeepers, among others. In the Gacko municipality, the participatory approach was maintained by involving all local stakeholders throughout all three stages of the planning process by utilizing various tools: workshops, interviews and surveys.

The Agriculture and Rural Development Strategy was developed in accordance with the principles of transparency, ensuring openness to the public maintained throughout all stages of its development. This was accomplished through a series of workshops that included expert and public discussions and a survey conducted on a sample of 30 households. The survey included 25 questions related to the types of income earned by household members, types of marketed products, types of obstacles they face in development of agriculture, other gainful activities on the farm and obstacles they face in development of supplementary activities, obstacles they face in development of entrepreneurial activities, access to public services and public infrastructure, priority problem and perspective. The survey also included ten questions for female household members as well as for young family members.

In addition, by the decision of the mayor of the Gacko municipality, a working group for the development of the strategy was formed and the coordinator of the working group was appointed. The working group consisted of seven members, of which five were female and two were male. Members of the working group were appointed as representatives of the public, business and civil sectors: agricultural cooperatives, the Department of Economy, Finance and Social Activities of Gacko Municipality, entrepreneurs in the field of agriculture, the Association of Gatač Beef Growers, the Tourist Organization of Gacko Municipality, an agricultural producer. The task of the working group

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<sup>2</sup> <https://www.undp.org/bosnia-herzegovina/publications/methodology-integrated-local-development-planning-bosnia-and-herzegovina-mipro>

<sup>3</sup> Walker, C., DeMatteis, L. & Lienert, A., eds. 2021. Selecting value chains for sustainable food value chain development – Guidelines. Rome, FAO. <https://doi.org/10.4060/cb7623en>

was to, with the expert support of the FAO, collect data relevant to the analysis of the state of agriculture and rural areas including surveying selected farm households, to validate the results of the situation analysis, to participate in defining the main strengths, weaknesses, limitations and opportunities for the development of agriculture and rural areas, to participate in defining the development vision and main strategic goals, as well as key projects and the measure for the implementation of the strategic document. All other interested stakeholders, took part in the discussions within the workshops that were organized at the end of each phase of the development of the strategic document: the first initial workshop on April 5, 2022 for members of the working group, the initial workshop for members of the working group and other representatives on May 26, 2022 in the municipality of Gacko, workshop on validation of results and SWOT analysis, 4 October 2022 (for working group members), validation workshop on 16 November 2022 in the municipality of Gacko for all stakeholders.

The draft of the strategic document was submitted to the Mayors Cabinet for additions and comments, as well as to the FAO Regional Office for Europe and Central Asia (REU), after which the final draft of the strategic document was produced and sent to the line ministry for approval.

## 2. STRATEGIC PLATFORM

### 2.1. Situational analysis

#### 2.1.1. Geographical location and agroecological characteristics

Gacko is located in the southeast of RS (BiH) and covers an area of 736 km<sup>2</sup>. It constitutes the region of Eastern Herzegovina together with the municipalities of Nevesinje, Berkovići, Ljubinje, Trebinje and Bileća.. The municipality encompasses the area of High Herzegovina, with Gatačko polje nestled between mountain massifs. It is the highest mountainous region in this part of BiH, with an average elevation of more than 1000 metres. The administrative center of the municipality is the town of Gacko, which lies 956 metres above sea level. In the south-east of RS and the east of Herzegovina, Gacko borders with Montenegro.

The town of Gacko is located 108 kilometres from Dubrovnik and the Adriatic Sea, 72 kilometres from Trebinje, 94 kilometres from Mostar, 69 kilometres from Foča, 146 kilometres from Sarajevo, 62 kilometres from Nikšić and only 38 kilometres from the Sutjeska National Park.. Given its environment and its location at a crossroads, the municipality of Gacko has a relatively favourable geographical position, which can be considered as a significant determinant in the future development of RS and BiH.



**Map1: Geographical position of the municipality of Gacko<sup>4</sup>**

The relief features of this area were sculpted by exogenous (external) forces, primarily karst and fluvial (river) erosion. This is a typical Dinaric holokarst. The mountains and the Gatačko polje stretch along the Dinaric northwest-southeast. An important feature of this area is the subsurface karst hydrography. The most notable features of the relief include smaller karst fields, karst depressions, karst lukas, sinkholes, fissures, pits, caverns, and estavelles. The Gatačko polje, which stands at an altitude of 929-960 metres above sea level and belongs to the group of high karst fields, is the largest and most notable form of karst relief. It is 20 kilometres long and 3 kilometres wide, on average. It is divided into Gornje and Donje polje (Upper Field and Lower Field). The Donje polje is further divided into Veliko and Malo. The northern side is typically rich in springs, whereas the southern side is rich in sinkholes. Veliko polje covers 60 km<sup>2</sup>, and Malo polje 8 km<sup>2</sup> (Kuljsko polje). The old Neogene Gatačko Lake was drained

<sup>4</sup> <https://www.weather-forecast.com/locations/Gacko/forecasts/latest> first image and <https://sr.wikipedia.org/wiki> for the second image

underground by the rivers Đurova-Zalomka and Mušnica, as well as partly by pits and sinkholes located on the field's rim. The northern section of the municipality is dominated by the karst surface of Ponikva (1100-1200 metres above sea level), while the southern Cernica (Stepensko-Kuljsko) field is 100 m lower than the Gatačko polje, with the Jasovica abyss as the lowest point (810 m). The Cerničko field extends west to east direction and deviates from the Dinaric NW-SE direction due to faulting. It covers approximately 3 km<sup>2</sup>. The Gacko municipality is surrounded by mountains: Zelengora (2014 m), Volujak (2336 m), Vlasulja (2103 m), Maglić (2386 m), Lebršnik (1985 m), Koviljac (1517 m), Kosovi vrh (1647 m), Manita gora (1736 m), Dobreljica (1892 m), Golija (1942 m), Čurilo (1561 m), Somina (1596 m), Troglav (1554 m), Baba sa Djedom (1735 m), Bjelasnica (1867 m), Magrop (1671 m), Ivica (1548 m), Vilovica (1608 m) and Dumoš (1882 m). The most important mountain passes are Čemerno (1293 m), Kobilja Glava (1030 m) and Ravno (1500 m). The highest point is Volujak (2336 m), while the lowest point is Vrtar (710 m), with a difference of 1626 metres between the two.

Sinkholes are the most prominent hydrological features of the terrain, but there is also a well-developed surface hydrographic network comprising Neretva (springs in Gacko), Izgorka and Jabučnica (make up Sutjeska), Dramešinska river, Žanjevička river, Mušnica, Gračanica, Đurova-Zalomka and a number of rivulets and streams. The most important lakes are two artificial lakes, Klinje (1896) and Vrba-Ulinje (1983). In addition, there are numerous sinkholes, springs and estavelles. It is important to emphasize that Gacko is a watershed separating the Adriatic and Black Sea basins: Čemerno polje and Gatačko polje (Dobreljska Pećina).

The Gacko municipality is situated at the regional intersection of the main roadways connecting Herzegovina with the northern parts of the country. Also, it is located in relative proximity to significant economic and social centres of RS (Trebinje and Foča). Therefore, the municipality's geographic and communication position is very favourable, providing opportunities for economic and overall development, in particular given the proposed construction of road infrastructure.

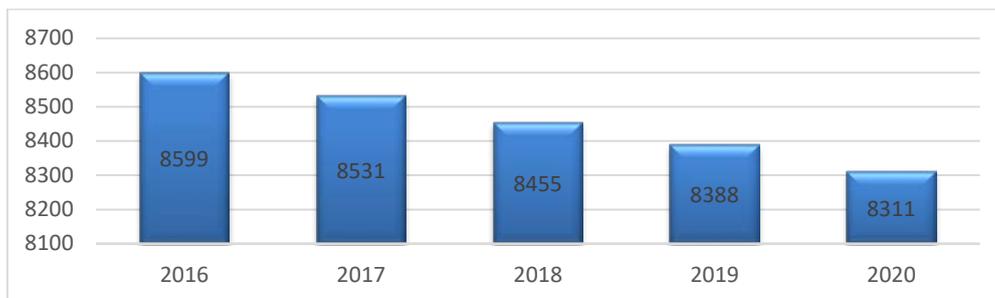
In future, the municipality of Gacko should definitely take advantage of its geographical position on the border with Montenegro, the wider Herzegovina region and the Adriatic Sea, as well as new investments in the expansion of road infrastructure. Given the intensive use of natural resources (particularly mineral raw materials, watercourses and land), and in order to ensure better living conditions for the residents of the municipality, it is necessary to consider all aspects of this community's sustainable development, especially in terms of environmental protection<sup>5</sup>.

### **2.1.2. Demographic characteristics/trends**

The demographic situation in the municipality of Gacko, as in the rest of BiH and RS, is unsatisfactory. Analysis of the Gacko population's migrations from 2016 to 2020 shows a slight decrease in the number of residents. Specifically, the population decline from 2016 to 2020 by 3.35 percent, from 8,599 residents to 8,311. While these statistics for the entire municipality (including both rural and urban areas) are not alarming, the demographic indicators shown below are not encouraging, and the continued population decline remains a cause for concern, necessitating immediate action to halt it.

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<sup>5</sup> Source: 2022-2028 Gacko Municipality Development Strategy



**Source:** Cities and Municipalities of Republika Srpska, RS institute of Statistics

**Graph 1: Trends in the (estimated) number of residents, 2016-2020**

According to the last BiH population census (2013), the total number of residents in the municipality of Gacko was 8,710, spread among 71 settlements.

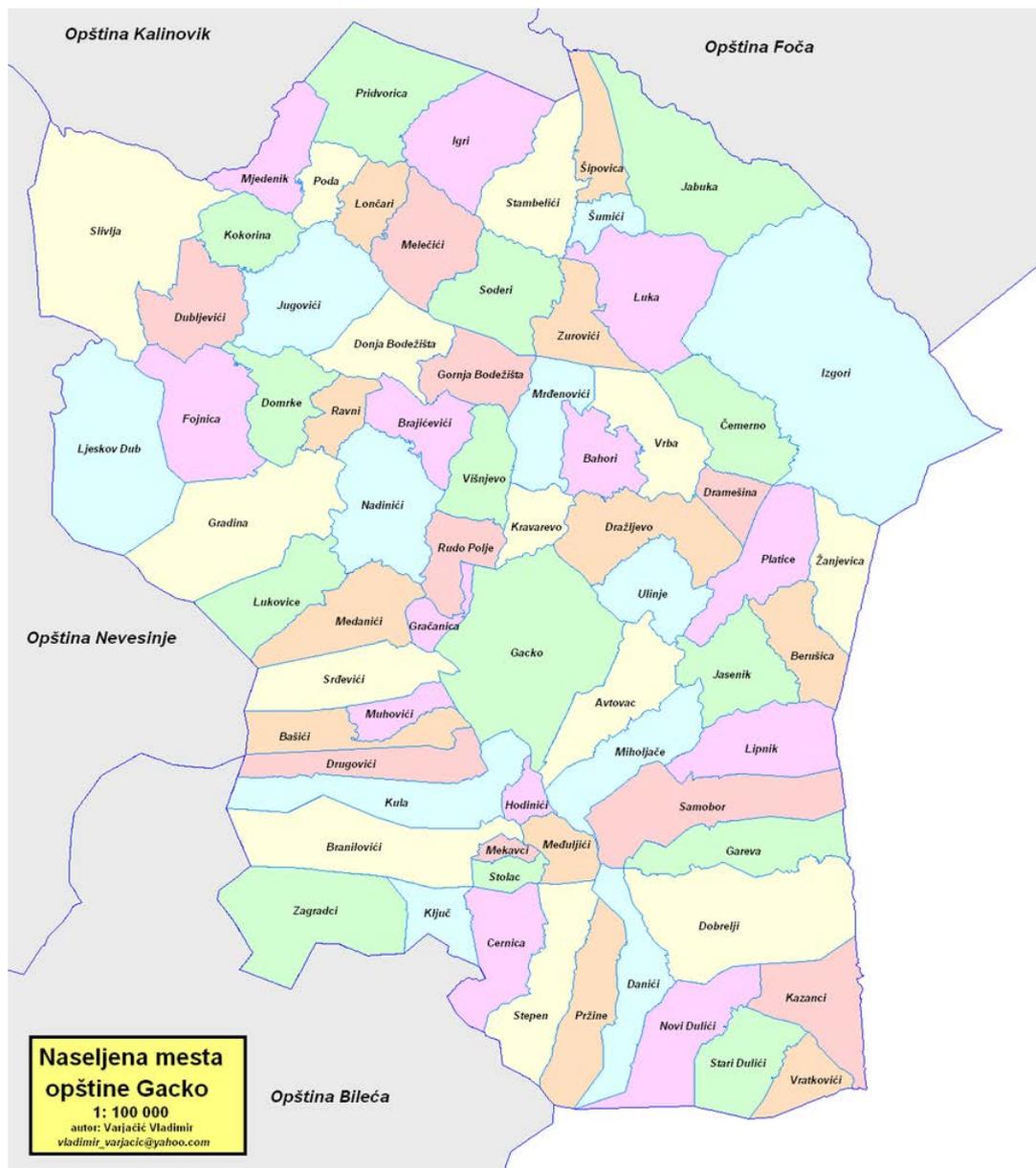
Comparison of the size of settlements with the number of residents per settlement between the two censuses reveals a noticeable decrease in the number of residents in most rural settlements.

**Table 1: Settlements by size**

Settlement size	2013 Census
uninhabited	10 settlements
1 - 10 residents	13 settlements
11 - 100 residents	37 settlements
101 - 500 residents	9 settlements
501 - 1,000 residents	1 settlement
1,001 - 5,000 residents	0 settlements
>5,000 residents	1 settlement

Source: 2013 Population Census, BiH Agency for Statistics

The inhabited settlement in the Gacko municipality include: Avtovac, Bahori, Bašići, Berušica, Brajićevići, Branilovići, Cernica, Čemerno, Danići, Dobrelja, Domrke, Donja Bodežišta, Dramešina, Dražljevo, Drugovići, Dubljevići, Fojnica, Gacko, Gareva, Gornja Bodežišta, Gračanica, Gradina, Hodinići, Igri, Izgori, Jabuka, Jasenik, Jugovići, Kazanci, Ključ, Kokorina, Kravarevo, Kula, Lipnik, Lončari, Luka, Lukovice, Ljeskov Dub, Medanići, Međuljići, Mekavci, Melečići, Miholjače, Mjedenik, Mrdenovići, Muhovići, Nadanići, Novi Dulići, Platice, Poda, Pridvorica, Pržine, Pusto Polje, Ravni, Rudo Polje, Samobor, Slivlja, Soderi, Srđevići, Stambelići, Stari Dulići, Stepen, Stolac, Šljivovica, Šipovica, Šume, Šumići, Ulinje, Višnjevo, Vratkovići, Vrba, Zagradci, Zurovići and Žanjevica. The territory of the municipality is administratively divided into nine administrative units (*mjesne zajednice* – MZs), namely: Avtovac, Bistrica, Brljevo, Vrba, Gacko, Kula, Nadanići, Stepen and Fojnica.



Map 2: Populated settlements in the Gacko municipality<sup>6</sup>

Table 2: Overview of local communities (MZs) in the Gacko municipality with the number of residents and households, 2019

Local community	Number of residents	Number of households
Autovac	1298	70
Nadinići	524	162
Bistrica	50	26
Brjevo	401	105
Stepen	213	80
Vrba	204	74
Fojnica	338	121
Gacko	5225	1685

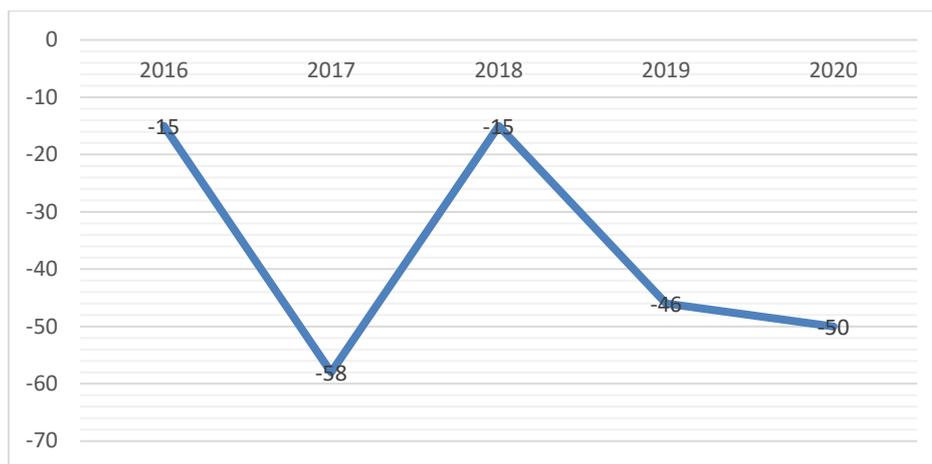
<sup>6</sup> <https://sr.wikipedia.org/wiki/media:Gacko-naselja.PNG>

Kula	174	72
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Source: Gacko Municipal Administration

The majority of residents live in the urban part of the municipality, the town of Gacko (60 percent), with a smaller proportion (40 percent) living in rural areas. The average population density is extremely low at 12.3 inhabitants per square kilometre.

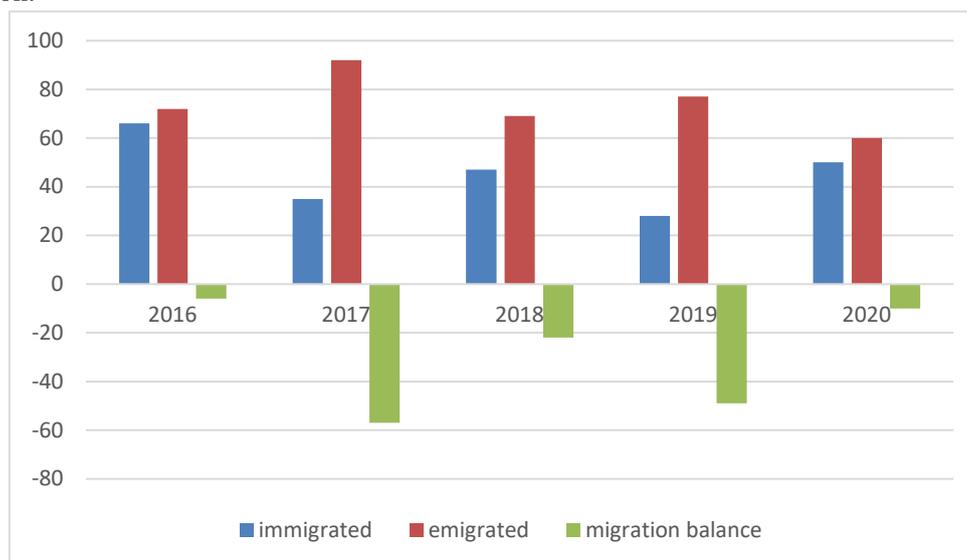
The unfavourable demographic outlook of the Gacko municipality is further evidenced by trends in natural population growth from 2016 to 2020. Graph 2 below shows the constant negative values of this indicator.



Source: Demographic Statistics Bulletin, 2021, RS Institute of Statistics

**Graph 2: Trends in natural population growth in the municipality of Gacko, 2016-2020**

Although the migration balance for Gacko and for other municipalities in BiH is sometimes the result of changes in place of residence motivated by local elections. We must still present it as it appears in the official statistical bulletins, which show a negative immigration to emigration balance in all years of observation.



Source: Demographic Statistics Bulletin, 2021, RS Institute of Statistics

**Graph 3: Trends in the number of emigrants and immigrants and the migration ratio for the municipality of Gacko, 2016-2020**

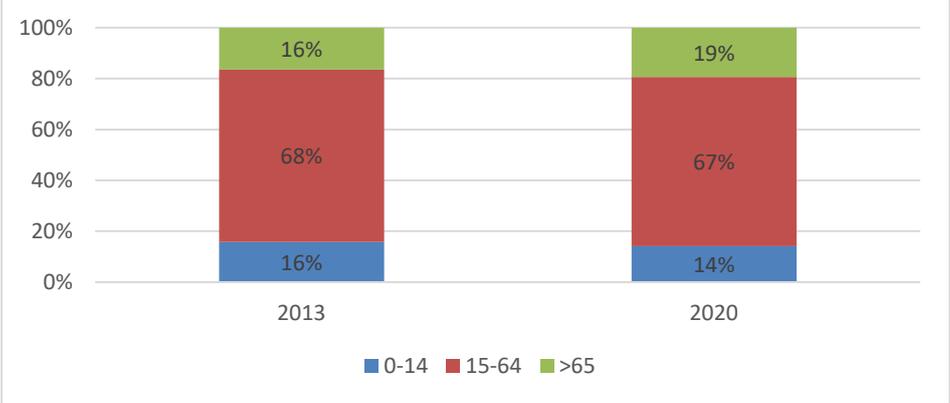
According to official statistics, there are 2,766 households in the municipality, of which approximately 40 percent are rural households. The distribution of households by number of household members indicates an essentially uniform distribution into five sizes of households, with each size of household accounting on average for 20 percent of the overall distribution. The average household has 3.15 members, which is more than the RS average of 2.85. According to a survey conducted for the purpose of development of this Strategic document, the average agricultural household has six members, which is a good indicator given that these households rely heavily on family labour to perform their activities.

**Table 3: Households by number of members in rural settlements**

Territory	Number of members				
	One member	Two members	Three members	Four members	Five or more members
In total	522	622	561	480	581
	19%	22%	20%	17%	21%

Source: Households by number of members, Gacko Municipality, 2013 Census, RS Institute of Statistics

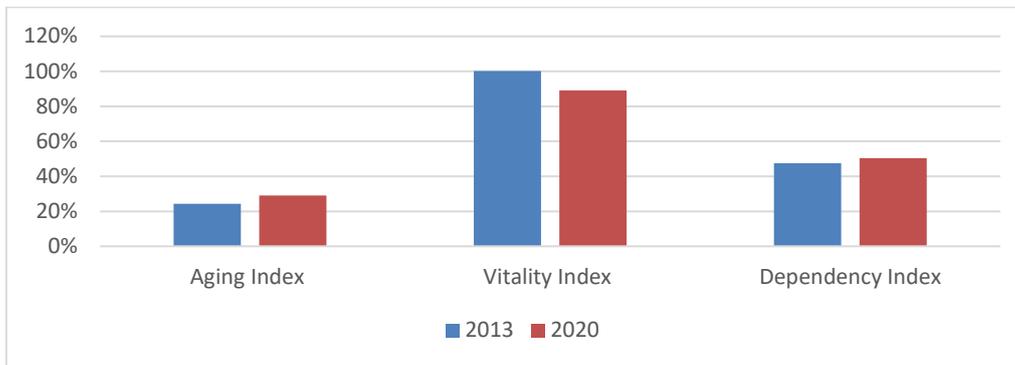
The age distribution of the Gacko municipality population indicates a population-aging trend.



Source: RS Institute of Statistics

**Graph 4: Population estimates by age group**

The proportion of people aged 65+ increased from 16 percent in 2013 to 19 percent in 2020, where any value above 12 percent is considered indicative of pronounced population aging. The vitality index of over 100 percent (the ratio of the age group 20-39 to 60+) also reflects the population’s declining vitality; at such rates, a generational change in the future is unlikely (Graph 5). Furthermore, the age dependency ratio (the proportion of age groups 65+ and below 14 in the working-age population) exceeded 40 percent, where any ratio above 40 percent is indicative of significant population aging. According to the survey conducted for the purpose of development of this Strategic document, the average age of the head of an agricultural holding is 58 years, which can lead to the situation that the majority of these farms will soon remain empty, considering that many elderly households do not have heirs who are ready to take over the properties. The aforementioned fact may also threaten the supply of agricultural products to the domestic market, especially considering that a similar trend is present throughout Bosnia and Herzegovina.



**Source:** Author's own calculation based on the database of the RS Institute for Statistics

**Graph 5: Demographic indicators, 2015-2019**

In the total population of the municipality of Gacko, there are 4,063 women (49 percent) and 4,248 men (51 percent). In terms of age distribution, both the male and female populations have the same proportion in all three age groups.

The above indicators (decrease of population, aging population, etc.) clearly point to increasingly negative population trends in the studied period 2016-2020, necessitating a relatively quick response, particularly from political decision-makers. This fact should be considered as one of the key threats (weaknesses) in defining future strategic actions and agricultural/rural policy measures in this region.

### 2.1.3. Employment and unemployment

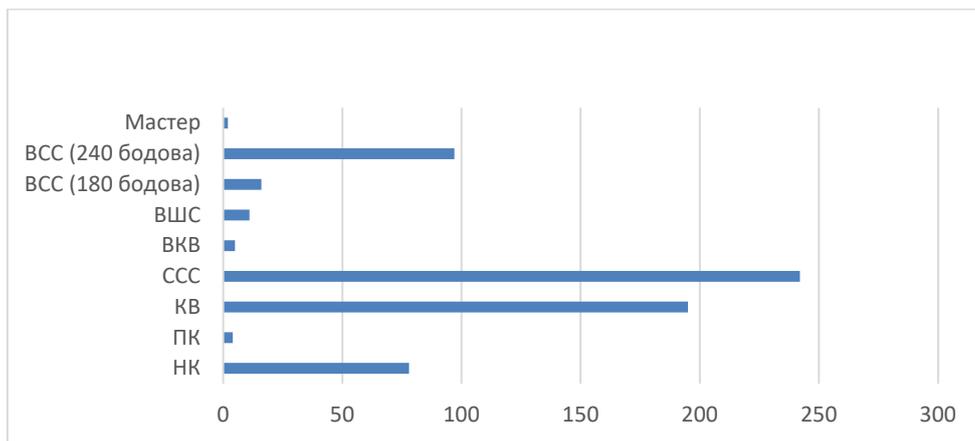
Unemployment, especially among rural population, is undeniably one of the biggest economic, political and social problems in every region, including the municipality of Gacko. According to the most recent population census, the formal unemployment rate is at a staggering 20 percent. From 2016 to 2020, the number of unemployed dropped from 981 to 723. Women have a greater unemployment rate than men, in 2020 463 (or 64 percent) of 723 unemployed individuals were women, while 260 (or 36 percent) were men.

**Table 4: Employment and unemployment in the municipality of Gacko, 2016-2020**

Description	2016	2017	2018	2019	2020
Employed	3046	3222	3230	3310	3243
Men	2052	2160	2159	2204	2154
Women	994	1062	1071	1106	1089
Unemployed	981	936	792	761	723
Men	363	346	266	256	260
Women	618	590	526	505	463

Source: RS Institute of Statistics, Cities and Municipalities of RS

Almost half of the unemployed are seeking employment for more than 48 months, with women accounting for 75.56 percent of those without work. The majority of unemployed have a secondary education, followed by skilled and unskilled labourers; nonetheless, the high percentage of unemployed with a university degree (92) remains a cause for concern.



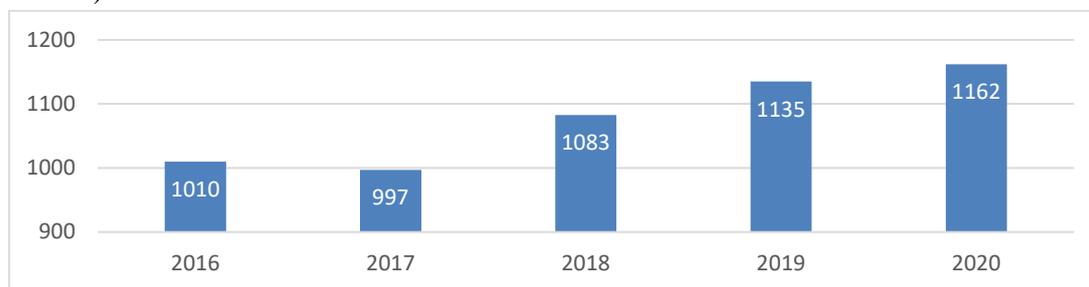
**Source: Data from the Employment Agency, Regional Unit Gacko, as of May 17, 2022**  
**Graph 6: Qualification distribution of the unemployed in 2021**

Among the unemployed, 32.36 percent are aged 30-45, and 32.08 percent are aged 18-30. Those aged 45-65 account for 43.84 percent of the unemployed, making them the largest cohort and the most difficult to employ as they are considered to have less possibilities to perform precise and physically difficult tasks, are less computer literate, may need more sick-leave days and will retire organization in a shorter period of time.

The most unemployed (2020) are those without an occupation (85), machinists-mechanics (85), financial workers (70), traders (68) and metalworkers (59).

Sector A (agriculture, hunting and fisheries) plays a minor role in the formal employment in the municipality, accounting for only 1 percent of total employment. In agriculture, informal employment, which primarily includes family farm owners and operators, plays an important role in addition to formal employment. According to the Census, the municipality has 986 households engaged in agricultural activity; however, only 437 of those are market-oriented.

The final economic indicator examined in this labour market analysis is the average monthly net salary in the period 2016-2020. During this period, the amount of the monthly net salary increased. The net salary in 2016 was BAM 1,010 and it rose to BAM 1,162 in 2020 (index 115). The average monthly net salary in 2020 was higher than the average net salary at the RS level (BAM 956), which can be attributed to the fact that the majority of the employed in the municipality are in the energy sector (Gacko Thermal Power Plant).



**Source: Cities and Municipalities of RS, 2021, RS Institute of Statistics**  
**Graph 4: Average net salary in the Gacko municipality, 2016-2020, in BAM**

Daily migrations related to employment are not typical for the municipality of Gacko, considering that in the territory of the municipality there are all public institutions relevant to a local community, as well

as a large company such as the Thermal Power Plant Gacko, which represents one of the largest employers not only in the area of the municipality of Gacko but also neighbouring municipalities.

**2.1.4. Overall economic development / importance of agriculture in the economy**

The most important activity for the economy of the municipality is the production and supply of electricity, gas, steam and air conditioning. Of the total number of employees, this sector employs 60 percent of the population, whereas public administration employs 9 percent (289), construction 6.5 percent (210) and education 5.56 percent (180). In 2020, of the total number of 145 business entities in the municipality 55 were limited liability companies and 54 were associations. In Sector A (agriculture, forestry and fisheries) there is only one business entity.

**Table 5: Distribution of business entities in the municipality**

Type of business entities	Number of business entities
Public enterprises	1
Joint stock companies	12
Limited liability companies	55
Partnership companies	1
Business associations	1
General cooperatives	4
Specialized cooperatives	1
Institutions	13
Legislative and executive bodies	1
Associations	54
Religious organizations	2

Source: Gacko municipality

Table 6 shows the importance of certain types of companies in terms of employment. About 80 percent of the employed men and women in the area of the municipality work in the only large company, which is the Gacko Power Plant.

**Table 6: Distribution of employees by business entity and gender**

	2016		2017		2018		2019		2020	
	M	F	M	F	M	F	M	F	M	F
Micro (up to 9 employees)	42	16	46	15	41	13	32	13	30	11
Small (10-49 employees)	60	34	51	30	51	29	106	36	108	35
Medium (50-250 employees)	280	69	269	71	272	71	207	63	191	60
Large (over 250 employees)	1472	318	1482	372	1550	408	1533	414	1501	488
<b>In total</b>	1844	437	1848	488	1914	521	1878	526	1830	594

Source: Gacko municipality

The number of registered self-employed entrepreneurs in 2022 was 106, most of whom were in the area of wholesale and retail trade, and in the area of catering. There were 11 registered self-employed

entrepreneurs in the field of agriculture, forestry and fishing in 2022, representing a significant increase over the period 2017-2020.

**Table 7: Distribution of self-employed entrepreneurs by activity, 2022**

Activity	2017	2018	2019	2020	2021	2022
Agriculture, forestry and fisheries	5	2	4	2	14	11
Manufacturing industry	8	8	6	6	8	8
Construction	1	1	1		2	2
Wholesale and retail trade; repair of motor vehicles and motorcycles	41	39	37	36	35	35
Transport and storage	7	8	9	6	7	6
Activities involving the provision of lodging, preparing and serving food; Hotel management and hospitality	34	31	28	30	27	28
Information and communications			1	1	2	2
Professional, scientific and technical activities	3	3	4	4	3	3
Education	1	2	2	2	3	3
Art, entertainment and recreation		2	1	1	1	1
Other service activities	7	7	5	5	8	7
<b>IN TOTAL</b>	<b>107</b>	<b>103</b>	<b>98</b>	<b>93</b>	<b>110</b>	<b>106</b>

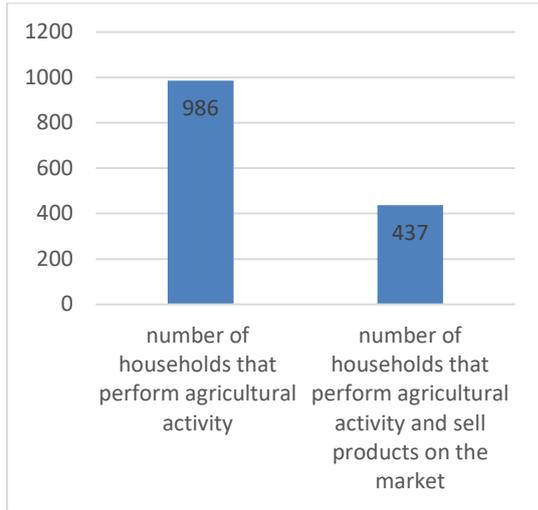
Source: Gacko Municipality

#### **2.1.4.1. Structure of households/farms<sup>7</sup>**

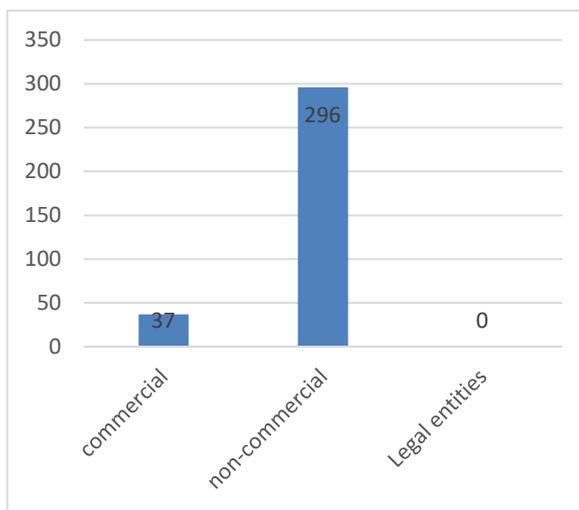
According to the 2013 Census, there are 986 agricultural holdings (farms) in the Gacko municipality, of which 437 are market-oriented. However, not all of these households are registered in Farm Register by the Ministry of Agriculture, Forestry and Water Management. The Farm Register (FR) currently lists 643 farms in Gacko, of which 333 are active/operational (regular annual data update in 2022). The vast majority of operational farms, 296, are registered as non-commercial, while only 37 are registered as commercial farms, and there are no legal entities currently in the Farm register. The reason for this small number of market oriented farms in the Farm Register is caused by the fact that since 2014, all registered farms need to pay social taxes (pension and health insurance).

<sup>7</sup> Unfortunately, there has not been an agricultural census yet conducted in BiH which would provide a snapshot of the current situation in terms of the number, size, structure and other important characteristics of new agricultural holdings – farms. This analysis uses unofficial data gathered as part of the 2013 Census of Population, Households and Dwellings, as well as data from the Register of Agricultural Holdings, to construct a picture of the current size and structure of agricultural holdings in the municipality of Gacko.

**Distribution of households, 2013 Census**



**Distribution of farms, FR**



**Source:** 2013 Census of Population, Households and Dwellings in BiH, Data from the Register of Agricultural Holdings

**Graph 11: Distribution of agricultural households and farms**

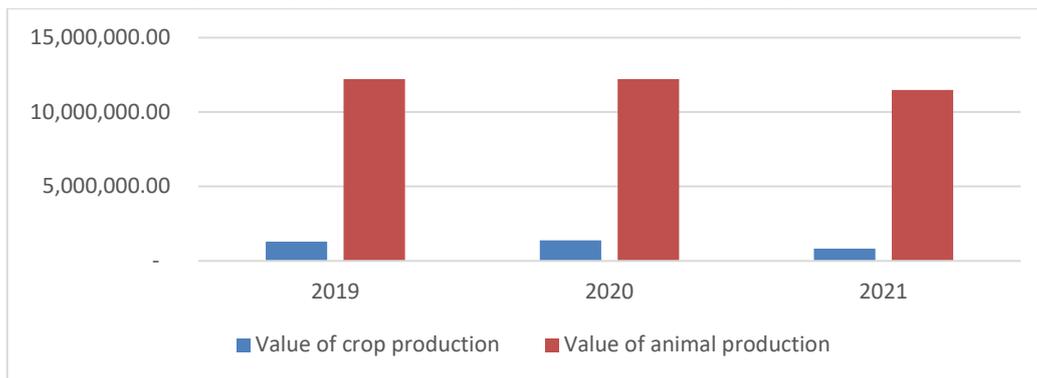
**2.1.4.2. Value of agricultural output**

The value of agricultural output in the municipality of Gacko in the period 2019-2021 shows an upward trend after the pandemic. In 2020, the total agricultural output was BAM 9.3 million, and in 2021, it rose to BAM 9.5 million.

**Table 8: Value of agricultural output in the municipality of Gacko, 2019-2021, BAM**

Output	2019	2020	2021
Cereals and corn production	31,849.96	34,527.52	35,011.06
Vegetable growing	395,742.50	350,882.50	349,168.45
Fruit growing	102,360.00	119,730.00	108,220.00
Value of crop output	529,952.46	505,140.02	492,399.51
Value of livestock output	9,052,600.60	8,833,630.00	9,038,321.98
<b>Total value of agricultural output</b>	<b>9,582,553.06</b>	<b>9,338,770.02</b>	<b>9,530,721.49</b>

Source: Author’s own calculation based on the database of the RS Institute of Statistics



Source: Author’s own calculation based on the database of the RS Institute of Statistics

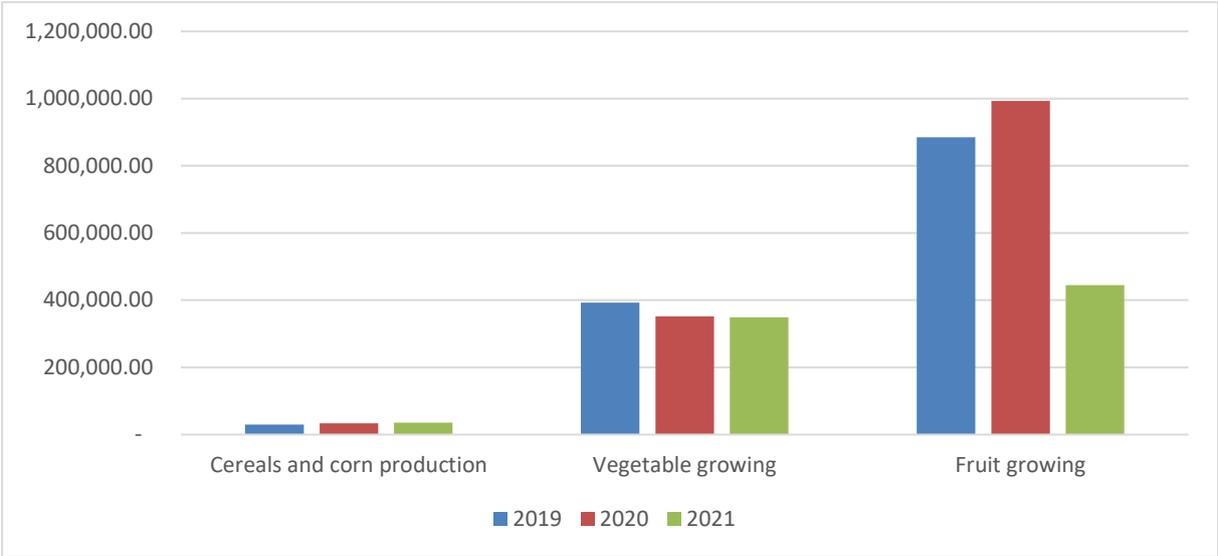
**Graph 8: Distribution of agricultural output value, 2016-2020**

Livestock output contributes more to the total value of agricultural output than plant output, which is to be expected given the available natural resources (dominant share of natural grasslands) and extensive

agriculture land use. Livestock output accounts for an average of 95 percent of the total agricultural output, while plant output accounts for 5 percent.

The total output value per agricultural household (according to the 2013 census, 986 households are engaged in agriculture) is BAM 9,618 (EUR 4,917), and per hectare of arable land BAM 638.78 (EUR 326.60 Eur). The economic size of the farm is not defined in RS, in contrast to the EU where, in most member states, farms below 4ESU (Economic standard unit) or EUR 4,800 of output value are considered small farms or non-commercial farms. Hence, we can conclude that the agricultural farms in the municipality of Gacko have an average size of 4ESU, i.e. or just below the commerciality threshold.

Vegetable output accounts for 72 percent of the plant output value, with an average value of BAM 365,000. The production of potatoes, onions and carrots dominates vegetable output. Apple production dominates fruit output, with an average value of around BAM 57,000.

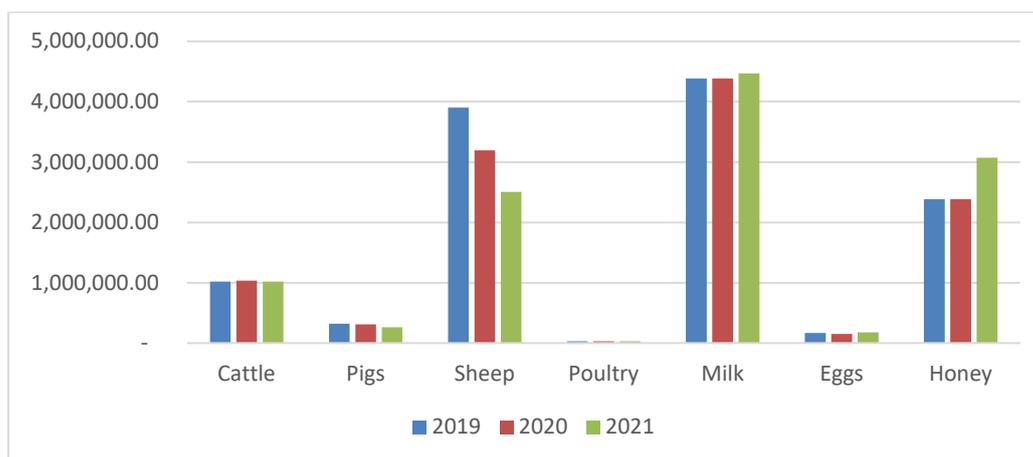


Source: Author’s own calculation based on the database of the RS Institute of Statistics

**Graph 9. Distribution of plant output value**

The average value of grain output in the observed period is minor, amounting to about BAM 34,000, and is dominated by wheat and barley, as well as triticale and oats. The total value of grain output is negligible in comparison to the extent of animal husbandry.

In the observed time period, milk production accounted for the biggest portion (about 49 percent) of overall livestock output, amounting to an average of BAM 4.4 million. The production of chicken meat contributed 20 percent, or an average of BAM 1.8 million. Production of beef, lamb, pork and eggs, contributed a smaller portion of overall livestock output value.



Source: Author's own calculation based on the database of the RS Institute of Statistics

**Graph 10: Distribution of livestock output value, 2019-2021**

**Table 9: Distribution of livestock output value, 2019-2021**

	2018	2019	2020
Beef meat	1,044,057.60	1,013,526.00	1,112,166.00
Pork	485,568.00	466,950.00	432,816.00
Lamb meat	964,080.00	846,144.00	879,840.00
Poultry meat	1,890,000.00	1,878,720.00	1,705,440.00
Egg production	32,480.00	30,550.00	35,619.48
Milk production	4,384,800.00	4,384,800.00	4,547,200.00
Honey production	251,615.00	212,940.00	325,240.50

Source: author's own calculation based on the database of municipal departments

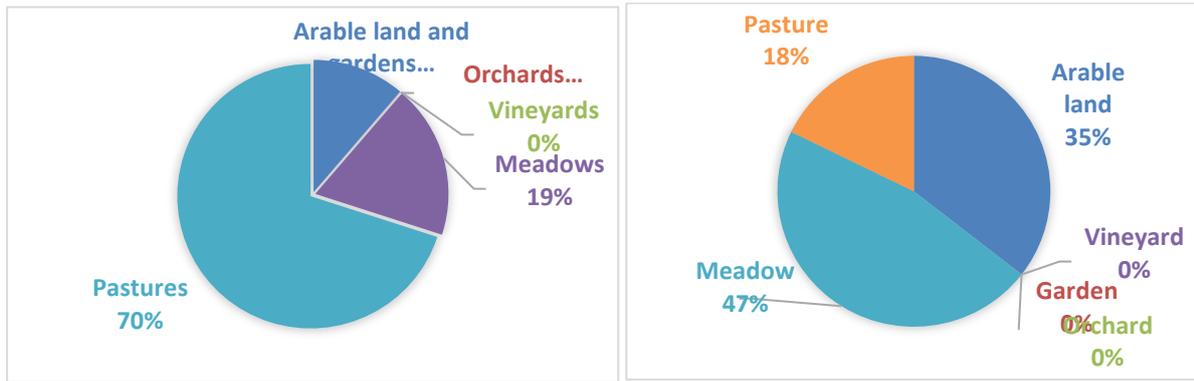
## 2.1.5. General trends in agricultural production

### 2.1.5.1. Agricultural production

#### *Land*

The municipality of Gacko covers an area of 73,600 hectares, of which approximately 14,854 hectares (about 20.1 percent) is agricultural land. The structure of agricultural land is dominated by natural grasslands and meadows covering 9,272 hectares and pastures covering 34,667 hectares, accounting together for 88.7 percent of total agricultural land.

The agricultural circumstances in Gacko are characterized by a scarcity of arable land, which is exacerbated by land fragmentation (on average up to three hectares per land plot). Without irrigation, much of the land is unusable for cultivation. Arable land accounts for 5,575 hectares, or 11 percent of total agricultural land, whereas fruit production accounts for only 7 hectares. According to surveys, farms cultivate about 60 percent of the land at their disposal, with two most commonly cited reasons being that the lands they do not cultivate are fallow and infertile, as well as lack of equipment.

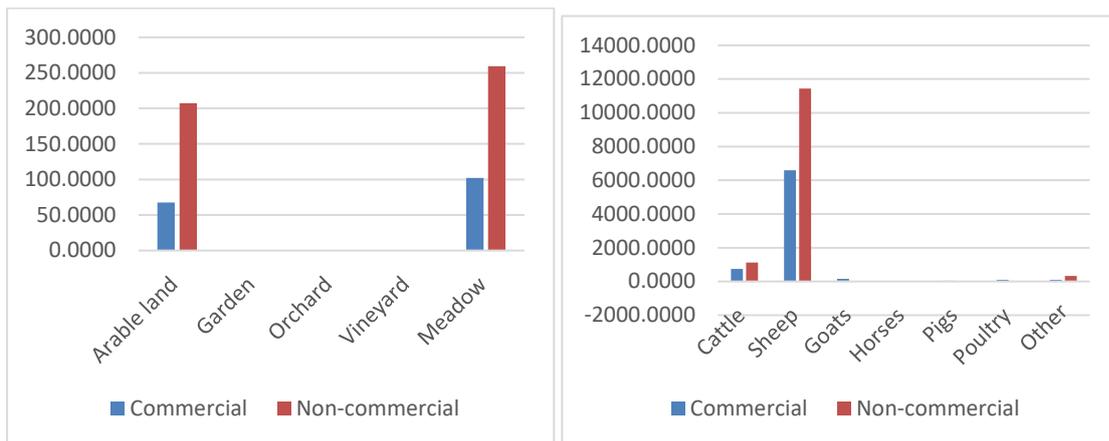


Source: RS Institute of Statistics (a), Farm register (b)  
**Graph 13: Distribution of agricultural land, 2022 situation**

Infertile land makes up 4.4 percent of the total land area.

If we look only at active farms listed in FR, the average farm size is five hectares, with commercial farms averaging 5.89 hectares and non-commercial farms 4.87 hectares. Compared to EU countries, which have an average farm size of 12 hectares (24 hectares in the old member states), and taking into account land fragmentation in Gacko (plots are spatially separated) and the dual character of production, it is evident that the municipality of Gacko faces a challenge in terms of unfavourable size and structure of agricultural holdings, which is one of the most important strategic problems that need to be addressed in the coming period. It should be noted that a substantial number of farmers freely use agricultural fields owned by RS or the Municipality, but without a clearly defined usage right over these fields, which discourages investment in land and land class improvement. Despite farmers' strong interest in legalizing the use of agricultural fields owned by RS/municipality in compliance with applicable legal regulations, the municipality of Gacko has not resolved the property legal aspects of the use of the mentioned areas, and therefore is not able to issue a call for the lease or concession of land.

In contrast to the RS average, where commercial farms and legal entities occupy the majority of agricultural land, in the Gacko municipality, the majority of agricultural land is occupied by non-commercial farms.



Source: Register of Agricultural Holdings, RS Ministry of Agriculture, Forestry and Water Management  
**Graph 12: Distribution of land (left) and livestock (right) by type of farm, 2022**

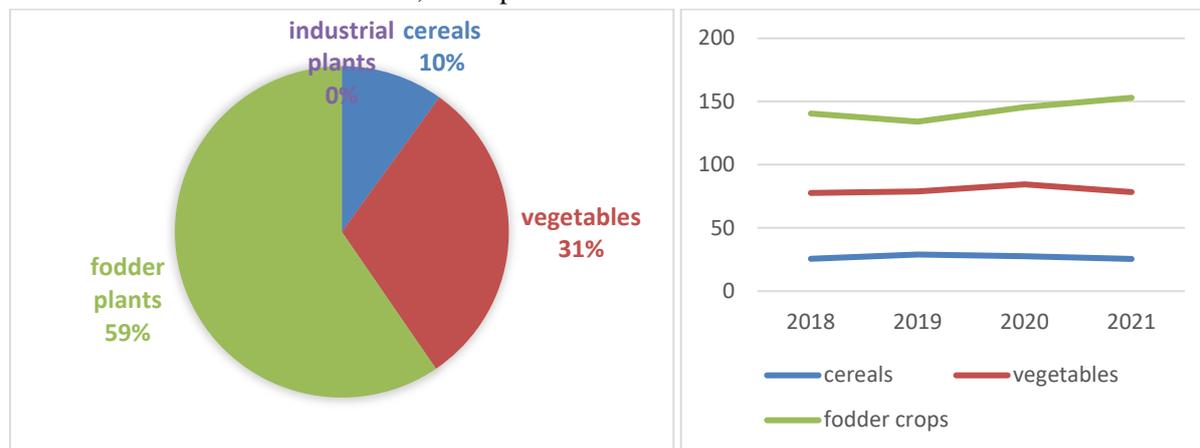
The graph above shows that non-commercial farms dominate animal farming as well.

### 2.1.5.2. Crop production

Crop (plant) production in Gacko is mainly comprised of crops that are typically grown in the country's mountainous regions.

#### Production of field crops

The total area of arable land and vegetable gardens is 5,575 hectares, with sown areas occupying 724 hectares on average for the cultivation of cereals, vegetables and fodder plants. According to 2017 statistics, the sown arable land is dominated by fodder plants occupying 45 percent of the total area. Cereals cover around 226 hectares, or 31 percent of the total sown arable area.



Source: RS Institute of Statistics

Graph 14: Distribution of sown arable land, 2021 (a) and 2019-2021 (b)

Gacko also provides opportunities for the production of arable crops, primarily cereals and vegetables. However, due to unfavourable pedological and climatic conditions, yields per unit area are lower despite investments being approximately the same as in lower altitude areas. Due to the climatic conditions and rainfall patterns, agricultural land is predominantly used for the cultivation of traditional arable crops.

In the production of arable crops, barley and wheat dominate, while triticale, oats and rye are represented to a lesser extent. Over the observed period, there has been a trend of decline in total production areas, but a slight gain in output thanks to relatively good yields that are on par with the RS average.

Table 10: Harvested areas, total and average grain yields, 2018-2021

Culture	2018	2019	2020	2021
<b>Harvested area (hectare)</b>				
Wheat	7	8	7.7	7.6
Rye	2	2	2.2	1.9
Barley	13	15	13.8	12.4
Oats	3.7	4	3.9	3.6
<b>Output (tons)</b>				
Wheat	30	32	33	38
Rye	6	6	6.5	6.7
Barley	44	42	44	44.5
Oats	11	10	11	11.5
<b>Average yields (ton/ hectare)</b>				
Wheat	4.3	4	4.3	5
Rye	3	3	3	4
Barley	3.5	2.8	3.2	3.6
Oats	3	2.5	2.8	3.2

Source: Municipality Gacko, Department for Economy, Finance and Social Activities, Statistic data

### **Vegetable production**

Potatoes and onions are the most commonly cultivated vegetable crops. Due to unfavourable climatic conditions, households in the Gacko municipality do not engage in intensive vegetable crop cultivation. The majority of the production is for personal use, since there are no commercial producers of vegetable crops.

**Table 11: Harvested areas, total and average vegetable crop yields, 2018-2021**

<b>Culture</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Harvested area (ha)</b>				
Potato	48	52.9	56.5	51
Carrot	5	5	5	5
Onion	23.7	20	22	21.5
<b>Output (tons)</b>				
Potato	440	450	480	430
Carrot	105	125	127	126
Onion	95	100	120	110
<b>Average yields (kg/ha)</b>				
Potato	9,000	8,500	8,500	8,300
Carrot	25,000	25,000	25,400	25,200
Onion	3,600	3,500	3,600	3,550

Source: Municipality Gacko, Department for Economy, Finance and Social Activities, Statistic data

Vegetable crop yields are below the RS average. The total potato output ranged from 430 to 480 tons, with an average yield of 8.5 t/ha, which is lower than the RS and the EU averages. Other vegetable crops show similar characteristics, albeit farmed on much smaller scales.

### **Production of fodder plants**

Livestock production and its economic viability require high-quality and low-cost bulk fodder. Because of this, it is important to know the current state of fodder plant production, as livestock production accounts for the majority of agricultural output. As previously mentioned, fodder plant production dominates total sown areas, however this is due to extensive land use rather than intensive livestock production.

**Table 12: Harvested areas, total and average yields of fodder plants, 2018-2020**

<b>Culture</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Harvested area (ha)</b>				
Clover (hay and seed)	33	34	35	32
Alfalfa (hay and seed)	38	36	40	37
A mixture of grasses and legumes	69.4	64.1	70.6	84
Silage corn	-	-	-	-
Other fodder plants	-	-	-	-
<b>Output (tons)</b>				
Clover (hay and seed)	59	66.3	63	48
Alfalfa (hay and seed)	45.6	48.6	48	44.4
A mixture of grasses and legumes	125	125	127	126
Silage corn	-	-	-	-
Other fodder plants	-	-	-	-
<b>Yield (kg/ha)</b>				
Clover (hay and seed)	1800	1950	1800	1500
Alfalfa (hay and seed)	1200	1350	1200	1200
A mixture of grasses and legumes	800	800	800	800
Silage corn	-	-	-	-

Other fodder plants	-	-	-
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Source: Municipality Gacko, Department for Economy, Finance and Social Activities, Statistic data

### **Fruit production**

Due to the mountain climate, fruit cultivation is restricted to the lower altitudes of the municipality, which can generate a microclimate conducive for fruit growing. Fruit production is dominated by apples, but pears and plums are also grown. The majority of fruit trees are planted as single trees in irregular patterns on the household plots. Almost no intensive orchards exist, but with more financial investment, primarily the construction of an irrigation system in some areas of the municipality, certain types of fruit could be grown more intensively, as evidenced by the establishment of an orchard in Avtovac, with 1,830 plantation apple seedlings, where all protection measures have been applied, and the yield is satisfactory if weather conditions are favourable. In 2020, the climatic conditions were favourable, resulting in generally decent yields of all types of fruit. Despite this, the fruit production sector in the municipality remains severely underdeveloped.

**Table 13: Number of fruit trees, total and average yields of fruit crops, 2018-2021**

Culture	2018	2019	2020	2021
<b>Number of fruit-bearing trees</b>				
Apple	3,500	3,181	3,641	3,882
Pear	684	833	800	812
Plum	1,250	1,250	850	808
<b>Output (tons)</b>				
Apple	70	70	71	66
Pear	13	15	16	13
Plum	25	25	24	21
<b>Average yield (kg/tree)</b>				
Apple	20	22	19.5	17
Pear	19	18	20	16
Plum	28	27	31	26

Source: Municipality Gacko, Department for Economy, Finance and Social Activities, Statistic data

The Gacko municipality, like the rest of RS, has experienced an increase in the establishment of berry fruit plantations in recent years. Only strawberries are grown in the municipality, over an area of 2.5 hectares and producing an average of 1 ton per year as total production for whole municipality.

**Table 13: Value distribution of fruit production, 2018-2020**

	2018	2019	2020
Pome fruits	131,000	135,000	138,500
Stone fruits	25,000	25,000	24,000
Berries	4,400	4,000	4,000

Source: Author's own calculation based on available data provided by Municipality Gacko, Department for Economy, Finance and Social Activities

### **2.1.5.3. Livestock production**

All types of livestock production are represented in the Gacko municipality, including cattle breeding, sheep breeding, goat breeding (to a lesser extent), pig breeding, poultry farming and beekeeping. In analysing the trend of the number of animals from 2018 to 2021, a minor increase in cattle breeding and a slight decline in the number of pigs, sheep and poultry are discernible.

**Table 14: Livestock numbers**

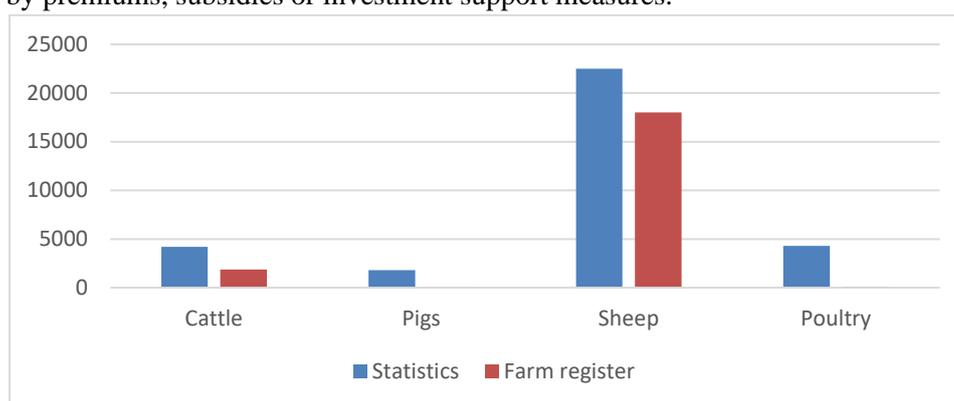
	2018	2019	2020	2021

Cattle	4,000	4,000	4,100	4,200
Pigs	2,000	2,000	1,950	1,800
Sheep (and lambs, rams)	31,000	30,000	27,000	22,500
Poultry	4,500	4,400	4,400	4,300

Source: Municipality Gacko, Department for Economy, Finance and Social Activities, Statistic data

In relation to the total grass areas, the above livestock data demonstrate a production intensity above the RS average with a value of 0.47 UG/ha, which is comparable to the average for BiH (0.51 UG/ha), but still lower than the average for the Balkan countries (0.88 UG/ha). According to EU policy, a value larger than 1 UG/ha is a reliable indicator of livestock production intensity.<sup>8</sup>

However, with the exception of sheep, only a negligible number of animal production facilities are registered in the Register of Agricultural Holdings, implying that the majority of production is not supported by premiums, subsidies or investment support measures.



Source: RS Institute of Statistics and Register of Agricultural Holdings

**Graph 15: Distribution of livestock, according to statistics and data from RAH**

*Cattle production* in the municipality of Gacko has seen a slight uptick (see Table 15). The majority of farmers in cattle production are engaged in the production of milk, of which on average 50 percent is collected by Padjeni dairy plant, while the rest is processed on farm into traditional dairy products (Gacko kajmak and cheese) or consumed fresh. Some quantity of traditional dairy products are marketed via direct sales on farm or at touristic sites.

Table 15: Number of cattle by category, 2018-2021

Year		2018	2019	2020	2021
Up to 1 year old	Calves for slaughter	2000*	2000*	2000*	2000*
	Bull calves	45	44	48	50
	Heifer calves	200	200	200	200
From 1 to 2 years old	Yearling bulls	34	33	35	35
	Heifers	160	152	180	180
Older than 2 years	Bulls and bullocks	21	19	20	20
	Cows	3500	3500	3500	3600
In total		4000	4000	4100	4200

Source: RS Institute of Statistics

\*estimates

<sup>8</sup> Vasko, Zeljko & Rokvić, Gordana. (2021). Economic valuation of grassland utilization improvement in the Western Balkans. SHS Web of Conferences. 95. 01002. 10.1051/shsconf/20219501002.

The distribution of farms by the number of cattle (Table 16), indicates a more intensive production than other municipalities in Eastern Herzegovina and RS as a whole, with 41 percent of farms having up to 20 heads of cattle, 15 percent having up to 50 heads and 1 percent having over 50 heads. Development of cattle breeding and dairy production in the Gacko municipality has a comparative advantage due to the availability of livestock fodder and the possibility of livestock grazing throughout the majority of the year. Therefore, it would be beneficial to diversify production in farm processing and direct sales models in order to compensate for the low output through value addition. It would also be advantageous to include at least the largest milk producers in productivity control, since this would enable these farms to receive incentives per head for the most productive cows and other measures of support provided from national level.

**Table 16: Distribution of farms engaged in cattle production and registered in the Register of Agricultural Holdings by the number of cattle**

Farm size	Number of registered farms
up to 5 heads	128
5-10 heads	3
10-20 heads	125
20-50 heads	46
>50 heads	3

Source: Ministry of Agriculture, Forestry and Water Management, Register of Agricultural Holdings

Together with cattle breeding, *sheep farming* is the most developed and widespread form of animal production in the municipality. Extensive sheep farming dominates, and very few farms keep sheep on modern farms with intensive feeding systems. Sheep are primarily farmed for the production of meat for personal consumption and for the production of lambs for personal consumption and sale on the market. Half of the farms have up to 50 sheep, 18 percent have from 50-100 sheep, 9 percent have up to 200 sheep, 11 percent of farms have up to 300 sheep and 12 percent of farms have over 300 sheep.

**Table 17: Number of sheep by category, 2018-2021**

Year	2018	2019	2020	2021
Lambs up to 2 months	12490	12630	11770	8550
Lambs and young sheep from 2 to 12 months	3250	3120	3000	2750
Sheep older than one year	15000	14000	12000	11000
Breeding rams	210	200	180	150
Barren sheep	50	50	50	50
In total	31000	30000	27000	22500

Source: RS Institute of Statistics

The majority of sheep products, including meat, milk and dairy products, are still sold through unregistered channels. The traditional sheep breeding system has not changed considerably. According to data from commissions that evaluate high-quality breeding sheep in Gacko at the regional livestock exhibition, Gacko stands out in terms of quality when compared to other municipalities, but it is definitely necessary to improve breeding and selection in sheep breeding and harmonize it with the RS Animal Husbandry Law. Sheep farming is focused either on the production of milk for cheese manufacture or on the production of lamb meat. Wool, an important by-product of sheep production, often goes unused and ends up as waste. Wool is a material used not only in the textile industry, but also in construction as a building and insulation material, among other things, and any project that would lead to increased usage of this underutilized resource would be viable.

**Table 18: Sheep's wool output, 2018-2020**

Year	2018	2019	2020
Number of sheep shorn	12000	11000	10000
Total wool shorn, t	1.60	1.75	1.5

Source: RS Institute of Statistics

Goat farming is practised on a small number of farms. It is not uncommon for a farm to have both sheep and goats.

*Pig farming* is often a secondary activity on rural farms and has no commercial aspects in Gacko. This provides meat and processed products for a limited number of households during winter season without large concentrations of animals on farms. The driving force for the expansion of pig farming could be to organize contracted production for existing processors in the wider area, or to support the development of the local marketing infrastructure, since at the territory of Gacko there are no butcher shops nowadays. Adding value to home-made meat products prepared according to traditional recipes could also be a potential strategy for intensification of pig farming, especially as such products can be sold and marketed through the tourism and catering sectors.

**Table 19: The number of pigs by category, 2018-2020**

Year	2018	2019	2020	2021
Piglets up to 20 kg	300	300	300	300
Pigs from 20 to 50 kg	120	130	110	120
Pigs for fattening	1100	980	975	970
Pigs for breeding	Sows	10	10	10
	Boars	6	7	8
In total	1536	1427	1403	1406

Source: RS Institute of Statistics

*Poultry farming* is not practiced largely in the municipality of Gacko, and all the facilities shown below produce poultry for personal consumption. The total number of broiler chickens is decreased in the period from 2018 to 2021, but there is a slow increase in the number of laying hens. Due to this modest increase, the egg output is noticed – from 230 thousand in 2018 to 236 thousand in 2021.

**Table 20: Number of poultry by category, 2018-2020**

Year	2018	2019	2020	2021
Broiler chickens	8,000	7,500	7,600	6,800
Laying hens	1,150	1,160	1,175	1,180
In total	9,150	8,660	8,775	7,980

Source: RS Institute of Statistics

**Table 21: Egg output, 2018-2020**

Year	2018	2019	2020	2021
Number of laying hens	1150	1160	1175	1180
Total eggs laid	230,000	232,000	235,000	236,000

Source: RS Institute of Statistics

*Beekeeping*. In addition to raising of cow and sheep farming activities, a significant number of farmers are also engaged in beekeeping because villages in the Gacko municipality abound in high-quality honey plants. There is the “Gacko beekeepers’ association”, with 41 members as of 2020. In the municipality there are approximately 3,300 bee colonies. Also, 41 beekeepers have been registered by the Ministry

of Agriculture, but there are also a number of beekeepers who own fewer bee colonies but are neither registered by the Ministry of Agriculture nor members of the beekeepers' association. The main product is honey, while other beekeeping products like propolis, candles, etc. are not produced at all. Honey is produced for both personal consumption and sale. Most honey producers sell directly to customers in order to obtain a better price. There is no local shop or organised collection of honey. Due to the weather conditions in 2020, honey output was low. Despite ideal natural conditions, beekeeping is not as developed as it could be because of unfavourable climatic conditions such as extreme heat and lack of rainfall, but it is nonetheless a source of supplementary income.

**Table 22: Honey output, 2019-2021**

Year	in 2019	in 2020	in 2021
Number of hives	3200	3150	3300
Honey output, kg	24500	21000	25000

Source: RS Institute of Statistics

One of the major issues faced by beekeepers is a scarcity of production inputs (wax foundations, high-quality pollen patties), as well as the impact of climate change and extreme events like heat waves, drought, flooding and similar events in key months of the year. The yield varies from year to year and ranges from 21,000 kg to 35,000 kg in good years, i.e. around 7-10 kg per hive. It is undeniable that beekeeping has an enormous, as yet untapped, potential due to steady market demand (both domestic and foreign) and exceptionally good pastures rich with medicinal and other herbs (a wealth of honey-bearing flora). Better organization of this livestock sector is needed, followed by financial support from the municipal and RS budgets. According to the views of the Gacko Municipality Beekeepers' Association presented at the workshops, in order for the beekeeping sector to improve its capacity, it is necessary to include this sector in the municipality's budget plan, providing support to the project for creating beehives, producing bee cakes, as well as honey processing, such as centralized honey bottling facilities. Stronger connections between the Associations of Beekeepers of Republika Srpska is another area which would support further development of beekeeping in Gacko.

### **Meat production**

Since statistics about the livestock slaughter are collected only at the level of registered slaughterhouses and not at the level of individual family farms, where the majority of meat is actually produced, it is difficult to accurately determine the total amount of meat produced within the municipality. The estimates of meat production are based on the statistical number of heads for slaughter and the average weight of specific categories of livestock, as well as the slaughter output for specific species of animals.

**Table 23: Estimated meat output, 2019-2021, in tons**

	2019	2020	2021
Beef meat	246,240	246,600	246,600
Pork	115,200	113,200	113,600
Mutton meat	93,600	93,600	93,600
Poultry meat	15,000	15,200	13,600

Source: Author's own calculations based on RS Institute of Statistics data

Although it is only an estimate of the total meat production by category, it provides important indicators of the level of development of this sector. The table above shows that the total production of meat is stable and only the poultry production had a considerable decrease during 2019-2021.

## *Milk and dairy products*

Cow's milk production is the most prevalent agricultural production in farms, and many farms earn a relatively good income from it.

For many years, Gacko is among the top ten municipalities in RS in terms of milk production. Up to 4 million litres of milk are purchased annually in Gacko. It is distinguished by the breeding of the Gatačko-type grey cattle. Due to the collapse of the breeding company "Gacko" and uncontrolled import and use of semen for artificial insemination, the autochthonous population of Gatačko cattle has come under a serious threat in the last few years. According to official statistics, production per head is low at around 2,880 kg of milk<sup>9</sup>, significantly less than the average milk production for this type of breed<sup>10</sup>. According to data from the RS Association of Agricultural Dairy Producers, for herds that were subject to productivity control in 2022, the average production per head in standard lactation was 7,050 kg for the Simmental breed, 7,599 kg for the Holstein breed and 6,529 for crossbreeds. According to EUROSTAT data, the average milk production per cow in the EU in 2021 was 7,682 kg. In 2022, there were no farms in the Gacko municipality that were subject to productivity control. The reason for this can be either poor information or low interest of growers from the area of this municipality, although the Ministry of Agriculture of the Republic of Srpska provides stimulation to the growers involved. Productivity control is successfully implemented in some municipalities in the region, such as Berkovići or Nevesinje.

However, due to the relatively low investment in production – cows are outside grazing throughout the entire growing season, and in recent years, because of absence of snow also during the winter, the production is more or less profitable, if income from on-farm milk processing and the sale of calves is counted.

**Table 24: Cow's milk output, 2018-2021**

	2018	2019	2020	2021
Average number of cows milked	2,700	2,700	2,700	2,800
Total amount of cow's milk milked, litres	7,560,000	7,560,000	7,560,000	7,840,000
Average yield, litre/cow	2,800	2,800	2,800	2,800
Of that, purchased by dairies, litres	3,323,714.5	3,498,935.5	3,843,417.5	4,048,637
Proportion of purchased milk in total milk production	44%	47%	51%	52%

Source: municipal departments

In 2020, milk was purchased from farmers by two business entities: the "Pađeni" dairy in Plana, Bileća (which purchased 3,815,468 litres from 246 farmers in the municipality, which is 316,533 litres more than the previous year, and it planned to buy 20 percent more in the course of 2021) and the "Glogovac" dairy in Nevesinje (which purchased about 7,000 litres from only six farmers, which was 81,315 litres less than the previous year, and it planned to buy significantly more in 2021). The rest of the milk is used on farms to make traditional dairy products (cheese, kajmak and other dairy products) for personal consumption, and the remainder is sold as a surplus on the local market and on markets outside the municipality. The most famous product is Gatački kajmak, which is produced in about 8 tons with a total value of about 240,000 BAM. In addition, mixed cheese, pie cheese, young cream and other

<sup>9</sup> 1 litre of milk = 1.0297 kg of milk

<sup>10</sup> Erbez M., Chládek G., Šarovská L., Walterová L. (2007): Exterior and Production Characteristics in Gacko Cattle Breed. [https://mnet.mendelu.cz/mendelnet08agro/files/articles/zoo\\_erbez.pdf](https://mnet.mendelu.cz/mendelnet08agro/files/articles/zoo_erbez.pdf)

products are produced in quantities of 5-6 tons. Gatački kajmak has a well-developed market and is one of the recognized products in the region.

The production of sheep and goat milk is modest, and this milk ends up being processed into cheese, since there is no organised collection of sheep milk at the territory of Gacko municipality. The purchase of cow's milk accounts for about 55 percent of the total production, while the remainder is assumed to be sold through direct channels, either as fresh milk or in the form of dairy products.

**Table 25: Sheep's and goat's milk output, 2018-2020**

Year	2018	2019	2020	2021
Number of sheep milked	11,000	10,000	8,500	8,000
Total milk milked	726,000	660,000	561,000	528,000
Number of goats milked	400	400	400	400
Total milk milked	20,000	20,000	20,000	20,000

Source: RS Institute of Statistics

### 2.1.6. Organic agricultural production

Despite the fact that the municipality of Gacko has very good natural conditions for organic agriculture, there are no organic farms in the municipality of Gacko.

One of the basic postulates of organic production is the use of indigenous species, i.e. animal breeds and plant varieties. In this context, Gacko really has significant potential, both because of the Gatačko govece and pramenka, as well as because of the significant number of autochthonous varieties of fruit grown in this area. However, there is a pollution because of the operation of the Gacko thermal power plant, but this pollution does not represent any chemical input in the production process, and thus does not conflict with the rules of organic production. It is to be expected that this issue will also be resolved by improving the level of purification of the gases emitted as a result of the operation of the thermal power plant.

The comparative advantages of the municipality in terms of the development of organic production are much greater than the negative ones. Namely, the municipality extends at higher altitudes and on an area that is far from pollution sources, which even can be considered as untouched nature, and where organic production could be organized, primarily livestock, but also the organic cultivation of certain fruit species and medicinal plants.

The areas in the north and east of the municipality are especially attractive for organic production. These are the areas around the source of the Neretva River, then towards Zelengora, the area of Čemerna, then the area above Lake Klinje, the area around and between the mountains Lebršnik and Volujak, and the south-eastern part of the municipality, i.e. move towards the border with Montenegro, i.e. villages Dulići and Novi Dulići, Kazanci. In the north-west, the area of the villages of Slivlja and Kokorina can be interesting for organic agriculture.

Though there are subsidies for organic farmers, it is important to note that financial support is not a sufficient incentivizing factor for engaging in organic production, given that transition to that type of production requires knowledge of organic production principles and professional support, at least in the initial years of production, in order to ensure income stability. A positive idea that is being discussed by the Municipal Administration, which is supportive of this, is to designate the northern section of the

municipality as a protected zone. This would mean that a large part of the territory of the municipality would be protected from all types of industrial pollution, which would enable the expansion of possibilities for organic beekeeping, collection of organic medicinal plants or extensive animal husbandry based on the principles of organic farming.

### 2.1.7. Agricultural extension services

Agricultural extension services are provided by the Regional Unit of the Department for the Provision of Agricultural Extension Services of the RS Ministry of Agriculture, Forestry and Water Management. In the entire RS, the department has only 32 extension agents, three of whom work in the Trebinje Regional Unit. The table below summarizes the extension agent workload relative to total agricultural areas and the number of farms. Veterinary services are provided in a private veterinary clinic.

**Table 27: Number of extension agents in relation to the number of active farms in RAH as of 31 December 2019**

Regional unit	Number of extension agents	Number of registered farms (active)	Number of active farms per agent	Number of registered farms (total)	Number of farms per agent
Banja Luka	9	4,353	391.33	4,353	483.67
Bijeljina	5	11,517	1,252.00	11,517	2,303.40
Gradiška	3	7,049	759.00	7,049	2,349.67
Doboj	5	5,003	500.60	5,003	1,000.60
Prijedor	4	3,495	460.50	3,495	873.75
Sokolac	3	4,720	783.33	4,720	1,573.33
Trebinje	3	4,061	707.67	4,061	1,353.67
In total	32	20,877	652.41	40,198	1,256.19

Source: Department for the Provision of Agricultural Extension Services

The Gacko Municipality Administration has two senior officers for agriculture, forestry and water management. Extension services in the municipality of Gacko are also provided by the General Agricultural Cooperative “Gacko”, which employs three agricultural engineers and four employees with secondary education. The Cooperative’s activities are focused on tasks and activities that enable farmers to access agricultural subsidies awarded by the RS Ministry of Agriculture, Forestry and Water Management, as well as the municipal agricultural subsidies, and to apply for tenders of various projects that support the improvement of agricultural production in local communities. The cooperative is financed by the municipality to provide these services to farmers, meaning that they are free of charge for farmers from Gacko.

A survey conducted on a sample of farms in the municipality for the purpose of development of this strategic document, has found that TV and radio are most used sources of information, together with internet that is named as most frequent other source of information. Farmers also refer to local agronomist, either the one at the cooperative or at the extension service.

**Table 28: Sources of information for farmers**

How do you get information about new technologies in production (new varieties, new seeds, new protective means, new machines, etc.)?	Answer
- the Ministry’s extension service	16%
-local agronomist (works in the municipality)	8%
-local agronomist (works in an agricultural pharmacy shop)	4%

-local agronomist (works in a cooperative/association)	20%
-TV/radio	39%
- other (please specify)	14%

Source: Survey conducted for the purpose of development of this strategic document

There is a noticeable lack of private extension agents in the field of agriculture, which may in future hinder access to EU pre-accession funds, as well as other sources of support for agricultural and rural development.

Additional services and equipment that, according to respondents in the survey, are lacking but could facilitate the development of agricultural production include machines and barns for livestock, as well as irrigation systems, i.e. investments in the modernization of farms. When we compare these needs with the low level of withdrawals of funds from the agrarian budget at national level, we need to investigate the cause of the low level of investments and adjust investment criteria or funding sources accordingly.

***Table 29: Needs for the improvement of agricultural production***

<b>What do you need most to improve farm production?</b>	<b>Answer</b>
-new machines	33%
-new barn for cattle	21%
-greenhouse	7%
-access to additional land areas	12%
-irrigation system	19%
-sorting and packing line	2%
-processing line	0%
-other	7%

Source: Survey conducted for the purpose of development of this strategic document

### **2.1.8. Value chain coordination and market development**

The market is described as a place where vendors and buyers can meet and exchange goods and services. A transaction between a seller and a buyer may occur directly or through one or more intermediaries (short and long sales channels). Contemporary times are marked by a decline in direct buyer-seller interactions and the introduction of specialized intermediaries into these chains. All of this is equally true for agricultural and food products.

Due to incoherence and disorganization, farmers are deprived of the ability to negotiate with suppliers for a more favourable purchase of bigger quantities of inputs such as seeds, mineral fertilizers, protective agents and others. Like in the rest of RS, farmers in the municipality of Gacko are not well-organized when it comes to entering the market, therefore there is potential for improvement.

According to a survey carried out on a sample of farms in the municipality, regardless of production fragmentation, farms sell up to 90 percent of their output and use rest of the products for their own consumption. Meat, livestock and milk are the most common products sold on the market. The dominant sales channels are through intermediaries, except for milk, which is collected by the dairy plant or sold

directly on the farm as fresh milk or processed into kajmak or cheese. Cooperatives and associations working in Gacko are not involved in the sales process (see Table 30).

**Table 30: Sales channels for agricultural products**

Product	directly on farm	farmers market	Intermediary trader	Collected for processing	association/cooperative
- milk	39%	0%	4%	57%	0%
- meat	5%	38%	54%	3%	0%
- fruit	0%	0%	100%	0%	0%
- vegetables	0%	0%	0%	0%	0%
- cereals	0%	0%	0%	0%	0%
- dairy products	100%	0%	0%	0%	0%
- meat products	0%	0%	0%	0%	0%
- grain products	100%	0%	0%	0%	0%
- other	0%	0%	0%	0%	0%

Source: Survey conducted for the purpose of development of this strategic document

Farmers consider low agricultural produce pricing to be the most significant hindrance to placing their product on the market, which is indicative of their poor positioning, inadequate organization and limited bargaining power. Farmers believe that the situation can be improved by reorganizing the value chains of agricultural products.

**Table 31: What measures need to be taken to improve situation in agriculture**

Measures	Answer
Provide a venue for the sale of agricultural products	15%
Better organize the local market infrastructure	5%
Association of agricultural producers	7%
Engaging with processors (long-term contracts)	3%
Better organization of purchases	34%
Better extension services	3%
Encourage youth to engage in agriculture	14%
Better road and utility infrastructure	12%
Development of other economic activities in the vicinity of rural areas (new jobs)	7%
Other:	0%

Source: Survey conducted for the purpose of development of this strategic document

Based on the analysis of the situation and the workshops held with local representatives, two priority value chains were selected in Gacko for further development, namely the production of Gacko kajmak (cream) and the production of honey and bee products. The detailed analyses of these value chains are presented respectively in Annex 3 and Annex 4.

### **2.1.9. Farmers' organizations**

The following agricultural cooperatives and associations operate in the municipality of Gacko:

1. General Agricultural Cooperative Gacko,
2. Association of Beekeepers of the Gacko Municipality,
3. Association of Breeders of Gatačko Cattle,
4. Association of Producers of Gatački Kajmak.

In addition, there are two currently inactive organizations, namely the agricultural cooperative PZ “Avtovac” and the Association of Milk Producers.

*General Agricultural Cooperative Gacko* was founded in 2006 to bring together farmers and provide them with services in the field of agriculture. Today, the Cooperative assists and contributes to the improvement of the situation of farmers and their service is available throughout the municipality of Gacko. The Cooperative’s activities are focused on tasks that enable farmers to access agricultural subsidies awarded by the RS Ministry of Agriculture, Forestry and Water Management. The Cooperative participates in a number of projects aimed at improving agricultural production in the local community. It is an active member of the agricultural cluster “Stara Herzegovina”, with the aim of making it easier, faster and cheaper for farmers to meet their production needs and find markets, as well as facilitating product branding, obtaining quality certificates, farmer training, introduction of new technologies, etc. Every year the Cooperative helps to organize the Regional Livestock Exhibition in Gacko. In cooperation with the Austrian Association of Tyrolean Grey Cattle, a number of high-quality breeding heifers were imported. Also, 2000 doses of high-quality semen for artificial insemination of cows were imported with the support of the Gacko municipality and the Veterinary and Animal Husbandry Centre. The main purpose of the Cooperative is to encourage and promote rural development, with a particular emphasis on food production, the preservation of indigenous breeds (livestock) and the protection of local products (cheese and “sack kaymak” [*kaymak matured in dried sheep/goat skin sacks*]). The Cooperative was founded by 20 farmers, and today has 84 members, which speaks to its credibility. Gacko cooperative is financed mostly from grant funds from the municipal budget, partly from income from the cattle market, which it manages, and partly from the provision of services.

*Association of Beekeepers of the Gacko Municipality* was founded in mid-2002. It currently has around 65 members that are registered with the relevant ministry. It participated in the implementation of important projects in cooperation with international funders. The following are two projects successfully implemented by the Association in the last two years:

1. Distribution of 12 start-up packages for new beekeepers in collaboration with the International Fund for Agricultural Development (IFAD)<sup>11</sup>;
2. “Support to Beekeeping Aimed at Improving the Offer of Home-Made Products along the Via Dinarica White Trail”, implemented as part of the Via Dinarica project in cooperation with UNDP BiH, with financial support from USAID and the Italian Development Cooperation Agency<sup>12</sup>.

*Association of Breeders of Gatačko Cattle* was founded in 2020 to preserve and protect this breed of cattle. Today, it includes about 30 farmers from the municipality of Gacko who breed or are believed to breed this autochthonous breed of cattle. The Association’s purpose is to bring together as many breeders as possible, work on the breed’s genotyping, research and protection, and raise public awareness in order to save the breed from extinction and create the conditions for developing a stable population in the regions of Gacko and Herzegovina. To protect the breed, the Association works with the RS Ministry Agriculture, Forestry and Water Management and the Institute for Genetic Resources. At the Association’s proposal, a scientific commission was appointed by the relevant ministry to prepare a feasibility study for the recognition of the breed. The municipality of Gacko recognized the importance of the project for the improvement of animal husbandry and the preservation of genetic resources and

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<sup>11</sup> <https://www.preduzetnickiportalsrpske.net/gacko-pcelarima-nova-oprema/?lang=bs>

<sup>12</sup> <https://m.facebook.com/viadinaricatrail/posts/4707582696017502/>

financially supported the projects in 2021 and 2022, with 30,000.0 BAM each, and the funds were used for the genotyping costs of Gatačko beef (60,000.00 BAM in total).

*Association of Producers of Gatački Kaymak* was founded in August 2021. Today, the Association has 24 members, all of whom are women due to the fact that women and not men are traditionally engaged in the processing of milk on farm. The Association’s primary goal is to obtain the geographical indication recognition for Gatački kaymak. The project "Preparation of producers for the process of branding the cream of Gatcho" was carried out through ReLOaD 2, which was financed by the EU, implemented through the UN Development Program (UNDP) and co-financed by the municipality of Gacko. The value of the project is 16,537.96 BAM. The focus of the Association’s activities is on vulnerable social groups, particularly women. A project to increase traceability in the Gatački kaymak production chain is currently being implemented as a preliminary step towards obtaining protected geographical indication status. In order to develop value chains in agriculture, it is necessary to work towards changing the current situation, either by providing support to private entrepreneurs or by establishing new farmers’ organizations founded solely for economic reasons and acting as an integrator of production, purchase and further marketing of products to the end customer.

**2.1.10. Diversification of economic activities**

According to the survey conducted for the purpose of development of this strategic document, in a substantial number (56 percent) of farms in Gacko, one or more farm members are employed or engaged in other off-farm activities that provide a regular income, most notably at the Gacko Thermal Power Plant and Gacko Municipality Administration. On such farms, salaries account for the majority of income, while farming income is relatively minor and serves as an asset base for prospective future investment in agricultural production.

The existence of supplementary income generated outside of the farm and/or agriculture is a widespread and long-standing model of how the household functions. As agriculture’s prominence in the rural economy has declined, the number of farms with a mixed income structure has increased, and agricultural and rural development policies seek to foster this process in order to ensure the economic and social sustainability of rural areas<sup>13</sup>.

Income diversification however doesn’t refer at the same time to on farm diversification. Among households with supplementary activities on the farm, 63 percent were engaged in milk processing (kaymak and cheese production), 19 percent in meat processing and 13 percent in the provision of agricultural machinery services. Other activities (tourism, timber sale/processing, brandy production) are present at a much lesser extent, if at all.

**Table 34: Distribution of supplementary activities on the farm**

Type of supplementary activity	% of surveyed
(1) Processing of foodstuffs of animal origin - milk processing	63%
(2) Processing of foodstuffs of animal origin - meat processing	19%
(3) Processing of fruits and vegetables	6%
(4) Provision of agricultural machinery services	13%
(5) Agrotourism	0%
(6) Timber sale/processing	0%
(7) Crafts	0%

<sup>13</sup> Bogdanov N. (2007): Small rural households in Serbia and rural non-farm economy, UNDP Serbia, Publication

(8) Other	0%
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Source: author's own survey

The primary reasons of limited on-farm diversification include limited market access and production capacity, followed by a labour shortage. The survey above shows that residents lack incentives in terms of both knowledge and material resources. The lack of workforce is a problem that can not be readily remedied, and special support measures are required to encourage young people to invest in agriculture, rural development, rural tourism, etc. According to those surveyed, young people simply lack the motivation to start their own business, which means that the aforementioned situation can be changed by the implementation of suitable support programmes. A major reason why young people abandon agriculture is that there are no vocations in the fields of agriculture and food industry offered by the secondary vocational school in the Gacko Municipality. Frequently, after completing the first two years of the comprehensive secondary school [*gimnazija*] in Gacko, students continue their education elsewhere and never return. Gacko, on the other hand, is known for its agricultural production, has a long tradition and is the only municipality in BiH to have developed its own breed of cattle, although this has been regrettably undervalued in recent decades.

### ***2.1.10.1. Tourism in the municipality of Gacko***

The natural beauty of Gacko's surroundings is complemented by the glacial lakes on the Volujak and Zelengora mountains, as well as the rich diversity of flora and fauna.

Lake Klinje, home to the oldest arch dam in the Balkans, is a true gem of this part of Upper Herzegovina. The dam is a cultural and historical monument and is protected by law. It was built from Gatački stone with lava ash from Vesuvius used as binding material. The lake is a popular destination for recreation and bathing tourists.

Lake Vrba is situated on the M-20 road leading to Trebinje and Dubrovnik. It is an ideal place for motorists and travellers to unwind, enjoy the scenery, take photos and swim. Along the shore there are three pavilions with benches and tables, as well as a pontoon on the lake, a landscaped beach and a souvenir shop.

Čemerno Pass, located between the mountains Zelengora, Volujak, Kuk, Lebršnik and Vučevo, is one of Herzegovina's most beautiful spots. In the Medieval Ages, it used to be an excursion site, a hunting ground and a summer resort for Dubrovnik's aristocrats. Čemerno is a watershed between the Adriatic and Black Sea basins. A curious fact is that rainwater from one side of the roof in Čemerno flows into the Adriatic basin and from the other into the Black Sea basin.

Mount Zelengora is a true gem among the mountains of the former Yugoslavia. It offers visitors the opportunity to swim in pristine nature and snowshoe on the slopes of the surrounding mountains at the same time. With eight glacial lakes, Zelengora provides ample opportunities for swimming, photographing stunning mountain peaks and foraging for medicinal herbs

Papin Do is home to a mountain lodge that attracts many mountaineers, nature enthusiasts and recreationalists. From here, visitors can go on a tour of the surrounding mountains. Nearby attractions include Jagodino Lake, the source of the Sutjeska River and the Papić-Grčić *katun*, which offers local products such as kaymak, cheese, honey and lamb.

In the 14<sup>th</sup> century, during the reign of Sandalj Hranić and the construction of the old town of Ključ, Cernica served as the primary customs centre for caravans traveling from Dubrovnik to other territories.

Visitors have the opportunity to explore the excavated remains of a 14<sup>th</sup> century church, one of seven endowments left by Jelena, daughter of Knez Lazar and wife of Sandalj Hranić.

Not far from Gacko is the medieval town of Ključ, founded in the 15<sup>th</sup> century by Sandalj Hranić, lord of Zahumlje. It was his most significant town, where he issued most of his charters. Outside the town, his wife Jelena, daughter of Knez Lazar and widow of Balšić, constructed a church. The fortress has a lower and upper town and is rectangular in shape. Ključ was one of Herzegovina's most important towns. Two cannons from this fortress were relocated to the National Museum of BiH in Sarajevo.

Since 2010, the ethno-museum in the village of Danići has served as a significant ethnological institution dedicated to the comprehensive study of traditional culture. The permanent exhibition of the Gacko Ethnographic Museum showcases the lifestyle and customs of the late 18<sup>th</sup>, 19<sup>th</sup> and early 20<sup>th</sup> centuries. Visitors can view old items such as traditional Herzegovinian folk costumes, work tools and a hut with a fireplace. The museum also boasts a library with approximately 4,000 books. Within the complex is the monastery of St. Petar Zimonjić and nearby lies the grave of Duke Bogdan Zimonjić, father of Metropolitan Petar Zimonjić, as well as the Zborne Gomile stećci [*medieval tombstones*]. Legend has it that the entire region from Danići to Pusto polje was once the site of a battle between father Uroš and his son Dragutin (Nemanjići).

Nestled at the foot of Mount Volujak near Gacko are two camping sites: Mountain Camp Izgori and Camp Volujak. Surrounded by stunning natural beauty and breath-taking mountain views, this location offers a unique opportunity to escape the hustle and bustle of daily life. Visitors can enjoy a range of outdoor activities such as hiking, mountain climbing, foraging for medicinal herbs and wildlife watching.

Stećci are scattered across 114 locations and consist of approximately 2,200 stone slabs, chests and crosses with 38 preserved inscriptions. The fact that many necropolises are situated next to medieval places of worship suggests that these monuments are Orthodox in origin.

The medieval church in Srđevići was constructed in the 14<sup>th</sup> century by the Srđevići princes and diplomats. These Gacko aristocrats played a significant role in medieval feudal society. The frescoes adorning the church walls serve as a testament to the former importance of this location. A 14<sup>th</sup>-century Menaion, written on parchment for use in the Srđevići church, can be found at the Žitomislić Monastery.

The Church of St. Dimitrije in Domrke is one of the oldest churches in Gacko. Folklore suggests that it dates back to the 13<sup>th</sup> century. Archaeological research indicates that the church was rebuilt in 1883.

The Monastery of St. Knez Lazar in Pridvorica. The church was constructed in 1936 and underwent restoration in 2006. On Christmas Day 1942, approximately 180 villagers, including women, children and elderly individuals were killed by Muslim Ustasha forces. The remains of these martyrs were initially buried on 17 April 1942 in two tombs next to the temple and later transferred to the temple crypt on 29 November 2006.

In terms of cultural and historical heritage, BiH Commission to Preserve National Monuments declared four monuments as national monuments: The Church of St. Nicholas in Srđevići, mosques in Kazanci

and Pridvorica, the old town of Ključ and Ključka mosque. Before 1992, several natural assets in the municipality of Gacko were protected by the Republic Institute for the Protection of Cultural, Historical and Natural Heritage of SR BiH, as follows:

- a part of Sutjeska National Park (covering 1950.88 hectares);
- Lake Klinje (a geomorphological monument of nature);
- the source of Pridvorica with its river to its mouth at the Neretva (a geomorphological monument of nature);
- the source of Gornji Krupac and its river to its mouth at the Neretva below Dumoš mountain (a geomorphological monument of nature);
- Čeljina cave above the source of Pridvorica (a geomorphological monument of nature);
- Mušnica river (a geomorphological monument of nature).

At that time, several gorges on the Neretva River were also protected as natural rarities and beauties of BiH. These included Čeljina, Gradina, Mrka Stijena, Krstac, Hotovska Brda and Veletin. The Čeljina and Krstac gorges are located in the municipality of Gacko. In 2013, the RS Government protected the Đatlo Cave as a natural monument at the initiative of the RS Institute for Protection of Cultural, Historical and Natural Heritage. The cave is located in Bileća municipality while its protection zone extends to Gacko municipality (Cernica settlement).

The RS Spatial Plan for the period until 2025 has been amended to include the expansion of Sutjeska National Park (Volujak and Lebršnik) and the creation of nature parks (category V): Lake Klinje – Mušnica and Bjelasnica. Additionally, habitat management areas (category IV) are planned for the upper course of the Neretva River and part of Gatačko polje. Also, in Gacko municipality, a total of 24 sites are planned to be designated as geomorphological monuments of nature, including some major caves such as Dabojeva Cave, Somina, Dobreljska Cave (Gareva Cave), Đatla Cave, Lebršnik, Golubinka caves, Vučevo, Orlovića Cave, Zagradci, Pećina (estavelle), Lukovice, Dobrelji Cave, Vrelska Cave, Crvena greda, Vilina Cave, Ključ and Zvokotuša Cave.

In the municipality of Gacko, several areas have been proposed as part of the EMERALD ecological network of areas of special conservation interest under the Bern Convention. These include the entire Gatačko Veliko polje (8527 hectares), part of the upper course of the Neretva River and the Maglić-Volujak-Zelengora complex. By the end of the planning period, 20,213.66 hectares or 27.75 percent of Gacko municipality will have been designated as protected natural assets. Protected cultural landscapes integrate cultural heritage with natural environments. The creation of a protected cultural landscape “Pridvorica” (covering Pridvorica and Igri settlements) with an area of 51.07 hectares is planned in Gacko municipality. On the list of selected NATURA 2000 areas on the territory of RS, there are also the following areas: Baba-Bjelasnica type A (101.02 km<sup>2</sup>), Gatačko polje type C (39.94 km<sup>2</sup>), Lebršnik type B (27.63 km<sup>2</sup>) and Maglić-Volujak-Zelengora type C (470.72 km<sup>2</sup>)<sup>14</sup>.

The document “Valorization of Cultural, Historical and Natural Heritage in Gacko Municipality” defines protection zones for architectural heritage in Gacko municipality. The first protection zone was established for the area around the church in Srđevići and Sava Vladislavić Square in the town of Gacko. No new construction is allowed in this zone, except for restoration of valorized valuable buildings to their authentic appearance, in accordance with archival, photo and technical documentation and detailed projects that meet protection requirements. The second protection zone includes parts of Nemanjina

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<sup>14</sup> 2022-2028 GACKO MUNICIPALITY DEVELOPMENT STRATEGY

Street, Hercega Stefana Street and Vojvode Bogdana Zimonjića Street in the town of Gacko, as well as areas around sacred buildings with architectural value. In this zone, restoration of valuable buildings is allowed while respecting their authentic appearance, architectural structure, disposition and materials. Revitalization is also permitted. The third protection zone encompasses all other spaces. In this zone, restoration and revitalization of valuable buildings are allowed along with certain interventions to adapt them to their environment. New construction is permitted with more freedom but must respect the basic characteristics of surrounding areas and vistas and ensure integrity with other zones. Protection measures are required for interventions in both the second and third zones.

The following monuments in the municipality should be placed under official protection at the levels of RS and BiH:

- Stećak necropolis with the Church of St. Knez Lazar Kosovski – Pridvorica;
- Church of the Descent of the Holy Spirit – Gacko,
- Church of St. Dimitrije – Domrke,
- Church of St. Nikola – Dobrelji,
- Holy Trinity Church – Jugovići,
- Church of St. Nikola – Gračanica,
- Church of St. Nikolaj – Miholjače,
- Church of St. prophet Elijah – Izgori,
- Holy Trinity Church – Gareva,
- Church of St. Vasilije Ostroški – Avtovac,
- Klinje arch dam.

There are a number of registered accommodation providers in rural areas of Gacko municipality:

- Holiday house “Bodežišta” in the village of Bodežišta near Gacko, with four beds.
- Holiday house “Imanje bajka” in the village of Cernica near Gacko, with three beds.
- Holiday house “Vikendica na jezeru” by Lake Vrba/Desivoje near Gacko, with six beds.
- Holiday house “Oaza mira” by Lake Vrba/Desivoje near Gacko, with four beds.
- Holiday house “Na krovu Hercegovine” in the village of Bodežišta near Gacko, with five beds.
- Rural household “Kamp Volujak”, located seven kilometres from the main road Gacko-Foča. It is situated in a picturesque setting in the village of Izgori. It has 14 beds in bungalows.
- Mountain camp “Izgori”, located four kilometres from the main road Gacko-Foča. It is situated in a picturesque setting in the village of Izgori, at 1180 metres above sea level. It has 15 beds in bungalows. The camp has a restaurant with a terrace serving traditional cuisine.
- Apartments “Sastavci”, on the main road Gacko-Foča, 23 kilometres from Gacko and eight kilometres from Sutjeska National Park. It has 13 beds. It has a restaurant serving traditional cuisine from the region.
- Mountain lodge “Volujak”, located 26 kilometres from Gacko and eight kilometres from the Čemerno pass. It is nestled between three mountain massifs (Lebršnik, Volujak and Kuk) in the Papin Do region, and with its 30 beds, it is an ideal place to stay for mountaineers, speleologists and other nature enthusiasts. It is run by the Volujak mountaineering association from Gacko.

Adequate infrastructure is needed for the development of all types of tourism, including rural tourism. In tourism, we distinguish physical infrastructure, tourist infrastructure and institutional or support infrastructure.

From the overview in table 35, we see that tourist arrivals and overnight stays were recorded only for 2018 and 2019, while the official statistics do not record data for previous years, which include the beginning and end of the COVID-19 pandemic. Even in these two years recorded by official statistics, there is a downward trend in the number of arrivals and overnight stays of domestic tourists, while the opposite trend is present in the case of foreign tourists. Unfortunately, the COVID-19 pandemic stopped these positive developments.

**Table 35: Tourist arrivals and overnight stays, 2016-2020**

Year	Arrivals			Overnight stays		
	total	domestic tourists	foreign tourists	total	domestic tourists	foreign tourists
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	1179	693	486	5607	4158	1449
2019	1069	574	495	6343	3647	2696
2020	-	-	-	-	-	-

Source: RS Institute of Statistics

The development of rural tourism and agrotourism would bring numerous benefits to farms and rural households in Gacko municipality. Such tourism would improve the sale of agricultural products and increase their value, including both farm-produced or processed agricultural products (such as honey, kaymak/skorup, cheese, prosciutto, etc.) and non-agricultural products (such as handicrafts). It would also increase the total income of farms and provide stability in the event of natural disasters that could threaten agricultural income. Additionally, it would create employment for available workforce (women and younger household members) and utilize unused capacities (buildings, land, etc.).

#### **2.1.10.2. Forestry**

The forest sector has very low productivity due to outdated technology and equipment, resulting in a significant percentage of waste in wood processing. The “Gacko Forest Service” manages forests and forest land in the municipality, and operates under the “Botin” Nevesinje Forest Management Enterprise. The total area of forests and forest land (by broader forest categories) is 24,560.34 hectares, of which 30.73 percent are high forests with natural regeneration, 1.03 percent coniferous forest cultures, 40.60 percent coppice forests, 15.60 percent bare land suitable for use and 12.04 percent bare land unsuitable for use. According to the ownership structure, the total area of the forestry area is divided into 57 percent of the forest area in public ownership and 43 percent in private ownership.

The estimated total timber stock is 4,234,894 m<sup>3</sup>, with high forests with natural regeneration accounting for 58.57 percent, forest cultures for 2.77 percent and coppice forests for 38.66 percent. The permitted annual wood cutting volume in Gacko municipality is 41,244 m<sup>3</sup> of total wood mass (5,959 m<sup>3</sup> conifers and 35,285 m<sup>3</sup> broad-leaved trees). Forestry silviculture works include those relating to simple reproduction (land preparation for natural rejuvenation and tending of natural saplings in forests with natural regeneration, afforestation with seedlings in high forests and replenishment and tending of seedlings) and those relating to extended forest reproduction (afforestation of bare land, replenishment of forest cultures and tending of seedlings after planting). An average of 27,630 seedlings per year are used to renew the growing stock. In 2019 alone, a total of 66,000 seedlings were planted on an area of 28.5 hectares, with 58,000 seedlings (87.88 percent) being used to afforest bare lands covering an area of 23.2 hectares.

**Table 36. Production, sale and felling of wood products in Gacko municipality**

	2016	2017	2018	2019	2020
<b>Output, m<sup>3</sup></b>					
Logs	8331.98	6001.63	4977.28	6962.25	5989.95
Mine timber	210,41	92.32	188.53	691.52	339.89
Cord wood (cellulose)	522.28	123.24	313.91	530.35	275.76
Firewood	8957.09	11116.67	12795.61	13055,1	12554.95
<b>In total</b>	<b>18021.76</b>	<b>17333.86</b>	<b>18275.33</b>	<b>21239.22</b>	<b>19160.55</b>
<b>Sale, m<sup>3</sup></b>					
Logs	8239.51	6027.54	4942.03	6951.81	5465.31
Mine timber	191.64	135.79	155.36	692.33	270.22
Cord wood (pulpwood)	491.62	222.65	307.74	470.89	209.54
Firewood	9087.85	11223	12789.01	12887.59	11584.34
<b>In total</b>	<b>18010.62</b>	<b>17608.98</b>	<b>18194.14</b>	<b>21002.62</b>	<b>17529.41</b>
<b>Felling, m<sup>3</sup></b>					
Logs	8331.98	6001.63	4977.28	6962.25	5989.95
Mine timber	210,41	92.32	188.53	691.52	339.89
Cord wood (pulpwood)	522.28	123.24	313.91	530.35	275.76
Firewood	8957.09	11116.67	12795.61	13055,1	12554.95
<b>In total</b>	<b>18021.76</b>	<b>17333.86</b>	<b>18275.33</b>	<b>21239.22</b>	<b>19160.55</b>

Source: Municipality of Gacko and public enterprise "RS Forests"

The "Gacko Forest Service" produces technical wood, firewood and pulpwood. Technical wood (logs) is primarily sold to domestic processors in RS municipalities such as Nevesinje, Gacko, Foča, Istočno Sarajevo, Čajniče, Bijeljina and Dobo. Firewood is marketed to both industrial processors and local residents. In 2019, the enterprise experienced no significant issues with the marketing of its forest wood products. The overall output of forest wood products was 21,158 m<sup>3</sup>, with logs accounting for 32.85 percent, coniferous mine timber for 3.20 percent, pulpwood for 1.50 percent and firewood for 62.45 percent. As of 31 December 2019, forest wood product stocks totalled 397.50 m<sup>3</sup>. The financial performance indicators for the "Gacko Forest Service" in the previous year (excluding transitional stocks of forest wood products) showed revenues exceeding BAM 1.7 million and expenditures slightly above BAM 1.6 million with a positive difference of approximately BAM 98,000.

In 2019, the "Gacko Forest Service" employed 25 people. The following are the problems faced by this economic sector in the previous years:

- natural disasters, particularly the cyclonic wind that damaged the region of Košuta and Debeljac last year,
- illegal logging in some parts of the municipality,
- an increase in the number of forest fires,
- scarcity of forestry professionals in cultivation, protection and production jobs.

**Table 36: Forest land areas by category in Gacko municipality**

No.	Forest category	Area, hectares	
		State-owned forest	Private forest
1.	High forests with natural regeneration	7,449,72	895.27
2.	High degraded forests	-	-
3.	Forest cultures	252.30	-
4.	Coppice forests	9,971.70	2,132.99

5.	Areas suitable for afforestation and use	3,817.44	11.02
6.	Usurped state-owned forest	519.92	-
7.	Areas unsuitable for afforestation and use	2,956.37	9.52
8.	Mine-contaminated areas	-	-
10.	In total	25,027.45	3,048.80

Source: Forest management plan for the Pale forest management area

Between 2016 and 2020, a total of 61 hectares of forested land and 30 hectares of non-forested land were reforested as part of afforestation efforts. Conifers made up 99 percent of the trees planted during this period.

*Table 37: Average wood mass, 2016-2020*

Year	2016	2017	2018	2019	2020
Broad-leaved trees	26,107	31,580	29,378	30,186	31,245
Conifers	4,302	1,479	2,554	5,283	2,662
TOTAL (m <sup>3</sup> )	30,409	33,059	31,932	35,469	33,907

Source: Forest management plan for the Pale forest management area

Illegal logging was documented on a total of 2,191 tree stumps – with theft on 2,019 tree stumps and without theft on 172 tree stumps. In the last three years, illegal logging with theft has resulted in the loss of 868.69 m<sup>3</sup> of wood mass, while illegal logging without theft (confiscation) has resulted in the loss of 74.20 m<sup>3</sup>. According to the forest enterprise’s report, to protect forests from human interference and illegal logging, it has implemented a ranger service in collaboration with law enforcement authorities and courts. In the past three years, this effort has led to the filing of 14 criminal and 23 misdemeanour complaints.

Other measures to protect forests include preventing plant diseases through monitoring and timely removal of damage. Insect protection measures involve installing traps on a regular basis to monitor and control bark beetle populations in coniferous forests. According to the forest enterprise’s report, protection of forests from wild game typically includes implementation of preventive measures such as constructing feeders and salt-licks in areas where wild game congregates and causes damage.

The “Gacko” hunting ground, located in the municipality of Gacko, spans a total area of 67,167 hectares. Of this area, 64,455 hectares are designated for hunting while 2,713 hectares are non-hunting areas. In terms of structure, the hunting ground is made up of arable fields, meadows and pastures, gardens, orchards and vineyards, forests and thickets and forest land, barrens and karst and other areas. The hunting ground is both mountainous in terms of elevation and commercial in terms of purpose. It accommodates various species including roe deer (464), bear (31), chamois (16), wild boar (318), hare (520) and fox (500). Gacko municipality offers numerous opportunities for hunting and fishing tourism development. The abundance of both big game (bear, roe deer, chamois, wild boar, grouse, wolf, fox, etc.) and small game (quail, duck, snipe, partridge, rabbit, etc.) provide a solid foundation for the development of hunting tourism. The hunting ground where these game species can be found covers an area of 66,394 hectares with an altitude range from 821 to 2,336 metres, which positively impacts game diversity and reproduction. Angling tourism also has great potential with numerous rivers and lakes available for organized angling trips where river and rainbow trout can be caught. The hunting ground is managed by the “Vranjača” hunters’ association.

Non-wood forest products represent an additional resource as well as an economic potential. According to the forest enterprise's report, there is an abundance of medicinal herbs and aromatic plants such as raspberries, blackberries, ramsons, blueberry, St. John's wort, yarrow and strawberries. There is also an abundance of edible mushroom species, such as bolete, morel and chanterelle. Given the financial value of these secondary forest products, the Public Forestry Enterprise developed the Rules on the Conditions for Use and the Method of Collection of Other Forest Products, which have been in effect since 2020, with the aim of ensuring biological sustainability and improving the potential of these forest products.

### 2.1.11. Rural economy and quality of life

Poverty is unequally distributed across rural and urban areas in RS, and it remains a significant problem for rural communities. According to the RS Institute of Statistics, 17 percent of the rural population live in poverty, compared to only 9 percent of the urban population<sup>15</sup>. Table 39 below shows that poverty is pronounced in RS, with 14 percent of households and 13 percent of population living in poverty in 2015. This is supported by key poverty indicators such as the S80/S20 ratio, which stands at 4.3.

*Table 39: Key indicators of relative poverty in RS (2011 and 2015)<sup>16</sup>*

Description	2011	2015
<b>Relative poverty line (BAM)</b>	<b>381.09</b>	<b>362.34</b>
Poor households	53,234	49,805
Total households	359,567	359,567
Poor individuals	152,909	126,043
Total individuals	1,060,290	985,854
Poverty rate		
Poor households	14.8	13.9
Poor individuals	14.4	12.8
Poverty gap (%)		
Households	23.0	22.1
S80/S20	4.4	4.3

Source: Household Budget Surveys in RS, 2015 and 2011, Statistical bulletins, 2018 and 2013

Since there is no measurement of living circumstances at lower administrative levels in BiH, such as municipalities, for the purposes of this document we will use data from the Household Budget Survey of the RS Institute of Statistics, which offers relevant information for rural and urban areas in RS. According to the 2015 Household Budget survey, the average monthly family expenditure in rural areas of RS was BAM 1,154, of which 34.8 percent was spent on food and beverages and the rest on other non-food products/services. The total monthly expenditure in urban areas is higher, totalling BAM 1,427 (see Table 38).

<sup>15</sup> RS Institute of Statistics. (2017). Household Budget Survey – Bulletin. Available at: [https://www.rzs.rs.ba/static/uploads/ankete/potrosnja\\_domacinstava/Bilten\\_Anketa\\_O\\_Potrosnji\\_Domacinstava\\_2018\\_WEB.pdf](https://www.rzs.rs.ba/static/uploads/ankete/potrosnja_domacinstava/Bilten_Anketa_O_Potrosnji_Domacinstava_2018_WEB.pdf)

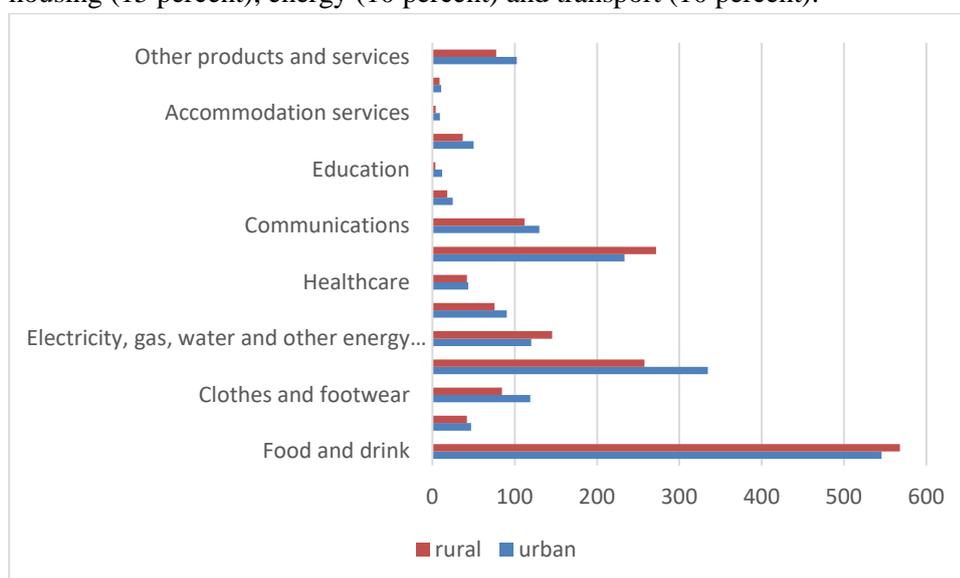
<sup>16</sup> The two metrics that are most frequently used in public documents are the S80/S20 ratio and the Gini coefficient. The S80/S20 ratio compares the total equivalent expenditure of the top quintile to that spent by the lowest quintile. The higher the ratio, the greater the inequalities.

**Table 38: Average monthly expenditure by type of expenditure and type of settlement in RS, in BAM, 2015**

Description	Type of settlement		
	Urban	Rural	In total
Food and beverages	425.69	400.93	410.55
Non-food	1,001.14	752.80	849.35
In total	1,426.83	1,153.73	1,259.91
	Percentage % (Total = 100)		
Food and beverages	29.8	34.8	32.6
Non-food	70.2	65.2	67.4
In total	100.00	100.00	100.0

Source: Household Budget Survey in RS, Statistical Bulletin, Banja Luka, 2018

A third of rural household expenditure is spent on food and beverages. Other important expenses include housing (15 percent), energy (10 percent) and transport (10 percent).



Source: Household consumption survey, 2021/2022., Institute of Statistics

**Graph 18: Household budget distribution in RS**

The RS Social Inclusion Strategy envisages several groups of measures to combat poverty by 2027, of which only the first group will be discussed in this document.

The first group of measures concerns the creation of a stimulating environment for employment, with a special emphasis on the employment of socially vulnerable groups, including:

- Promoting economic recovery and employment measures;
- Education aligned with labour market demand;
- Employment of hard-to-employ categories of the population;
- Encouraging employment and self-employment of persons from socially vulnerable groups;
- Activation and employment of marginalized groups in emergencies<sup>17</sup>

<sup>17</sup> RS Social Inclusion Strategy for 2021-2027, Banja Luka, November 2020

### 2.1.11.1. Social and physical infrastructure

#### Physical infrastructure

According to field survey data, physical infrastructure in Gacko is generally available to all households, with the exception of sewage and organized waste collection and disposal, which are least prevalent in rural areas. Also, availability of public lighting was mentioned only by 17 percent of surveyed households. However, what is concerning is the poor quality of physical infrastructure, particularly the water supply network and road infrastructure, with telecommunication signal also being cited as problematic.

**Table 40: Availability of physical infrastructure in rural areas at household level in Gacko municipality**

Type of infrastructure	availability	satisfaction with the service
(a) Water supply	70%	33%
(b) Sewage	20%	17%
(c) Asphalt roads	67%	47%
(d) Electricity	87%	60%
(e) Bus, public transport	73%	53%
(f) Landline telephony	70%	53%
(g) Mobile telephony	87%	67%
(h) TV signal	83%	57%
(i) Internet access	73%	47%
(j) Waste collection and disposal	10%	7%
(k) Public lighting	17%	10%

Source: author's own survey

#### Road infrastructure

In Gacko municipality, only road traffic is available. The nearest railway station is located 60 kilometres away in Nikšić, the nearest airport is about 90 kilometres away in Mostar and the nearest seaport is 106 kilometres away in Dubrovnik. Two trunk roads pass through Gacko: M-20 and M-6. The M-20 trunk road serves as the Dubrovnik tourist route, which leads from the Republic of Serbia (Belgrade) to the Adriatic Sea, passing through Višegrad, the Sutjeska river valley, Gacko, Bileća and Trebinje. The M-6 trunk road Mostar-Nevesinje-Gacko connects the municipality to the Neretva valley and Western Herzegovina. With the exception of local roads, whose quality can be considered relatively acceptable, the quality of other roads is inadequate. The state of the trunk roads that pass through Gacko municipality, which are the municipality's primary connection to the rest of the region, is particularly concerning.

**Table 41: Road network in the municipality**

Description	Length (km)	%	State of repair (good/poor)
Uncategorized	28.5	6.03	Poor
Local	321.95	68.11	Good
Regional	52.05	11.01	Poor
Trunk	70.2	14.85	Poor
In total	<b>472.7</b>	<b>100.00</b>	-

Source: Municipality of Gacko, Departments for economy, finance and social activities

In addition to these main town roads, the majority of other roads in the primary road network connect directly to the trunk roads. These roads are mainly characterized by insufficient width, construction right

next to the sidewalk, short distance between intersections, intersections with obstructed traffic visibility, poorly executed levelling, poor pavement construction and **lack of areas for pedestrians** and stationary vehicles. In recent years, significant funds have been invested in the construction of rural infrastructure in the municipality of Gacko. Asphalt roads exist in more than 50 percent of villages. However, many villages are located far from main roads and are sparsely populated, with scattered households. Constructing asphalt roads in these remote villages requires substantial funds, but they are often almost deserted due to population migration to urban areas and difficult living conditions.

Public transport in the municipality is provided by buses. In the pre-war period, due to commuters who worked in the local mine and the thermal power plant, local public transport was much more prevalent than long-distance transport. Due to defunct economic capacities and reduced demand for movement and travel (poor standard of living), public transport today is not extensive, but it is planned to be increased over the period covered by the plan. This requires that more attention should be paid to this type of transport. Since 2019, the municipality of Gacko has been subsidizing local public transport with BAM 90,000 annually. The bus station is located in the town centre, but it lacks enough platforms. It is operational and privately owned, but the building and the bus terminal are inadequate. This necessitates the construction of a new bus station in a new location, with sufficient capacity to meet the needs of a modern public transport system<sup>18</sup>. Bus lines in the rural area are running between following locations: Avtovac - Samobor - Gareva-Dobrelja - New and Old Dulići - Brljevo - Kazanci - Vratkovići. Gračanica - Rudo Polje - Srđevići (Medanići) - Kravarevo - Nadanići - Lukovice - Šume - Gradina - Fojnica (domrke) - Hercegljija. Ulinje – Vrba – Čemerno – Sastavci. Vrbica - Avtovac - Lipnik - Danići - Stepen. Miholjace-Jasenik.

### *Energy infrastructure*

The municipality of Gacko obtains electricity from the electrical energy system of RS, via ZP “Elektro-Hercegovina” a.d. Trebinje, RJ Gacko. In close proximity to the town of Gacko is a major electrical and energy facility, the Gacko Thermal Power Plant, while the southern part of the town is bordered by mine’s exploitation field. The transmission line has a capacity of 16 MVA, indicating that there are substantial reserves relative to the substation’s capacity. The distribution network consists of 10 kV overhead lines leading to Fojnica and Vrbica, as well as underground 10 kV cables running to the town and the industrial zone. The major disadvantage of the 10 kV distribution network is that it is typically fed radially, without the option of double-sided power delivery, which diminishes supply safety. The quality of electricity supply can be rated as satisfactory, particularly in the urban part of the municipality, although in certain rural areas the electricity network needs to be reconstructed.

**Table 42: Main indicators regarding electricity supply of the municipality of Gacko**

Description	2016	2017	2018	2019	2020
<b>Length of electrical network, km</b>	<b>379</b>	<b>387</b>	<b>395</b>	<b>398</b>	<b>400</b>
At high voltage	167	174	176	178	178
At low voltage	212	213	219	220	222
<b>Length of the reconstructed network, km</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>39</b>	<b>39</b>
At high voltage	10	10	10	17	17
At low voltage	19	19	19	22	22
<b>Length of the constructed network, km</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>0</b>
At high voltage	5	2	1	0	0

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At low voltage	1	7	1	2	0
<b>Number of users</b>					
At high voltage	4	4	3	3	4
At low voltage	3,753	3,765	3,785	3,795	3,808
<i>Households</i>	<i>3,427</i>	<i>3,437</i>	<i>3,457</i>	<i>3,468</i>	<i>3,481</i>
<i>Public lighting</i>	<i>13</i>	<i>15</i>	<i>16</i>	<i>17</i>	<i>17</i>
<i>Other consumption</i>	<i>313</i>	<i>310</i>	<i>312</i>	<i>310</i>	<i>310</i>
<b>In total</b>	<b>7510</b>	<b>7531</b>	<b>7573</b>	<b>7593</b>	<b>7620</b>

Source: Municipality of Gacko, Departments for economy, finance and social activities

Generally, all rural families have access to electricity. However, the network is in a poor state of repair, therefore many villages are left without electricity during the winter owing to collapsing poles caused by heavy snowfall and storms. This situation does not repeat itself every year because the volume of precipitation during the winter period is decreasing due to climate change.

Approximately 63 percent of the population is covered by the public lighting system, and the number of lighting fixtures changed between 2016 and 2020. Three rural areas have public lighting: Fojnica, Stepen and Avtovac. There is a significant need to increase the energy efficiency of public lighting in order to reduce costs for maintenance and energy consumption.

#### *Telecommunication infrastructure*

It is estimated that more than 95 percent of the population is covered by a mobile network, with the remaining 5 percent relating mostly to uninhabited areas of the municipality. Contemporary business is increasingly reliant on electronic communications and information technology services, and this should be taken into account during the development planning of the municipality of Gacko. The introduction of new information technologies and services that demand high access speeds is impossible without broadband Internet, which is delivered through optical cable networks and wirelessly. We should certainly strive to increase coverage, signal quality and speed (+100 Mbit/s). In the municipality of Gacko, landline telephone service is provided by MTEL which is estimated to serve around 5000 households. The entire area of the municipality is covered by mobile network (MTEL, BH TELEKOM, HT ERONET), but in the signal quality varies. The entire territory of the municipality of Gacko is covered by TV signal via repeaters and telecom operators.

#### *Water supply*

Water supply and sewerage in the municipality of Gacko is managed by the Public Utility Company "Vodovod" a.d. Gacko. It is estimated that 337 households (data for 2023) in the rural area currently do not have access to the water network, while around 50 households in the municipality use water from locally run water supply networks. The total number of connections in the household category is 1620, accounting for around 70 percent of all households connected to the water supply network. The rest of the 30 percent of the total number of households in Gacko are not connected to the network and must provide water out of private sources.

**Table 43. Basic characteristics of the water supply system in the municipality of Gacko**

<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Investments in the water supply infrastructure	0	0	957,140	1,701	225,000
Investments in maintenance of the water supply infrastructure	3,900	4,980	5,900	5,100	20,000
Number of users on the public water supply system	1,796	1,825	1,840	1,831	1,861

Water losses, %	-	-	-	-	Approx. 70%
Number of households in municipality without connection to the water supply	298	290	290	290	280
Collection rate of water bills, %	79.68	74.17	83.19	83.24	80.13

Source: Municipality of Gacko, Departments for economy, finance and social activities

Water supply is a challenge because of shortages that occur every year during the summer months. Communities and town zones at high elevations are especially vulnerable during this time.

Twenty-one rural communities (33 percent) are connected to the town’s water supply network. Agricultural households in villages at lower altitudes are connected to the water supply network. But, due to low rainfall throughout the summer period, even these rural households are frequently left without water, posing a challenge for those who live in the countryside. However, most agricultural households constructed rainwater cisterns as a backup water supply source. Drinking water supply is generally a concern, both in the town and in the villages, and the Municipality has made the development of a new water supply network for additional water supply a priority.

The total length of the sewage network system is approximately 5 kilometres. As of 2020, the Public Utility Enterprise “Vodovod” had 998 connections to its sewage network. The existing sewage system is a combined type, using the same collector for sewage and surface runoff. The sewage system serves only a portion of Gacko’s urban area, specifically only about 4,000-5,000 of the population in the urban zone. Septic tanks are used by up to two-thirds of the residents in the municipality to dispose of faecal waste water. As a result, the majority of used water is disposed of in individual septic tanks or directly discharged into canals of intermittent streams and ditches. Septic tanks are typically overloaded, constructed without design documentation, water permeable, and thus inadequate, as well as a potential source of infection.

The current tariffs, set by municipalities and water utility enterprises, are insufficient to ensure proper operation and maintenance. Water management fees do not generate sufficient revenue for more substantial investments. This has resulted in investments that are significantly lower than optimal and intended, low investment efficiency, the absence of a development function, poor service quality and, ultimately, reluctance to pay for water services<sup>19</sup>.

### *Heating*

The municipality of Gacko does not have a district heating system. The majority of residential buildings are heated with firewood. Recently, some residential buildings have switched to pellet heating. It is estimated that only 10 percent of households have a high-quality heating system, whereas 2,570 households are estimated to be without a high-quality heating system. As a result, the extremely poor air quality throughout the winter months is a major concern. Before the war, there were plans to use hot water generated by the Gacko Thermal Power Plant to heat some parts of the town (e.g. the Vrta neighbourhood), but the project never materialized.

### *Social infrastructure*

When it comes to the availability of public services and institutions in the rural area, research on a sample of rural households revealed a low level of availability of almost all public services in the

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<sup>19</sup> 2022-2028 GACKO MUNICIPALITY DEVELOPMENT STRATEGY

municipality of Gacko. The least available services are kindergartens and sport facilities, while the most available are primary and secondary schools, grocery stores and catering establishments.

**Table 44: Availability of public institutions and services in rural areas**

Type of public institution	availability	satisfaction with the service
(a) Outpatient clinic (Primary Health Care Centre)	17%	13%
(b) Grocery store	40%	30%
(c) Primary school (4 grades)	47%	30%
(d) Primary school (8 grades)	20%	10%
(e) Pharmacy	17%	17%
(f) Agricultural pharmacy (shop)	10%	10%
(g) Post	23%	20%
(h) Bank	13%	17%
(i) Cooperative (association of agricultural producers)	13%	13%
(j) Veterinary service	20%	23%
(k) Community centre (cinema)	10%	13%
(l) Sports hall (playground)	3%	3%
(m) Kindergarten (preschool)	7%	10%
(n) Catering establishments	13%	17%
(o) Bakery	17%	17%
(p) Butcher's shop	7%	7%
(r) Servicing of electrical appliances	0%	3%
(s) Car mechanic	0%	3%
(t) Other	0%	0%

Source: author's own survey

### *Preschool education*

The municipality of Gacko has one preschool, namely the public preschool institution “Kindergarten” Gacko. The indoor area of the kindergarten building has 520 m<sup>2</sup> of usable space (five functional classrooms). The outdoor area (courtyard and playground) is fenced off, with slides and other props appropriate for the children's ages installed to meet the standards for working with children outdoors. In school year 2019/2020, a maximum of 225 children were enrolled in the kindergarten based on a public call, while in 2020/2021 a total of 201 children were enrolled. In school year 2021/2022, a total of 225 children were registered, but the lack of capacity continues to be a problem. In 2020, 29 children were included in the “Preparation before Starting School” programme. The programme is planned to last three months. In 2021, 35 children were enrolled in the programme, but it was not implemented due to the COVID-19 pandemic. The programme is run and financed by the relevant ministry. There are issues with lack of capacity, lack of suitable space for children with special needs, lack of computer equipment, completion of the building's exterior, and interior renovations, including electrical and plumbing works. In 2020, the Municipal Administration allocated a total of BAM 613,860 for the financing of preschool education, with an annual average of around BAM 600,000 for the last five years. The “Kindergarten” employees 33 people, 14 of whom have a university degree and four have an associate degree.

### *Primary and secondary education*

Primary school education and upbringing in Gacko, in the earlier period, covered the entire area of the municipality of Gacko with a school network in 2 nine-grade schools (Gacko, Avtovac) and 5 five-grade

schools (Fojnica, Nadanići, Dobrelja, Dulići and Brljevo). All other satellite schools have ceased operations because they were located in hilly and mountainous areas affected by emigration.

**Table 45. Number of students and teachers in primary schools in the municipality**

School year	Primary schools				
	number of schools	students			teaching staff
		in total	grades I-V	grades VI-IX	
2015/2016	7	825	424	401	61
2016/2017	7	800	430	370	60
2017/2018	7	784	416	368	60
2018/2019	7	759	411	348	60
2019/2020	7	724	412	312	62

Source: RS Institute of Statistics

What remains a major concern is the consistent downward trend in primary school enrolment in the last five years, with decrease amounting to a staggering 9.7 percent. This can be attributed to the emigration of young married couples who are unable to find work and provide for their families, as well as the general problem of declining birth rates in both RS and BiH. Currently, about 725 students attend primary education. Schools employ a total of 92 workers, 62 of whom are teachers.

A satellite branch of the “Sveti Roman Melod” music school from Nevesinje was established 11 years ago, providing instructions in the classrooms of the Secondary School “Pero Slijepčević” Gacko.

The Secondary School “Pero Slijepčević” in Gacko perpetuates the legacy of secondary education, which has changed professions and vocations over time since the Lower Real Gymnasium was founded in school year 1921/1922. In 1948, the Ministry of Education established the State Lower Real Gymnasium, which became secondary school in 1955. In 1958/1959, the school had four grades and a total of 124 students. As noted previously, Gacko had the highest percentage of university-educated people, with more than 90 holding PhDs. Regrettably, they all went to work elsewhere. Currently, 355 students are enrolled in 16 classes of the vocational school for the following vocations: mechanical technician fourth degree, welder and metal worker third degree; in economics, law and administration: economic technician and business legal technician fourth degree and business legal secretary third degree; in geology and mining: mining technician. The school’s teaching staff includes 37 licenced teachers. The work is organized in one morning shift across 21 classrooms. The school has its own gym, metal shops and a solid-fuel-powered central heating system. About half of the students are from the wider area of the municipality of Gacko, who commute to school via a well-organized transport service. Instruction is delivered on a semi-classroom basis. The classrooms for computer science, geography, mechanical engineering, physics, Serbian language and foreign language are well equipped. The school facilities are in a good state of repair, with a new roof and PVC carpentry on all doors and windows. Obsolete equipment in classrooms is replaced in accordance with the applicable plan. The Student Council and the Parents’ Council play an important direct and indirect role in resolving all school issues.

**Table 46. Number of students and teachers in secondary schools in the municipality**

School year	number of schools	Secondary schools		number of teachers
		Number of classes	students in total	
2015/2016	1	18	440	35
2016/2017	1	19	423	38

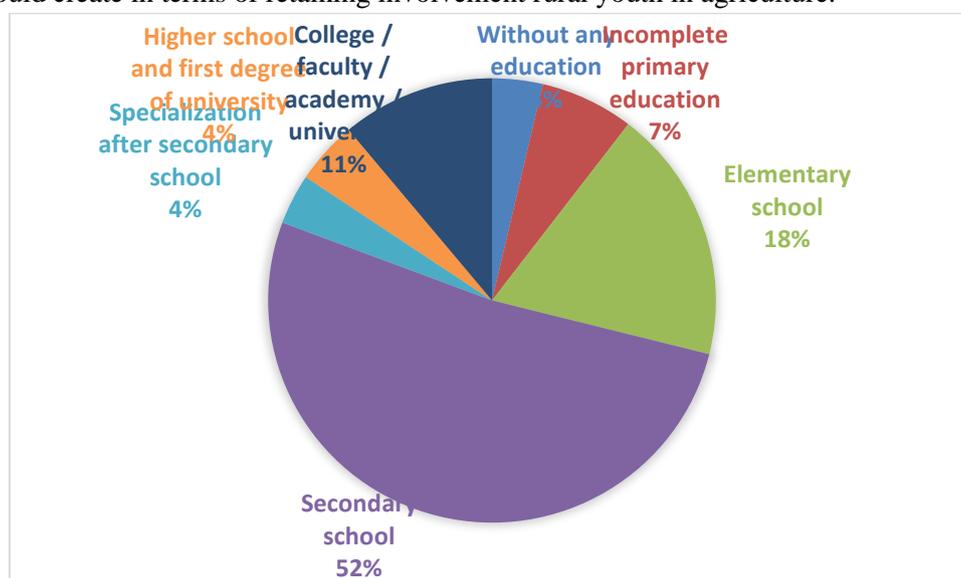
2017/2018	1	18	382	37
2018/2019	1	17	361	37
2019/2020	1	16	357	36

Source: RS Institute of Statistics

The decline in secondary school enrolment over the past five years (27 percent) is cause for concern. In the last five years the municipal administration allocated BAM 60-77 thousand for co-financing secondary education.

The municipality of Gacko has a higher share of people with higher education (11 percent) than the RS average (9 percent). Consequently, the percentage of illiterates in the municipality is lower than the RS average of 3.3 percent, and stood at 1.4 percent at the time of the population census. Additionally, the population census shows that around 40 percent of the municipality's residents are computer illiterate, which is in line with the RS average.

**There is no agricultural orientation/course** in the municipality's secondary school, despite the existing natural resources, capacities, traditional heritage, and the possible positive impact that such courses could create in terms of retaining involvement rural youth in agriculture.



Source: RS Institute of Statistics, 2013 Census

**Graph 19: Population aged 15+ by educational attainment and gender**

Examining the number of students enrolled and graduated across all profiles reveals a decline in university student numbers over time in Gacko (Table 47 and 48). The number of students enrolling in faculties of agriculture is declining even more rapidly in whole RS, owing to a fall in students' interest in agricultural careers, poor employability of agronomists and unfavourable agricultural development trends. Students who have the opportunity to inherit a family farm are more likely to choose to study agriculture in order to increase their chances of self-employment on their own farm. Updating curricula and introducing new directions/courses related to rural development, rural tourism, organic farming and similar courses that align with the economic structure of the municipality could certainly attract more students.

**Table 47: Enrolled university students from the municipality of Gacko, 2016-2020**

2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
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195	207	194	182	160
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Source: RS Institute of Statistics

**Table 48: Graduated university students from the municipality of Gacko, 2016-2020**

2016	2017	2018	2019	2020
20	21	26	21	22

Source: RS Institute of Statistics

Regrettably, it is also a typical occurrence that, after graduating from university, students who have studied elsewhere, particularly in major administrative and university centres, do not return to their place of residence. There are currently three agricultural engineers from the area of the Gacko municipality at the employment office.

In order to encourage young people to stay in Gacko or go back after their studies, measures should be implemented to generate innovative and professional employment opportunities in rural areas. In this regard, it is vital to consider the employment prospects that the formation of the Breeding Organization (in accordance with the measures for the preservation of Gatačko cattle outlined in chapter 2.1.6.3. of this document) could create for agronomists in the private sector. In addition, the availability of EU funded projects will increase in the future. To that end, well-educated personnel who know how to prepare project proposals and implement projects are required. Therefore, private extension services need to be strengthened, and models developed to assist existing and future agronomists and related professions in the municipality in expanding their knowledge and skills in this field. They will have a critical role in recruiting investments and funds for Gacko businesses and farmers.

### **Health care**

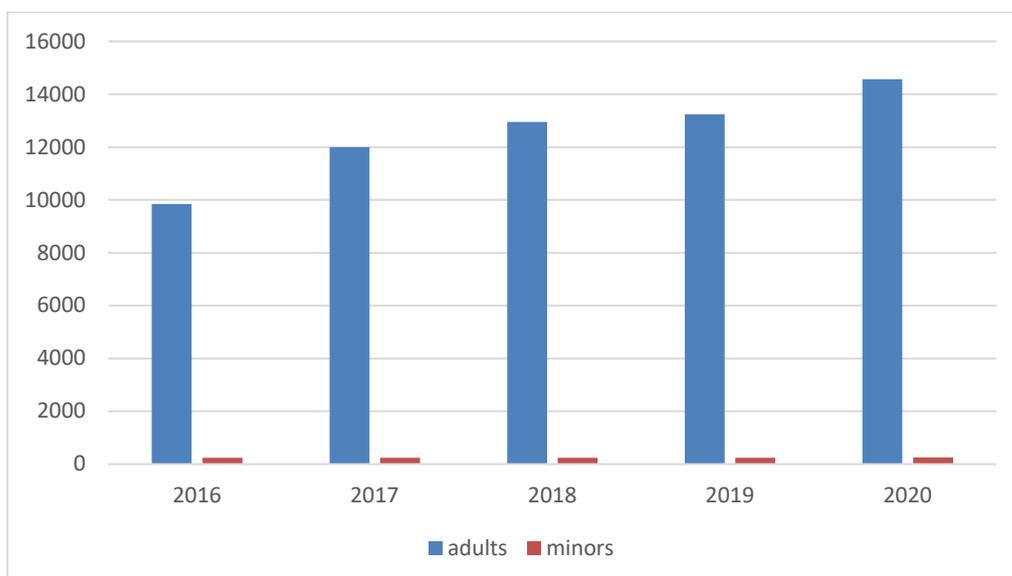
In the municipality of Gacko, health care is provided by the Public Health Facility “Primary Health Care Centre Prof. Dr. Savo Bumbić”, where primary health care is available 24 hours a day, through regular work, as well as on an on-call and standby basis. The Centre is organized in accordance with the Concept of the family medicine (Koncept porodice medicine) and has the following organizational units:

- Family medicine clinic,
- Consultative-specialist paediatric clinic,
- Consultative-specialist gynaecology clinic,
- Emergency ward,
- Dental clinic,
- CBR (community-based rehabilitation),
- Laboratory services,
- X-ray,
- Hygienic and epidemiological protection.

The Primary Health Care Centre employs 60 people, 12 of whom are doctors. With one doctor per 692 residents, the ratio between the number of health professionals and the number of residents is unfavourable.

### **Social Protection**

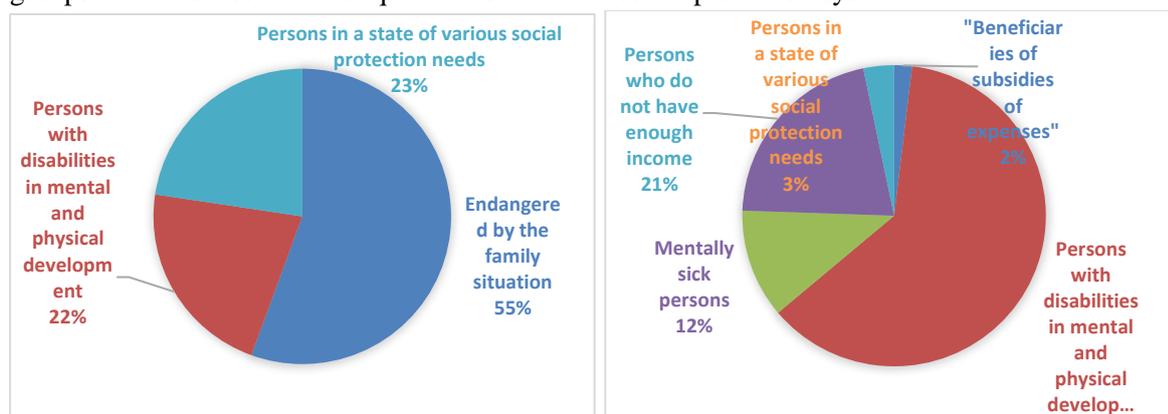
Social protection services are administered by the Gacko Municipal Administration. A significant proportion of residents are in a precarious financial situation due to a lack of basic necessities.



Source: RS Institute of Statistics

**Graph 20: Beneficiaries of social protection from the municipality of Gacko, 2016-2020**

The number of social protection beneficiaries is increasing, as shown in the graph above. The majority of socially vulnerable people are families with multiple children whose parents are unemployed, retired people or returnees to rural areas, whereas among adult beneficiaries who do not have enough subsistence. The social protection system lacks the resources to adequately care of all socially vulnerable groups. There is also a lack of qualified staff in the social protection system.



Source: RS Institute of Statistics

**Graph 21: Beneficiaries of social protection, children (a) and adults (b)**

The public institution Centre for Social Work Gacko does not perform certain tasks within its scope of responsibility (e.g. providing help and care services at home, shelter services, day care for the elderly, etc.) because the introduction of these services and rights requires a significant increase in budget funds as well as the acquisition of new material and technical means, which is not feasible in the current circumstances. This would also require hiring of additional workers – caregivers and assisted living caregivers for the elderly. However, these rights are guaranteed by law, and will have to be introduced within the next year or two. Given the number of elderly one person households in Gacko, these rights are more than essential<sup>20</sup>. According to data from the Center for Social Work and the Association of Children with Special Needs, the Association of St. Vukašin, in the area of the municipality of Gacko

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there are 20 beneficiaries in the state of social need in the rural area. Also, there are 25 people with special needs in the village.

### *Culture*

The public institution “Cultural and Sports Centre” was founded in 2000. The Centre consists of:

- Cultural Centre with a movie theatre, two changing rooms and three offices;
- Sports hall with two changing rooms and one office;
- Outdoor sports courts for tennis, futsal, basketball and volleyball;
- Gym.

The Centre’s main activities are: management of facilities and sports courts; film screenings; artistic and literary creativity; performing arts; sports activities in indoor and outdoor sports facilities; recreational activities of sports clubs and individuals, and other entertainment-related activities. The total number of employees in the Public Institution "Cultural Sports Center" Gacko is 26.).

Gacko also has a Public Library, which was founded in 1957 and has five employees. It has about 22,000 books and a reading room with 20 seats. The annual membership is around 500.

The Gacko Municipal Council issued a decision establishing the local informational media outlet Public Institution “Informative Culture Centre” Gacko – Radio Gacko on 7 December 1992. Radio Gacko broadcast on the FM frequency of 90 MHz. It seeks to provide objective information on all current issues in the municipality, including the economy, politics, education, culture and sports. Its reporters make a point of visiting the municipality’s rural areas and recording radio shows about each village and community in the municipality. Radio Gacko has 10 employees.

In the municipality of Gacko, there are several associations for the preservation of traditions. The Cultural and Artistic Association “Zelengora” was founded in 1997 and has about 300 members divided into five age groups. The association cherishes folk traditions, collects folk artefacts and maintains an extensive ethno-museum collection. They have participated in various festivals both at home and abroad.

The Association for the Preservation of Folk Songs and Dances “Sava Vladislavić” is an all-male folklore group. It was founded in January 2010 and has 150 members.

The Association of Guslars [*musicians who play the traditional single-stringed instrument known as gusle*] and Epic Poem Singers “Tešan Podrugović” was founded in late 1997. The association has an impressive track-record participating in both individual and team competitions. It has about thirty members, a third of whom are active gusle players, a third are vocalists, and a third are young gusle players from the “Tešan” gusle school.

### *Sports and recreation*

In the municipality of Gacko, there are numerous sports and recreation clubs and organizations. The Football Club “Mladost” was founded in 1970, and football has the longest and most storied tradition of any organized sport in the municipality. The club is presently competing in Republika Srpska’s Second League, group East. The club has the main and auxiliary grounds as well as technical rooms. The Women’s Volleyball Club “Gacko” (ŽOK Gacko) was founded in 1996 as the women’s selection of the Gacko Volleyball Club, and it has been operating as an independent sports organization since 2009. In its two and a half decades of existence, the Women’s Volleyball Club has grown into the

municipality's most successful and trophy-winning sports club. The Men's Volleyball Club "Gacko" (OK Gacko) was founded in 1985. The club ceased operating during the 1990s war, and activity was resumed in 1996 with two sections: men's and women's. There are also the Youth Basketball Club "Gacko" founded in 2005, the Shooting Club "Mladost" founded in 1992, the Chess Club "Mladost" founded in 1996, the Judo club "Gacko" founded in 2014, the Shooting Club for People with Disabilities "Gacko" founded in 2012, the Kickboxing Club "Tigar" founded in 2003 and the Dance Club "We Dance" founded in 2014.

The Mountaineering Association "Volujak" Gacko, founded in 2005, is critical to the development of tourism, particularly rural tourism. The association has a modern facility and bungalows at the Papin Do site at the foot of the Volujak mountain, which is ideal for sports, recreation and hiking. The association has about 150 registered members of all ages.

Association of Hunters and Anglers "Vranjača" Gacko has been successfully operating for decades and is engaged in breeding and protection of game and fish, as well as hunting and angling. The association has 100 hunters and 70 anglers.

Despite the presence of so many sports clubs and associations, the municipality of Gacko makes little investment in amateur sports and recreation. Membership fees are commonly imposed on younger age groups, particularly in sports schools. All of this contributes to a large proportion of residents having difficulty participating in sports, or enrolling their children in sporting activities. In addition, there is a glaring lack of reconstruction of existing sports and cultural facilities, provision of equipment for gyms and changing rooms in schools and the Sports Hall and enhancement of the Sports Hall's amenities and contents, as well as various support programmes for young sports talents (both financial support in the form of sports scholarships and support from their clubs, etc.).

In the municipality of Gacko, there are a significant number of sports facilities, but not enough to accommodate all of the needs of sports clubs for organizing training sessions and playing matches<sup>21</sup>.

#### ***2.1.11.2. Gender aspects of rural development***

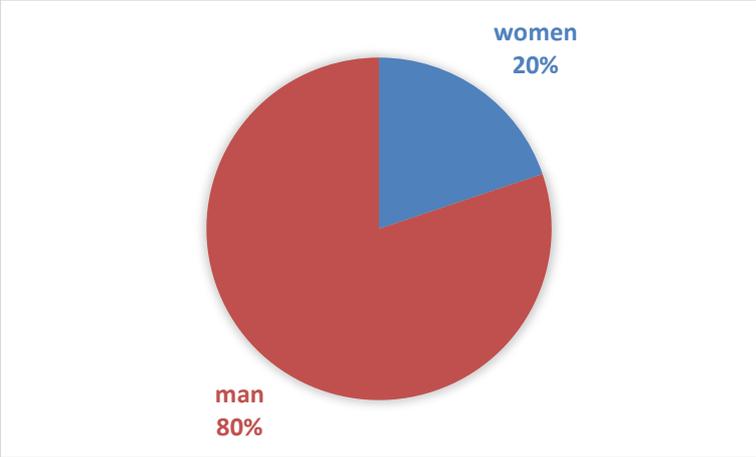
BiH is a signatory to all important international conventions on gender equality and the elimination of all forms of discrimination against women, the most important of which is the UN Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW). A special article of this convention calls for the improvement of the position of rural women and obligates BiH, as a signatory, to work towards the improvement of the socio-economic situation of rural women, their access to resources, the market and information, as well as their access to basic infrastructure and public services. The most important domestic piece of legislation that regulates, as a *lex specialis*, gender equality as a special human right is the Law on Gender Equality in BiH (Official Gazette of BiH, No. 32/10). The Law promotes gender equality and prohibits discrimination based on gender and sexual orientation, and mandates that all government institutions at all levels to develop, enact and implement programmes of measures for the Law's implementation in all areas. BiH has a Gender Action Plan (currently for the period 2018-2022) which has three strategic goals: 1) Development, implementation and monitoring of the programme of measures for advancement of gender equality within governmental institutions, as per priority areas; 2) Establishing and strengthening the system, mechanisms and instruments for the achievement of gender equality; and 3) Establishing and strengthening cooperation and partnership.

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Efforts to improve the situation of rural women in RS began in 2009, with the completion of the first Situation Analysis, which served as the basis for the development of the first Action Plan for Improving the Situation of Rural Women, as a specific measure under the RS Rural Development Programme. The Action Plan, the first of its kind in the region, is implemented by several ministries in the RS Government, including the Ministry of Agriculture, the Ministry of Health, the Ministry of Education, the Ministry of Transport and Communications, and others, which plan and implement measures adapted to the needs of rural women. The Ministry of Agriculture implemented a number of projects to encourage women’s entrepreneurship, including co-financing commercial activities of women’s associations, forming women’s cooperatives and working to establish regional networks to support rural women. Also, as part of the subsidy allocation process, special requirements (extra points) were set for female farm owners. All these measures resulted in rise in the number of women owning farms from 4 percent at the start of the period to 19 percent, with a share of 6.5 percent in the withdrawal of financial resources from the budget, which is still a modest result.

According to the Register of Agricultural Holdings, 66 farms, or 20 percent, are headed by women in the Gacko Municipality. In 2019, the share of women-headed households in agricultural budget absorption in RS reached 6.5 percent. Although this percentage has a constant growth trend, it is noticeable that women owners of farms apply for small investments and thus withdraw less total funds from the agricultural budget. The number of women owners of agricultural farms at the EU level is about 29 percent (Eurostat, 2016), so we can conclude that BiH, thanks to continuous cooperation with UN organizations, manages to follow this trend.



**Source:** Register of Agricultural Holdings of the Ministry of Agriculture, Forestry and Water Management

**Graph 22: Ratio of owners of family farms by gender, 2022**

According to the survey conducted for the purpose of development of this Strategic document, female members of rural households are equally active in agricultural production as their male counterparts and spend most of their working time in agriculture. Also, according to female respondents, in the majority of cases, women participate equally in decision making about farm activities. Of course, there are so-called women's and men's jobs both at home and in agriculture. Thus, women are more involved in the production of vegetables for the household, processing of products on the farm and direct sales, while men are mainly responsible for mechanization, livestock care and other physically demanding jobs. When it comes to administrative jobs, most often, men finish the jobs in the city, while women are tied to the house and taking care of dependent members of the household.

The majority of rural women do not own farmland. Furthermore, according to an unwritten long-standing rule, when a woman get married, she forfeits her inheritance of any agricultural land that her

family may own. According to the survey, most of their possessions consist of jewellery. Women are also less mobile and are confined to the farm due to caring for children or the elderly, and as a result, they rarely participate in agricultural training. The most pressing concern cited by rural women is water scarcity. However, despite this limitation, they see a future in remaining in the countryside and continuing to engage in agriculture and other activities on the farm. The most important types of investment for female respondents are new farm buildings (24 percent), new machinery (20 percent) and cheese processing equipment (12 percent).

The survey has also found that young people in rural areas see their future mostly outside of agriculture, through employment outside the farm. They also cite poor infrastructure and water scarcity as priority concerns.

### **2.1.12. Environmental aspects of rural development**

Environmentally based rural development approaches that aim to protect environmental resources and pass on a healthy environment to future generations are integrated with the concept of sustainable rural development and are therefore an unavoidable factor in the improvement of agriculture and rural areas. Sustainable development is a developmental approach that emphasizes the quality of the environment while ensuring the efficient use of natural resources. Given the nature and volume of economic activity in Gacko, and particularly the role of the Gacko Thermal Power Plant in the municipality's overall development and the quality of the environment, the environmental aspect of rural development is extremely important for Gacko. The operation of the Gacko Thermal Power Plant has a direct impact on various agricultural and rural development factors, compounding the resolution of these issues. The approach must be based on the latest and best knowledge in this field, and the results must be long-term and beneficial to both the population and the environment.

#### ***2.1.12.1. Environmental planning and resource management***

Environmental planning is the process of enabling decision-making to implement land development while respecting the environment and taking account of social, political, economic and management considerations. It provides a holistic framework for achieving sustainable results in both rural and urban development. The management of agricultural land, water and waste is commonly emphasized in discussions about agriculture and rural development. A unique concern in the case of Gacko is the management of exhausted mines after their closure, as well as the gases generated during the operation of the Gacko Thermal Power Plant.

#### ***Agricultural land management***

The natural processes taking place in the environment, such as soil erosion and natural degradation, and the agricultural practices, such as the improper use of artificial fertilizers, are both affecting the environment and the quality of agricultural lands, water resources, water regimes and fisheries. Land use in Gacko is predominantly extensive in character, and is typically inefficient and lacks planning. Land losses are primarily caused by unplanned development of residential, industrial and infrastructure facilities, unsustainable exploitation of mineral raw materials, excessive erosion caused by deforestation, and improper cultivation on slopes<sup>22</sup>.

Other land management issues identified in the Gacko Municipality Local Environmental Action Plan<sup>23</sup> 2010-2015 include: lack of systematic land monitoring; lack of a land information system (LIS); lack of

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<sup>22</sup> Ibid.

<sup>23</sup> 2010 – 2015 Gacko Municipality Local Environmental Action Plan

knowledge of the degree of soil contamination from the standpoint of ecologically sound food production; an absence of an adequate land valuation system; lack of a single land cadastre (cadastre and land registry are currently separate); failure to implement soil recultivation and remediation measures; low level of awareness about the importance of land for the sustainable development and survival of humanity; a low level of land development and land use planning; and a lack of pedological soil maps on a larger scale for various purposes in order to plan space and its use more effectively.

### *Water resources management*

Sinkholes are the most prominent hydrological feature in the municipality of Gacko, but there is also a well-developed surface hydrographic network comprising Neretva (springs in Gacko), Izgorka and Jabučnica (make up Sutjeska), Dramešinska river, Žanjevička river, Mušnica, Gračanica, Đuropa-Zalomka and a number of rivulets and streams. A distinctive feature of the natural hydrological regime is the extremely uneven distribution of precipitation during the year, resulting in flooding of certain areas during the winter and droughts during the summer. At the time of the construction of the Klinje dam, a small stone dam Nelavo with a length of 400 m was also built in this part, as a water intake for the irrigation system of a large part of the Gatačko polje with a system of open canals built at the beginning of the 20th century, which still exists today and plays a significant role in feeding livestock for several villages on the edge of the Gatačko polje.

Natural lakes in Gacko can be divided into permanent and seasonal lakes. Permanent lakes include (artificial) water reservoirs. Gacko is home to six water reservoirs. Groundwater in Gacko is found in karst areas, where major karst fields are located. There are significant springs in the Neretva and Trebišnjica basins. Two of the most notable lakes are artificial lakes Klinje (1896) and Vrba-Ulinje (1983). Klinje is the first artificial lake in BiH, named after the toponym “Klini”. It has a surface area of 26 hectares. It was accumulated between 1891 and 1896 following the construction of a stone arch dam, the first of its kind in the Balkans. The dam was built to irrigate the Gatačko polje, but it is no longer used for that purpose. There are also numerous sinkholes, springs, and estavelles.

The quality of drinking water in some parts of the municipality remains substandard. Pollution poses a threat to public health due to old and damaged pipelines and unchecked chlorination. Water quality control is also inadequate, particularly in rural areas where residents rely on individual wells. Because wastewater treatment capacities are virtually non-existent, untreated effluent is discharged directly into surface watercourses. During dry seasons, some water supply systems are unable to meet the needs of users in terms of quantity. The quality is frequently low, either because of the insufficient yield of the source, or due to the insufficient capacity of the water supply system or its individual parts. There is also a shortage of water protection infrastructure and proper wellfield protection measures. Organic matter may pose a threat to wellfields because, in addition to insufficient immediate protection, waste water treatment devices are absent, sewage systems are poorly maintained, deforestation is widespread, plant protection chemicals are used uncontrollably, etc. Water sources frequently contaminated with bacteria. The vast majority of wastewater (close to 90 percent) is released untreated directly into the nearest watercourses or underground. In urban parts of the municipality, 60 percent of the population is served by the sewage system. Uncontrolled deforestation, soil erosion and flash floods all have special implications for the water sector, including a lack of biological potential, increased karst soil erosion and the formation of silt and sludge, resulting in reduced capacity and increased risk of flooding and water contamination. There are no reliable statistics on pesticide contamination of surface and subsurface water in Gacko. Fortunately, pesticides are not extensively used in Gacko. It is projected that as agriculture develops, their use will increase, necessitating the implementation of specific administrative measures aimed at water protection.

### *Waste management*

Waste management is handled by the Public Enterprise “Komus” a.d. Gacko. Presently, the only option for managing both municipal and hazardous waste (industrial, medical and other hazardous waste) in Gacko is disposal at local (municipal) landfills, the majority of which are in inconvenient locations and/or are technically unequipped. There are ten known illegal landfills, but the estimated number is many times higher. Household waste is often dumped in rivers, lakes, abandoned quarries and open-pit mines.

As per the decision of the Gacko Municipal Council, the official (albeit non-sanitary) municipal waste landfill is located in Zlatica, next to the tailings (soil) dumper from the mine and thermal power plant, which is used to bury the waste. The landfill is partially landscaped, with fences and roads built within it. Only Avtovac has well-organized municipal waste collection from households. In the urban part of the municipality, the Avtovac neighbourhood has 99 percent coverage with waste collection and disposal service. Other communities in the municipality are not included in the organized waste collection and removal. It is estimated that less than 10 percent of the total volume of waste (1,320 tons per year) is sorted. Unfortunately, the industry sector frequently dumps its waste in the same landfills as municipal waste. The thermal power plant has its own landfill, where it disposes of tailings, slag and ash. The issue of hazardous waste disposal is not adequately addressed. In Gacko, there is no modern incinerator that can burn municipal and particularly hazardous waste. Co-incineration, or the incineration of specific types of waste (old tyres, some types of waste oil) in energy and industrial furnaces, is not practiced although it is technically feasible. Citizens Association "Ljubitelji nature" Gacko, implement the Pilot project "Waste management according to the principle of separation at the point of origin". The project lasts 6 months (ends on April 1, 2023). 5 public institutions are included in the project: municipal building - Municipal administration. Preschool "Pero Slijepčević", Junior Primary School "Sveti Sava", Junior High School "Gacko Kindergarten" and the chapel of the Serbian Orthodox Church, as well as 3 catering facilities and 40 households. The project collects separately: glass, paper and metal, and the value of the project is 14,334.00 BAM.

### *2.1.12.2. Biodiversity and genetic resources*

BiH, as a fully-fledged party to the Convention on Biological Diversity-CBD since 2002, has been following global trends in the preservation and sustainable use of biological diversity, and has mobilized its institutions and experts to meet its international commitments, in particular to ensure that protection and sustainable use of biological diversity are mainstreamed in relevant sectoral policies and strategies at all levels of government in the country. BiH adopted the 2011-2020 Strategic Plan for Biological Diversity. The RS Nature Preservation Strategy (2011) established a strategic framework for the protection of biological diversity. The Strategy emphasizes that the entire territory of RS is considered as a high-value natural environment, in which measures to safeguard and preserve the richness of biological diversity and the equilibrium of natural processes, can be undertaken. According to the Sixth National Report of BiH to the Convention on Biological Diversity (2019) and the State of the Environment in BiH (2010), BiH is characterized by a high degree of ecological diversity.

Gacko is notable for its unique biodiversity owing to its distribution across different geological and climatic zones. In the area of Gacko, there are numerous development endemic centres, and centres of relicts-refugia of tertiary flora and fauna, which have survived to this day in the particular paleoclimatic circumstances. This rich biodiversity is under threat. Currently, there are a large number of registered

domesticated plants in fruit growing, viticulture, vegetable growing and horticulture that are only preserved in certain areas. Gacko used to have unique breeds of livestock, but their numbers are dwindling. The biotope (habitat) diversity or geodiversity of Gacko is extremely high. This is influenced by factors such as orography, geology, hydrology and ecoclimate. Geodiversity is still locally retained despite pronounced anthropogenic influence, and it should be placed under an appropriate system of sustainable management. Unfortunately, anthropogenic activity has altered, devastated or degraded many landscapes, transforming them into lower forms of ecological organization.

The “Sutjeska” National Park, the country’s oldest and largest national park, encompasses 16,051.61 hectares, including 1,950.87 hectares in the northern portion of the Gacko municipality. The park boasts a rich and varied flora and fauna, with an abundance of endemic and rare species. Dense forests make up 66 percent of the park’s vegetation, with mountain pastures, meadows and rocky soil with sporadic vegetation. The slopes of the north-western hills are particularly notable for their dense coniferous forests and beech trees up to 1,600 metres in height. In contrast, other steep slopes in the park are barren and rocky. Plateaus above 1,600 metres are home to pastures. The park’s floral diversity includes 2,600 species of vascular plants, many of which are rare and endemic, and approximately one hundred species of edible mushrooms.

The Perućica rainforest is home to towering beech trees that can reach up to 60 metres in height and have a circumference of about one and a half metres, as well as endemic specimens of black pine. The trees in Perućica rainforest have never been inventoried, and some are estimated to be over 300 years old. The forest is also home to a diverse and abundant animal population, including bears, chamois, wild boars, wolves, martens, wild cats, foxes, and wild goats. Over 300 species of birds can be found in the park, particularly around Zelengora’s large lakes and in wetland areas. The Balkan chamois, a type of goat-antelope native to Europe and the Carpathians, is another species found in the park. Bird species observed in the Perućica rainforest include the golden eagle, capercaillie, peregrine falcon, blackbird and rock partridge.

The Amended RS Spatial Plan for the period until 2025 includes plans to expand it by an additional 2,173.68 hectares. The park’s borders, protection regimes, management, protection, and development are established by the Law on the “Sutjeska” National Park.

In addition to the “Sutjeska” National Park, the municipality is home to significant natural values, primarily related to its karst relief and large forest ecosystems. Protected areas in the municipality include geomorphological natural monuments such as Klinje lake, Gornji Krupac spring, Pridvorica spring, Čelja cave, Đatlo cave, Mušnica river, and gorges on the upper course of the Neretva river.

In the following, the endemic species of freshwater fish and a species of medium-sized cat are described as particularly important examples of the richness of the biodiversity of the municipality of Gacko.

**Gatačka gaovica** (*Telestes metohiensis*) is an endemic species of freshwater fish that lives in isolated karst fields in eastern Herzegovina: Nevesinj, Gatački, Cernički. It is a very specific species that prefers clean karst streams with a weak current as its habitat as well as springs with stagnant water, which is why it is known as an excellent indicator of water quality. According to the latest research, it has become very rare in these regions, and its disappearance is linked to water pollution in these regions, and especially to the displacement of the Mušnica river in the Gatača field. Due to all of the above, its habitat is limited to only the upper parts of the river course. Gatačka gaovica is categorized as vulnerable B1ab and is also on the IUCN red list in the category of sensitive species (VU), and according to the decree on strictly protected wild species in the Republic of Srpska, it is on the list of strictly protected wild

species, but also as regionally extinct. Gatačka gaovica is characterized by a specific way of life. Part of their life cycle is spent in the underground lakes of karst caves, and when the water spills into the flood zones, the gaovice come out to the surface waters. During their stay in the flooded fields, the gannets feed intensively and spawn. Feeding of larvae and juveniles is possible only in surface waters. Factors endangering the gaovica gaovica are: Global climate change (acid rain), diversion of watercourses, reclamation activities, pollution of groundwater, introduction of invasive species.

**Common lynx** (Eurasian or forest lynx (lat. *Lynx lynx*) is a species of medium-sized cat, naturally living in Siberia, Central and Eastern Europe, as well as in Eastern and Southeast Asia. It can grow up to 1.3 m. In the past year, eyewitnesses have noticed how the lynx has expanded its habitat to the mountainous area of the municipality of Gacko, and it is assumed that it has expanded its range from the national park Sutjeska, which is its natural habitat, so now as a protected species it is also found in the area of Gacko. By the way, the common lynx is a resident of dense forests and river gorges. It occupies a territory of 5 to 100 km<sup>2</sup> and does not tolerate other members of its species. The common lynx is the largest species of lynx, of which there are four in total. Its length is between 80 and 130 cm, and its height is between 60 and 65 cm. The length of its tail is from 11 to 24.5 cm. Males usually weigh 18 to 30 kg, and females 8 to 21 kg. During the summer, the common lynx has relatively short, red or brown fur, which can lighten. In winter, it replaces it with a much thicker, layer of silky fur, from silvery gray to grayish brown in color. This Eurasian lynx does not have the ability to control reproductive behavior depending on prey, as its close relative the Canadian lynx can.

### *Genetic resources*

#### *Genetic diversity of plants*

In BiH, only a few plants' genetic resources are currently protected. These include several varieties of Blatina and Žilavka vines, as well as a single variety of apples with an unknown name. However, BiH is home to a wealth of authentic varieties of fruits, vegetables, and cereals that grow in specific parts of the country.

It is worth noting that RS has adopted two programmes: the Programme for the Preservation of Plant Genetic Resources (2008) and the Programme for the Preservation of Forest Genetic Resources (2012). These programmes provide a foundation for the preservation and sustainable use of RS's plant genetic resources and facilitation of collaboration between relevant bodies in RS and competent institutions in BiH and the region. The municipality of Gacko possesses untapped potential in the form of its genetic resources of both plant and animal species, which have yet to be fully explored.

According to the First National Report of BiH to the CBD (2008), the varieties of corn, wheat (Bosanka, Granada, Kristina, Prijedorčanka, Banjalučanka, Orion, Stojanka, Jelena, Šamčanka), barley, oats, rye, millet and soy (Sana, Sonja, Marina, Milica) stand out among the genetic resources of cereals. Important vegetable varieties include squash and pumpkin, beans (čučo, bubnjo, trešnjo, kućičar, mesni), cabbage, peppers, okra, watermelon, melon and potatoes (romanijski, kupreški, fojnički, glamočki). Some of these species are certain to thrive in the municipality of Gacko. There is also a high variety of fruit varieties, most notably cherries, plums, pears, apples, as well as sour cherries, apricots, peaches, almonds, raspberries, blackberries, strawberries and currants.

Research indicates that 160-170 species of medicinal plants are currently being collected in BiH, with 15-20 species being the most traded. BiH's forests have successfully maintained their genetic structure. Despite the introduction of forest species during the development of intensive forest management a

century ago, most attempts were unsuccessful. As a result, BiH is now one of the few countries free from genetic pollution and altered genetic structures of major economic tree species such as fir, spruce, beech and sessile oak (Ballian, 2009).

### *Animal genetic resources*

Numerous breeds of animals are commonly bred in BiH. Notable breeds include breeds of horses (Bosnian-Herzegovinian mountain horse), cattle (buša and Gatačko cattle), sheep (pramenka), goats (domestic Balkan horned goat), pigs (šiška), dogs (Bosnian shepherd Tornjak and Bosnian wirehaired barak hound) and pigeons (Travnik short-beaked pigeon, Sarajevo roller, Bihać roller and Zenica roller). There are also indications of autochthony in the Herzegovinian donkey, dog and fowl (First National Report of BiH to the CBD, 2008). Certain types of (hunting) game are also distinguished by their distinctive and unique gene pool (roe deer, chamois, wild boar, wolf, beech marten, brown bear, etc.) (First National Report of BiH to the CBD, 2008).

Some of the aforementioned species are still bred in the Gacko municipality. Their producers should be included in the animal resources protection programme implemented by the RS Ministry of Agriculture, Forestry and Water Management in collaboration with the Institute for Genetic Resources, which is lacking due to financial constraints. This is particularly important for the protection of the original breed of Grey Gatačko cattle.

The breed of Grey Gatačko cattle was developed near Gacko by crossing Bosnian Buša first with Wipptal and Montafon bulls, and later with Oberintal bulls. This breed of cattle has a characteristic grey colour and is native to the wider Gacko region and the mountainous region of eastern Herzegovina, with an average altitude of about 1,200 metres above sea level. In the 1950s, Gatačko cattle accounted for 90 percent of the region's entire cattle population. The breed spread from this region to Montenegro, Dalmatia, and north to Sarajevo through Kalinovik. In 1887, the Livestock Station in Gacko became the centre of breeding efforts for the Buša breed. That same year, 300 grey Alpine Wipptal bulls were imported for their size, body weight, and ability to thrive on a modest diet that suited the Gacko region. From 1905 onwards, Buša bulls were castrated to allow only Wipptal bulls to mate. After World War I, Montafon bulls were also introduced to the Gacko region. The Livestock Station in Gacko played a significant role in this process. The station later provided college-type education for livestock keepers, where young keepers received free theoretical and practical education for three years. In return, they were required to open a cattle farm and educate other keepers in their village after completing their education. The process of creating the Gatačko cattle breed was interrupted between the two world wars but resumed later. By the 1950s, the grey-coloured Gatačko cattle breed was established, with a lifespan of 15-17 years. The breed's phenotypic characteristics include a height of 130 cm at the withers and a body length of 155 cm. The area between the horns and along the backline is mainly yellow in colour until sexual maturity. The Gatačko cattle has an annual milk yield ranging from 3,000 litres on farms to 4,000 litres in own breeding. The milk has a high fat content of up to 6 percent and 3.4 percent protein, making it ideal for cheese and kajmak production. These cattle have their first mating at 16-24 months and experience relatively easy parturition, with a high percentage of live calves (up to 90 percent). Newborn calves weigh an average of 30 kg for females and 40 kg for males, with a daily weight gain of 0.9 to 1.1 kg. The breed is perfectly adapted to the hilly-mountainous terrain and continental climate of Gacko, with harsh winters, where the altitude averages over 1000 metres. They thrive in the harsh karst terrain and graze for most of the year<sup>24</sup>. Last year, the RS Ministry of Agriculture, Forestry and Water Management worked with the Institute for Genetic Resources to sample around 300 cattle believed to

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<sup>24</sup> Dušan Andrijašević, Gacko Agricultural Cooperative

be of the Gatačko breed. However, laboratory analyses revealed that only 16 of these cattle had more than 90 percent of the Gatačko cattle genes, a concerning result. Despite this, the project marks the beginning of efforts to inventory and genotype the breed in order to protect it and raise public awareness about the importance of preserving this indigenous breed in RS.

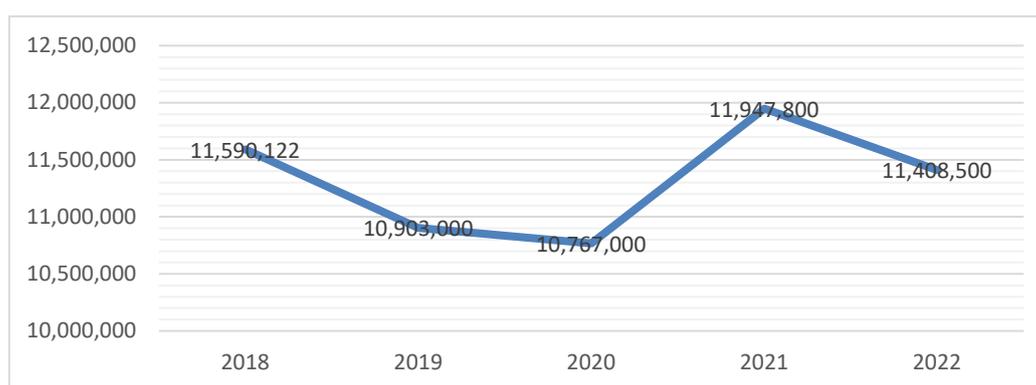
### 2.1.13. Local administration structure and agricultural and rural development policy

Gacko's municipal administration is divided into several departments, each with its own sub-organizational units:

- Department for General Administration,
- Department for Economy, Finance and Social Activities,
- Department for Spatial Planning and Civil Protection,
- Department for Inspection Affairs,
- Technical Service,
- Service for Joint Affairs,
- Internal Audit Unit,
- Territorial Fire and Rescue Unit.

Currently, there are 142 employees in the Municipal Administration. 63 of them have higher education and 72 are female. The employees include elected and appointed officials as well as two persons hired on a service contract basis. The Fire and Rescue Unit employs 40 of these workers.

During the observed period 2017-2021, the annual available budget of the municipality of Gacko ranged from BAM 10.7 million in 2020 to almost BAM 12 million in 2021. Budgets are made up of tax and non-tax revenues, grant monies and transfers between budget units at different levels of government. It is important to note that the budget also includes revenues from various fees (such as mining rent, forest management fees, water management fees, and mineral raw materials) that are used in a dedicated manner for infrastructure construction and regular maintenance. These funds cannot be used for personal income of employees or other personal income allowances and benefits.



Source: Gacko municipality, finance department

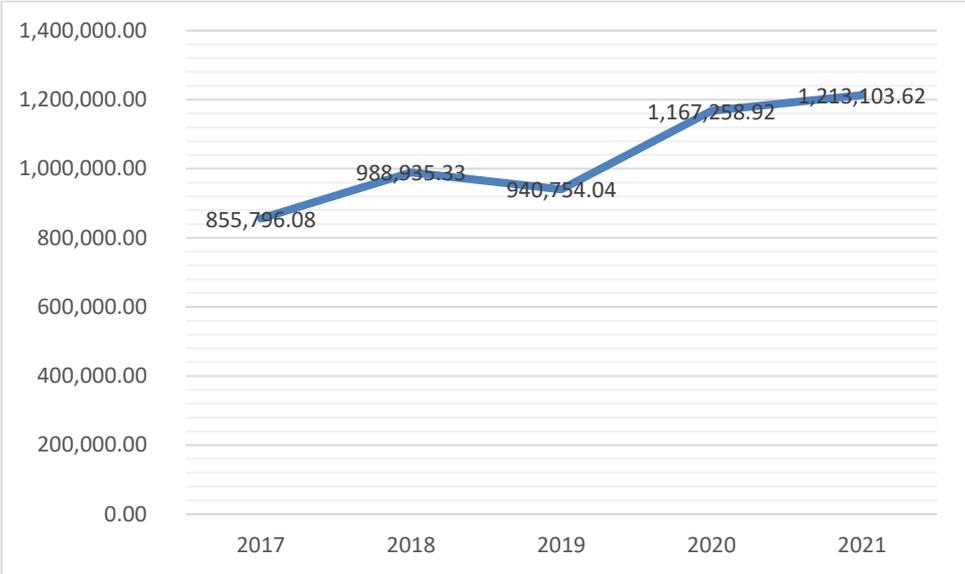
**Graph 23: Annual budget of the municipality of Gacko, 2018-2022**

#### ***Agricultural policy and rural development policy framework***

In accordance with the RS Law on Agriculture (“Official Gazette of RS”, nos. 70/2006, 20/2007, 86/2007 and 71/2009), agricultural policy is implemented according to the RS Agriculture Development

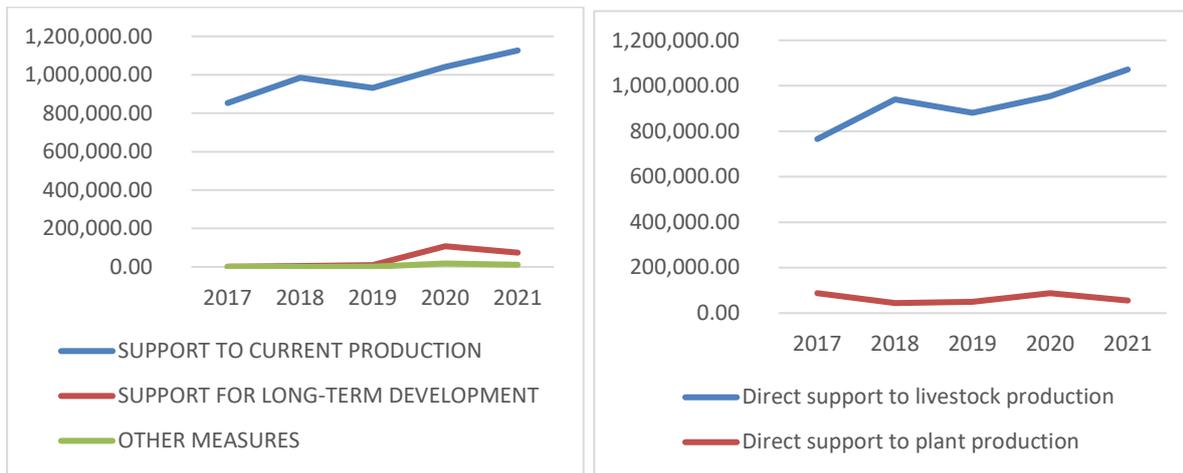
Strategy. The policy measures are divided into four categories: market and price policy measures, structural policy measures, land policy measures, and agricultural incentive measures. According to the Law, local self-government units can implement additional structural policy measures for their territories in accordance with the agricultural strategy. Financial support for these additional measures is provided from the budgets of local self-government units. The Law also lays down the following types of structural policy measures: support to regions with more challenging agricultural conditions, support to agricultural development that does not degrade the natural environment and ensures the preservation of biodiversity, support to investments in agricultural holdings, support to professional training for work in agriculture, support for young agricultural producers, support for regional agricultural development, support for supplementary activities on agricultural holdings, support for farmers’ efforts to organize themselves, and support for the hail protection system and other crop protection measures.

In accordance with the aforementioned legal provisions, budget support for agricultural producers in the municipality of Gacko comes from two levels: the RS level and the municipality level. However, the amount of support from the RS agricultural budget that will be used in the municipality of Gacko is primarily dependent on the intensity of production, i.e. the minimum volume of production for which an incentive can be realized, as well as from the willingness of farmers to register and accept the obligations of paying health and pension insurance. Over the observed period (2017-2021), funds ranging from BAM 856,000 to 1.2 million were withdrawn, with a marked upward trend.



**Source:** RS Ministry of Agriculture, Forestry and Water Management  
**Graph 24:** *Agricultural budget funds invested in the municipality of Gacko*

The largest share of budget support from the RS level goes to current production support (on average 95.5 percent during the observed period). This includes support for milk production, the cow-calf system, a premium for breeding goats and sheep and breeding heifers, and support for beekeeping production. In crop production, the only support measure implemented during the observed period is diesel fuel subsidies.

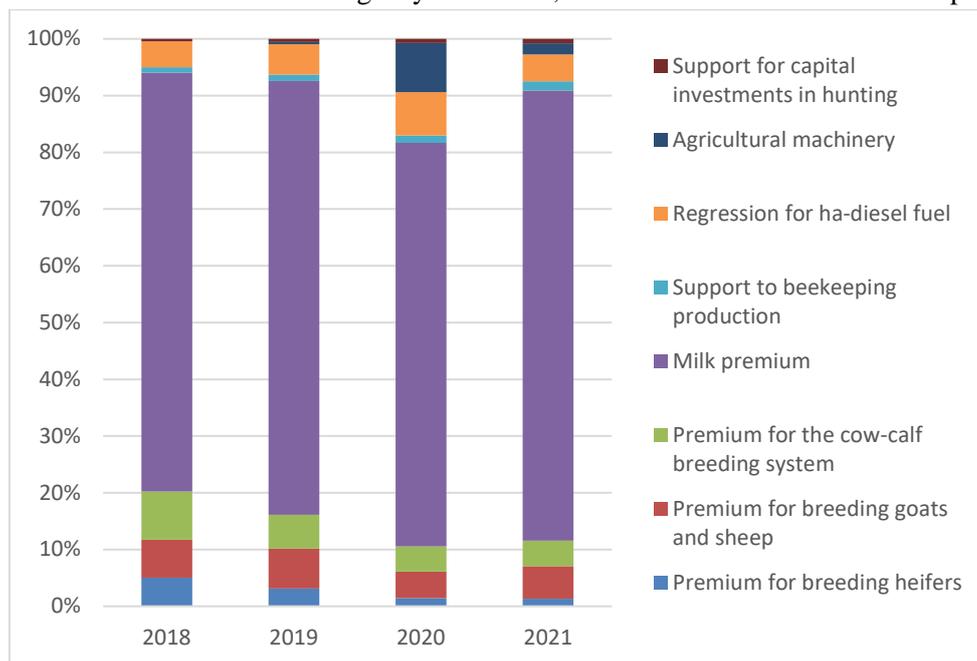


Source: RS Ministry of Agriculture, Forestry and Water Management

**Graph 25: Support from the RS agricultural budget for the municipality of Gacko**

When it comes to support for structural measures, i.e. long-term investment, the amount of withdrawn funds is extremely low, with funds withdrawn only for purchasing agricultural machinery, constructing livestock facilities and purchasing foundation stock and livestock equipment. RS budget provides support in the range of 30-40 percent of the return on investment (for municipalities with an altitude above 600 metres, the support is 40 percent).

The third group of measures (systemic support measures) include support for animal health protection, market intervention measures and emergency assistance, for which modest funds were implemented.



Source: Ministry of Agriculture, Forestry and Water Management of Republika Srpska

**Graph 26: Structure of measures supported by RS agricultural budget in the municipality of Gacko**

The budget of the municipality of Gacko includes funds for the development of agriculture. These funds fall under the budget item “Subsidies: funds planned for agricultural incentives.” The amount allocated varied over the observed period, peaking at BAM 160,000 in 2021 and reaching the lowest value of BAM 100,000 in 2019. In 2020, funds for incentives were not paid due to the lack of funds in the budget, as the rent from ZP "Rudnik i TE" was late. In the development strategy of the municipality of Gacko

for the period 2022-2028, it is foreseen that 300,000 BAM will be set aside for agriculture in 2022 and 50,000 BAM more each year up to the amount of 500,000. However, in 2022, this statement from the strategy was not respected. This budget item accounts for 1 percent of the overall budget of the municipality. The distribution of funds is governed by the Rules on the Distribution of Agricultural Subsidies, which are enacted annually by the mayor for the current fiscal year. The following types of incentives are available to users as part of these support measures:

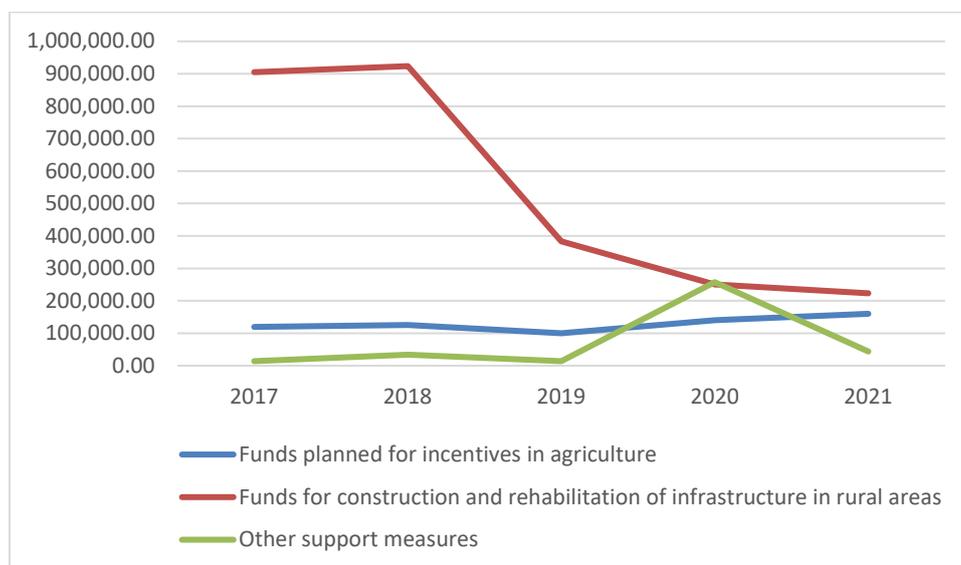
- 1) LIVESTOCK BREEDING SUBSIDIES
  - a. cow breeding subsidies
  - b. Gatačko cow breeding subsidies
  - c. beef fattening subsidies
  - d. pork production subsidies
  - e. sheep and goat breeding subsidies
  - f. poultry production subsidies
  - g. honey production subsidies
- 2) FRUIT PRODUCTION SUBSIDIES
  - a. subsidy for establishing new and maintaining existing fruit plantations
- 3) CAPITAL INVESTMENT SUBSIDIES
  - a. subsidy for adapting existing and constructing new farm buildings
- 4) CO-FINANCING OF INSURANCE PREMIUMS

The important feature of the above measures is that they supplement the existing support measures provided by the RS level, including with regard to eligibility criteria.

In addition to providing incentives for rural areas and the agricultural sector, the budget also funds other measures. These include the construction and rehabilitation of rural infrastructure, livestock exhibitions, support for genotyping Gatačko cattle, support for acquiring foundation stock and support for socially vulnerable families.

**Table 49: Support measures from the local budget for agriculture and rural development, planned resources**

Support measure	2017	2018	2019	2020	2021
funds planned for agricultural incentives	120,000.00	125,000.00	100,000.00	140,000.00	160,000.00
for the construction and rehabilitation of infrastructure in rural areas	904,558.89	923,532.36	383,727.55	250,504.56	223,207.94
for the regional livestock exhibition	13,950.00	13,950.00	13,950.00		13,950.00
for improving the breed composition of Gatačko cattle		19,588.00			
for the construction of a farm building (barn) for a socially vulnerable family				250,504.56	
for co-financing the purchase of pregnant heifers				6,996.12	
for the genotyping of Gatačko cattle					30,000.00



Source: Department for Finance

**Graph 27: Funds for the promotion of agricultural development, 2017-2021**

## 2.2. Evidence-based SWOT analysis

The SWOT analysis workshop took place on 16 November 2022 in the Assembly Hall of the Gacko municipality. The participants were all members of the working group appointed by the mayor of the municipality and other relevant stakeholders, including agricultural producers and their organizations, local administration and non-governmental organizations. The workshop had a total of 20 participants. The workshop participants were guided through the SWOT analysis by questions prepared by the moderators. Strengths, weaknesses, opportunities and threats in various sectors and socioeconomic contexts were examined based on a situational analysis..

**Table 50: SWOT analysis of agriculture and rural development in the municipality of Gacko**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Natural resources (coal, marl, limestone, water reservoirs, forests, etc.)</li> <li>- High municipal budget with a significant portion of non-tax revenues (the purpose of which is the implementation of strategic projects)</li> <li>- Large areas of agricultural land</li> <li>- Favourable climate for livestock production</li> <li>- Milk production – relatively high amounts of milk delivered to dairies</li> <li>- Long-standing milk processing tradition – production of kajmak and cheese</li> <li>- High marketability of the main agricultural products, such as meat, livestock and milk</li> <li>- Relatively well-developed sheep farming sector</li> <li>- Natural resources suitable for tourism development</li> <li>- Proximity to a national park</li> </ul>	<ul style="list-style-type: none"> <li>- Low levels of investment in agricultural production from all levels of government, as well as private sources</li> <li>- Fragmented agricultural plots</li> <li>- Low intensity of livestock production</li> <li>- Negative demographic trends – an aging population, emigration of working-age population</li> <li>- Sparse population in rural areas – population emigration, villages in the Gacko municipality are sparsely populated</li> <li>- Insufficient organization among agricultural producers</li> <li>- Weak interest in entrepreneurship</li> <li>- Lack of lodging and tourist facilities</li> <li>- Inadequate valorization of natural resources for tourism purposes</li> </ul>

<ul style="list-style-type: none"> <li>- Relatively preserved and ecologically healthy and clean environment suitable for specific types of tourism</li> <li>- Valuable cultural and historical heritage</li> <li>- Higher level of formal employment compared to the rest of RS</li> <li>- High proportion of non-agricultural income in household income structure</li> <li>- On-farm processing as a primary supplementary activity</li> <li>- Well-organized agricultural cooperative</li> <li>- Well-organized beekeepers' association</li> <li>- High participation of rural women in associations</li> </ul>	<ul style="list-style-type: none"> <li>- Mismatch between labour market needs and the curriculum of the Gacko secondary school</li> <li>- Unsolved water supply and sewage issues</li> <li>- Burdened budget due to initiated but uncompleted high-value projects</li> <li>- Underdeveloped capacities of the municipal administration to attract external funding (from various domestic and international projects)</li> <li>- Numerous illegal landfills and low awareness of the need for environmental protection</li> <li>- Absence of processing capacities</li> <li>- Unorganized purchasing of agricultural products</li> <li>- Poor quality of physical infrastructure and low availability of public services in rural areas</li> <li>- Absence of secondary school education in the field of agriculture/food</li> <li>- Low level of advisory services available to farmers</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>- Availability of various EU funds (IPA, etc.)</li> <li>- Availability of international organizations in BiH, who work on and support agriculture and local rural development</li> <li>- Geographically located near a major road to the Adriatic Sea, which gives an opportunity to develop transit hospitality in the municipality</li> <li>- Proximity to well-known tourist destinations such as Trebinje and Sutjeska National Park</li> <li>- Potential for investment from diaspora</li> <li>- Preservation and valorization of the genetic potential of Gatačko cattle</li> <li>- Branding of agricultural products to add value and boost income for producers</li> <li>- High demand for specific agricultural products (cheese and Gatački kajmak)</li> <li>- Potential for inter-municipal, inter-regional and cross-border cooperation in project implementation</li> <li>- Established legal regulations for private-public partnership and potential for development, etc.</li> <li>- Opportunity to develop agritourism as a means of efficiently utilizing rural resources and creating additional income source for farmers</li> <li>- Growing interest among tourists in ecologically healthy and rural communities, and among donors in investing in rural tourism projects</li> <li>- Increasing trend towards consuming healthy, organically produced food</li> <li>- High demand for organic products in export markets</li> <li>- Existing support from the RS Government for improving the situation of rural women (at national level specific incentives are available for self employment of rural women )</li> </ul>	<ul style="list-style-type: none"> <li>- Emigration</li> <li>- Global and other recessions</li> <li>- Closure of the power plant due to the obsolescence of the system and loss of income, which accounts for over 50 percent of the income in the budget</li> <li>- Climate change, natural and other disasters</li> <li>- Unstable political environment</li> <li>- Diseases of domestic animals</li> <li>- Restrictive eligibility criteria for accessing funds from the RS budget for small producers</li> <li>- Contagious diseases</li> <li>- Market price fluctuation for agricultural products</li> <li>- Lack of measures to protect domestic production</li> <li>- Unfair competition in the agricultural product market</li> <li>- Violation of free trade conditions with neighbouring countries</li> <li>- Reduction in the agricultural budget and financial resources for investment in the agricultural sector</li> <li>- Stagnation in the EU integration process and inability to access pre-accession funds</li> <li>- Tightening of conditions for exporting products to the EU market</li> </ul>

<ul style="list-style-type: none"> <li>- Alignment of the education system with labour market needs as part of strategic programs initiated by the RS Government</li> </ul>	
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### 2.3. Strategic focus

Based on the findings of the Situation Analysis and the need to align strategic priorities with existing strategic frameworks at the local, RS and state levels, three strategic focuses have been identified for improving agriculture and rural development in the municipality of Gacko. These are:

- Improving the competitiveness of agricultural production within selected value chains,
- Enhancing the quality of life in rural areas,
- Responsible management of natural resources and territorial capital in rural areas.

The strategic focus of ‘improving the competitiveness of agricultural production within selected value chains’ aims to add value to agricultural products for which Gacko is already known and for which the municipality has comparative advantages in terms of production conditions and available resources. By increasing competitiveness, sustainability is also improved through the efficient use of existing resources. Specific measures and key projects have been defined to address challenges in the production and processing of key products in this region, namely the production and processing of milk and the production and processing of meat. These measures and projects were developed by identifying all links in the value chain, including applied technology, income levels, ecological and social environment in terms of the level of involvement of different social groups in the value chain, and impact on the environment. ‘Enhancing the quality of life in rural areas’ addresses challenges such as population loss due to emigration, particularly among young people. To retain young people in rural areas, basic prerequisites such as job opportunities or strong incentives for self-employment in agricultural or non-agricultural activities must be provided. Additionally, living conditions must be improved by increasing access to infrastructure and public services to retain the existing and attract new residents and investments. Also, it is important to bring young people closer to agriculture and rural development through new secondary education curricula. ‘Responsible management of natural resources’ involves protecting essential resources such as land and plant and genetic resources that have been identified for inclusion in existing protection programmes at the RS level. The focus is also on promoting sustainable production systems such as organic and integrated production, in line with the general strategic framework at all levels of government. Additionally, the focus is on ‘territorial capital’, which encompasses natural resources, cultural and historical heritage, local knowledge and skills and social networks.

### 2.4. Development vision

A vision is the first and fundamental step in determining the future of an area. It represents a formal agreement among all stakeholders in the local community about the future they desire. As such, any vision for the future should:

- strike a balance between vision and pragmatism;
- reflect the role that the rural area has in the regional and national contexts;
- be easily understood by citizens,
- align with other local community plans.

A well-crafted vision has both external and internal dimensions that are in harmony with one another. The external dimension is expressed as a competitive position that that community aims to occupy within an environment that is considered relevant for the next strategic period. The internal dimension is expressed as a shared perspective among local actors on the type of community they intend to build during the following strategic period. In practical terms, shaping a vision involves answering two questions:

- What (competitive) position do we intend to occupy, in what environment?
- What kind of social community do we intend to build?

The first question primarily concerns economic aspects, with ecological considerations also playing an important role. The second question focuses primarily on social aspects, with ecological and economic considerations also being important.

The Gacko Municipality Development Strategy for the period until 2027 has already defined the development vision, which reads:

**Municipality of Gacko – the economic cornerstone of Herzegovina, a developed, infrastructurally advanced, and recognizable community, an attractive environment for new investments and a pleasant place to live and work, a community dedicated to protecting the environment and promoting sustainable social development in all aspects**

In line with the principles of vision creation, the local team has defined the vision for the development of agriculture and rural areas in the municipality of Gacko as follows:

**MUNICIPALITY OF GACKO – a region where agricultural products embody the taste, smell and beauty of our rural landscapes and high altitudes**

This vision seeks to emphasize the comparative advantages of the Municipality of Gacko, such as its healthy environment protected by high altitude, national parks, and favourable climatic conditions, as well as its unique flora and fauna and genetic resources, all of which contribute to the distinctive flavour, aroma and beauty of its agricultural products. The vision aims to show that in addition to its thermal power plant as a major economic entity, the Municipality of Gacko has the potential to develop sustainable agricultural production with protected geographical indications and provide good living conditions for future generations, through application of innovative and professional approaches to rural development.

**2.5. Strategic goals with indicators**

Strategic goals for agriculture and rural development for Gacko municipality have been defined in accordance with the strategic framework that is currently being defined at the local level, as well as the strategic framework at the RS and state levels, and are consistent with the existing strategic framework and defined indicators.

**Strategic goal 1:**  
*Improving the competitiveness of agricultural production within selected value chains*

*Table 51. Strategic goal 1 indicators*

Strategic goal 1 <i>Improving the competitiveness of agricultural</i>	(Impact) indicator	Baseline (2023)	Target (2027)
	Amount of investment support from the budget of local	BAM129,000	+50%

<i>production within selected value chains</i>	administration to support agricultural production		
	Number of value chains functioning	no functioning value chains	at least two value chains functioning

The first strategic goal focuses on enhancing competitiveness and developing value chains. Competitiveness will be attained through increased investment in agricultural production, such as in new machinery, farm buildings, irrigation systems and on-farm processing or the opening of processing plants. Another way to boost competitiveness is by building functional value chains for the production of kajmak and honey. Accompanying measures for the establishment of value chains include development plans on sale channels - local markets, local shops, common sale points for producers, online channels, public catering sector, increasing the knowledge level of producers involved in the value chain on hygiene and food safety standards, and strengthening the position of producers within the value chain through producer organizations like cooperatives. Production sustainability will be attained by supporting the establishment of integrated production systems and eventually organic production systems. The social aspect of sustainability will entail developing specific support measures to include women and youth in value chains. Increased investment and established value chains are expected to lead to improved productivity, higher added value, better market access, and ultimately increased overall income from agricultural production.

**Strategic goal 2:**  
*Improved quality of life in rural areas*

**Table 52. Strategic goal 2 indicators**

Strategic goal 2 <i>Improved quality of life in rural areas</i>	(Impact) indicator	Baseline (2023)	Target (2027)
	The percentage of population living in rural areas	40%	+10%

The ultimate goal of improving the quality of life is to retain existing residents and attract new ones to rural areas. Since the entire territory of the municipality of Gacko is rural, this means retaining existing and attracting new residents to the municipality itself. Following the example of developed municipalities and countries, reducing emigration and attracting new residents requires offering new job opportunities, competitive salaries and access to essential services and amenities such as health care, education, transportation, supplies, etc. The solution to this challenge cannot be found solely in the development of agricultural production but also in the development of the rural economy as a whole. Improved living conditions in the municipality can encourage residents to stay and choose Gacko as their home, even if they commute daily for work. Additionally, some former residents may choose to return. Special attention should be given to increasing the number of social events and encouraging participation from people in rural areas in organizing these events. Another strategy to retain residents is to improve opportunities for self-employment and small business development across all sectors of the economy, particularly in crafts, tourism and processing. Building missing infrastructure is one of the accompanying measures for this strategic goal since the municipality is already well-developed in terms of basic physical infrastructure and access to services.

### Strategic goal 3:

#### *Responsible management of natural resources and territorial capital in rural areas*

**Table 53. Strategic goal 3 indicators**

Strategic goal 3 <i>Responsible management of natural resources and territorial capital in rural areas</i>	(Impact) indicator	Baseline (2023)	Target (2027)
	Number of farms with organic certificate	0 farm	5 farms
	Number of genetic protected and conserved plant or animal species	0 species	1 animal species protected
	Land market data base established	No data base exists	Data base established

Sustainable management of natural resources, particularly land, water and forests as primary resources, involves establishing a system to monitor the state of each resource, reporting on monitoring results, and implementing measures to improve their condition, protect them from degradation, etc. The first and most fundamental resource to be preserved is agricultural land, which suffers from various forms of degradation as revealed by the analysis. One of the main forms of degradation is caused by the abandonment of land and production areas or by failing to use the land in accordance with applicable legal regulations. To increase the amount of cultivated land and put production areas and abandoned estates back into use, it is important to activate the agricultural land market and distribute land to those who want to cultivate it through active monitoring and the creation of a land database. Additionally, agricultural production can be a source of soil, groundwater, and air pollution. Measures are needed not only for waste management in agriculture but also to support the development of sustainable agricultural production systems and approaches such as organic production or the integrated pest management approach. Identifying plant and animal genetic resources also provides a basis for their protection and better valorization. Special attention should be paid to the abandoned Gacko TPP mines, which can be used for cultivating honey crops and other income-generating crops. It is also necessary to put into operation land area such as the Avtovačko-Samoborsko polje (area about 400 ha), the Mulja complex (area about 40 ha) and the Lukovica pasture (area about 150 ha) in the Land Registers. Most of these complexes are registered as state property, and they are still registered in the Cadastre in the possession of the former ODPP "Planinsko dobro Gacko", while a part of these plots (about 10 percent) are registered in the land registers and in the cadastre to natural persons.

#### **Cross-cutting goals**

The Agriculture and Rural Development Strategy encompasses not only the strategic goals outlined above, but also cross-cutting goals that must be considered when developing an implementation model for each measure. These objectives include gender equality with a focus on improving the situation of rural women, combating poverty, promoting demographic revitalization of rural areas and supporting youth, as well as environmental protection and climate change mitigation.

#### **Gender equality**

The principles of gender equality were taken into account during the strategy's development. Throughout the process, public authorities and non-governmental organizations (NGOs) specializing in equal opportunities were consulted to ensure a proper representation of gender issues. In the process of

developing individual support measures, existing gender concerns will be taken into account by prioritizing female entrepreneurs in ranking systems for measures, where relevant, and ensuring an effective gender-responsive budget. During the strategy's implementation, the use of support measures for agricultural farms and enterprises operated by women will be closely monitored. All monitoring and evaluation indicators will be gender-disaggregated. Every monitoring and evaluation report will include a section on equal opportunities that examines the strategy's impact on gender equality. Information and advertising campaigns will encourage equal participation by women and men. Gender officers in central and local governments, as well as NGOs working on gender equality issues, will serve as catalysts.

### **Demographic revitalization and youth**

Negative demographic trends have a more pronounced and detrimental impact on rural areas, affecting not only the human population but also flora, fauna and nature as a whole. While human actions can disrupt the environmental balance, the absence of human populations in rural areas has a negative influence on biodiversity preservation, as well as the sustainable production and availability of food. Furthermore, when rural populations decline, so does rural heritage, which is lost as the oldest individuals pass away. This diminishes the identity and wealth of rural areas. Therefore, encouraging young people to return to agriculture and rural areas is a mission of strategies, plans, and programmes at all levels of government. Without young people, there can be no progress in production, new investments, new products or overall development.

### **Environmental protection and climate change adaptation**

In line with the EU's Green Agenda for the Western Balkans, the current state of environmental protection in the municipality, and climate change's impact on agriculture and other rural economic activities, all stakeholders implementing this strategic document must consider these issues and devise mechanisms to comply with minimum environmental protection requirements in the implementation of each measure. While the legal framework for environmental protection is enacted at the RS and state levels, it is the responsibility of local communities and other actors to respect it and strive towards achieving the Sustainable Development Goals (SDGs), which are relevant globally. Economically, this presents a development opportunity through available funds allocated for improving the environment, adapting to climate change, protecting biodiversity, etc. In this context, Gacko can leverage both its positive and negative aspects to attract these funds.

### 3. PRIORITIES AND MEASURES

Priorities indicate critical domains and courses of action for achieving the vision and strategic goals, and as such have the greatest impact on development, i.e. the achievement of strategic indicators. Priorities are grouped under relevant strategic goals.

Strategic Goal 1 *Improving the competitiveness of agricultural production within selected value chains* will be realized by focusing on the following two priorities:

#### ***Priority 1.1. Increasing productivity and improving the quality of agricultural products***

Measure 1.1.1. Investment support for improved agricultural production

Measure 1.1.2. Improving the quality of agricultural production

Measure 1.1.3. Improving access to knowledge and innovations in agricultural production, processing, marketing, communication, etc

Measure 1.1.4. Provision of start-up packages for rural youth and women

#### ***Priority 1.2. Development of the agrifood value chains***

Measure 1.2.1. Investments in the development of agrifood value chains

Measure 1.2.2. Investments in on-farm processing of agricultural products

Measure 1.2.3. Improving the capacity of producer organizations

To overcome limited production capacities and improve market opportunities, family farms require fresh investments to modernize production and processing through the introduction of new technologies for both traditional delicatessen and conventional mass consumption products. To improve animal welfare, it is important to invest in livestock feed preparation and storage systems, as well as modernize livestock facilities<sup>25</sup>. Only then can we talk about developing value chains in the sector and integrating small family businesses and medium and large companies. The general consensus during the definition of priorities and measures was that without building processing capacities and adding value to products through processing, sustainable agricultural development is not possible. In this regard, support measures are needed for constructing new processing capacities, both small on-farm capacities and larger capacities in the future. This would provide a means of regulating low agricultural product purchasing prices, a concern raised by most survey respondents. Finally, recognizing that, as a small municipality, Gacko can only be competitive in the agricultural and food product market if it is well-organized and has clearly defined rules for all participants, it is necessary to work towards forming a consortium of these participants (agri-tourism, hospitality sector and secondary school education). Investments in the value chain should not only result in technological and technical progress but also consider the social component, promotional efforts and other social initiatives that improve the quality of life for all value chain participants and rural areas in general. However, without adequate knowledge and professional support, it is not possible to expect good and sustainable use of funds. Therefore, the measure “Improving access to knowledge and innovations in agricultural production” is necessary for

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<sup>25</sup> <https://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mps/%D0%B1.%D0%BA%D0%B5%D1%86%D0%BC%D0%B0%D0%BD/Documents/Privilnik%20mjestaj%20gajenja%20zivotinja%20u%20stocarstvu.pdf>

the successful implementation of this document. Special attention in this segment should be paid to women and youth participating in the development of the municipality's rural areas.

Improving the capacity of the producer organisations would serve all relevant participants of the agri-food sector in Gacko, with the aim of achieving at least one of the following objectives:

- planning and adjusting production to match demand, particularly in terms of quality and quantity;
- concentrating the offer and marketing of the products of its members, including through direct marketing;
- optimizing production costs and return on investment in compliance with environmental protection and animal welfare standards, and stabilizing farmer prices;
- promoting and providing technical assistance for the use of environmentally friendly farming practices and techniques that respect animal welfare, including bee protection;
- promoting and providing technical assistance for the use of farming standards, improvement of product quality and development of products with protected geographical indication status or marked by a national quality label.
- ensuring better management of byproducts, especially waste, with the aim of protecting the quality of water, soil and the environment, as well as preserving and promoting biodiversity;
- contributing to the sustainable use of natural resources and climate change mitigation;
- developing initiatives in the fields of promotion and marketing;
- providing the necessary technical assistance for the use of the futures<sup>26</sup> contracts and insurance system.

Implementation of this activity with carefully selected personnel and clearly stated obligations and rights of all participants would improve, *inter alia*, the use of EU funds for these purposes, especially in connection with EU Regulations 1305/2013 and 1308/2013, as well as RS funds. Obligations primarily include membership fees and reporting. The membership fee must be adjusted to the financial status of all participants. The rights also include the right to participate in decision making.

To achieve Strategic Goal 2 ***Improved quality of life in rural areas***, two priorities are proposed:

***Priority 2.1. Support for the diversification of economic activities in rural areas***

Measure 2.1.1. Investing in the provision of tourism services on farms

Measure 2.1.2. Investing in the development of crafts and other supplementary activities in the rural settlements

Measure 2.1.3. Protection of traditional autochthonous products

***Priority 2.2. Improvement of rural infrastructure and availability of public/social services***

Measure 2.2.1. Support for improving the availability of public services

Measure 2.2.2. Support for improving physical infrastructure in rural areas

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<sup>26</sup> A futures contract is an obligation to buy or sell certain goods or financial assets such as grain, fruit, vegetables or securities at a specified time in the future, at a predetermined price.

While agriculture is the most important economic activity in rural areas, it should most certainly not be the only activity for the decreasing number of rural households in the analyzed area. Diversification of economic activities is key to rural development. Therefore, the goal is to support families on agricultural farms and rural residents who want to diversify their activities, and to provide services for rural communities. Examples of such activities include promoting crafts, direct marketing and promotion, wood processing and handicrafts, rural and other forms of tourism, marketing and brand development, unconventional agricultural production, etc. Also, many IT professionals have recently started to seek quality remote-work bases in natural settings that offer recreational and other amenities such as horse riding, hiking and cultural events. Therefore, it is possible to consider improving countryside lodging facilities with good internet access and additional activities offered by other rural economy/agriculture participants as well as through established value chains. Improving service availability and general living conditions in rural areas is an important aspect of this document, ensuring the demographic and economic development of rural communities.

To achieve Strategic Goal 3 *Responsible management of natural resources in rural areas*, one priority with an accompanying set of measures were defined:

### ***Priority 3.1. Protection of natural resources***

Measure 3.1.1. Soil protection from various forms of degradation

Measure 3.1.2. Activate the agricultural land market

Measure 3.1.3. Support for organic production system and the application of the integrated pest management approach

Measure 3.1.4. Identification and protection of animal genetic resources

Firstly, it is necessary to resolve the issue of land owned by RS or cooperatives, and make the land available to local farmers with clearly defined rights and obligations. Farmers must have assurance of long-term land use rights, while grantors must have assurance of regular income and improved land quality during use. In connection with this, it is necessary to regulate water usage from Lake Klinje for irrigation in the Avtovac field. Land quality must be assessed by reference laboratories before leasing, with lease funds allocated to a dedicated fund for land improvement in other municipality locations and natural resource management training. Rural area natural resources include production resources such as land and forests, as well as other natural resources of special value and genetic material requiring conservation and protection in the interest of the municipality of Gacko, as well as RS and BiH. These resources contribute equally to rural area development and represent a potential for development. In this regard, programmes and measures are needed to valorize and protect this capital in order to achieve sustainable development goals and preserve the capital for future generations, particularly with regard to Gatačko cattle and the Pramenka sheep breed raised in this area. Also, efforts should be made to identify, protect and valorize indigenous fruit varieties such as pears and apples, as well as other successful plant genetic resources in this municipality. In the context of measures 3.1.3 and 3.1.4, a portion of funds should be allocated to encourage this type of farming to attract young people and retain them in rural areas, as well as attract tourists to the countryside. Additionally, Gatačko cattle, one of BiH's most important genetic resources, should be better promoted in Gacko.

A detailed overview of development priorities and measures is given in Annex 1.

## **4. KEY STRATEGIC PROJECTS**

Key strategic projects are distinguished by the size of the investment or the anticipated impact, and they represent projects that the municipality of Gacko would seek to implement with potential partners, including international organisations and projects, domestic institutions from all levels of government and potential investors.

### **1. SUPPORT TO SELF-EMPLOYMENT IN RURAL AREAS**

Support to self-employment in rural areas would include start-up packages in the form of basic inputs or cash for establishing agricultural production or non-agricultural activities that can take place on the farm. Input packages could include reproductive material, equipment for milking, milk processing and meat processing (prosciutto, equipment for drying beef, mutton, goat meat or preparing sausages, etc.), beekeeping equipment, soil cultivation equipment, as well as equipment for processing other types of agricultural or forest fruits/raw materials. Cash start-up packages would be provided for establishing production in activities related or unrelated to agricultural production, such as tourism, crafts, on-farm processing, mechanized services, provision of educational services, etc. The amount of cash for start-up packages available would depend on the total amount of funds available. Currently, start-up packages available from the RS level range from BAM 5,000 for rural women to BAM 40,000 for young engineers. Also, input packages are available from the IFAD project. This project aims to increase the number of rural youth and women starting their own businesses. The estimated financial resources for the implementation of the project total BAM 200,000 from various sources.

### **2. DEVELOPMENT OF THE VALUE CHAIN IN AGRICULTURAL PRODUCTION**

The value chain involves establishing organized agricultural production and marketing of agricultural products from the field to the final customer, with the primary producer positioned such to maximize income and competitiveness in relation to other links in the chain. During strategy development, value chains were defined for kajmak production and beekeeping. This project would include investments and measures to establish efficient value chains through the construction of processing facilities such as milk processing plants and home milk processing facilities (mini-cheese dairies), as well as equipment for producing wax foundations, royal jelly and other bee products. To ensure efficient value chains, it is also necessary to raise the technological level of primary production through new technologies. The expected effects of this project include growth in added value in agriculture, increased finalization of agricultural raw materials, built processing capacities and established value chains. Also, to ensure stronger and sustainable market performance, actions towards forming a consortium are necessary. The estimated financial resources for project implementation total BAM 670,000 from various sources.

### **3. PROTECTION AND PROMOTION OF TRADITIONAL AUTOCHTHONOUS PRODUCTS**

The municipality of Gacko is well-known for its food and agriculture, and this part of the municipality's identity should be leveraged. One way to capitalize on the positive image of products from this municipality is to seek geographical indication protection for the aforementioned products, as well as for rogatički potatoes, romanijski skorup, etc who are already on the list of protected products. The first step in implementing these activities is to improve the capacity of production organizations that initiate the protection procedure, prepare feasibility studies, control traceability in the production chain, and promote and market products. The next step should be selecting sales channels for supplying local, RS, and foreign markets, a demanding process for producer organizations such as cooperatives and

associations. The estimated financial resources for project implementation total BAM 125,000 from various sources, including measures 2.2.3 and 3.1.5.

#### **4. INVESTMENTS IN THE DEVELOPMENT OF RURAL TOURISM**

Through the development of non-agricultural activities such as rural tourism, agritourism, wood processing, crafts or other service activities, farm income becomes less dependent on agricultural production alone, leading to diversification of sources of income and resulting in a more efficient use of farm labour. Given the rich natural, cultural and historical heritage, diverse gastronomic offerings and marked biodiversity of the area, rural tourism is one of the activities that must better leverage these potentials. Rural tourism development should proceed in two main directions: agritourism on agricultural farms or rural households and as part of the rural economy and tourist offerings. The first direction includes support for individual producers, rural residents, and domestic and foreign investors through combined financing from municipal budgets, RS funds and pre-accession funds. The second direction involves activities coordinated by the Tourist Organization and the Consortium to valorize rural heritage, promote rural products and services, design tourist products related to rural areas, and adapt infrastructure and superstructure for rural tourism development. The expected effects of this project include growth in the offer of tourist services in rural areas, an increase in registered farms providing agritourism services, increased consumption of homemade agricultural products, and an increase in visitors and overnight stays in rural areas. The estimated financial resources for project implementation total BAM 325,000 from various sources and for different measures.

## 5. DESCRIPTION OF THE INTERNAL AND EXTERNAL CONSISTENCY OF THE STRATEGIC DOCUMENT

During the preparation of the Gacko Municipality Agriculture and Rural Development Strategy, the key elements of development plans in the field of agriculture and rural development at the level of the state of BiH and at the level of RS, as well as relevant development plans at the municipal level, were considered. This strategic and development framework includes:

- 2022-2028 BiH Strategic Plan for Rural Development
- 2021-2027 RS Strategic Plan for the Development of Agriculture and Rural Areas
- 2022-2028 Gacko Municipality Development Strategy

Given the timeframes of these strategic documents, the project team additionally considered the information provided by the relevant institutions regarding the principal strategic orientations for the upcoming term.

The strategic period for agriculture and rural development at the EU level until 2027 is marked by the beginning of the implementation of the EU's new ambitious plan, namely the European Green Deal, which includes a new Biodiversity Strategy, a new Farm to Fork Strategy and other strategic guidelines that contribute to the EU's goal of becoming the first green continent. With the adoption of the EU Green Plan, the Western Balkan countries have a new alignment obligation, which will be supported by additional funds from the Western Balkans Investment Framework. This obligation involves environmentally friendly technologies, industry innovation support, the introduction of cleaner, cheaper and healthier modes of private and public transport, decarbonization of the energy sector, energy efficiency building retrofitting and collaboration with international partners towards improving global environmental protection standards.

In addition to alignment with the principles of the Green Plan, strategic goals and measures were also aligned with BiH's Sustainable Development Goals<sup>27</sup>. Alignment was achieved in particular with the following Sustainable Development Goals (SDG):

SDG2: Zero hunger, target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment. Strategic Goal 1 of this strategic document, as well as the priorities and measures defined under this goal, contribute to the realization of SDG2, target 2.3.

SDG2: Zero hunger, target 2.4. By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality. Strategic Goal 3 of this strategic

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<sup>27</sup> The Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future for the whole world. They address the global challenges faced by the whole world, including poverty, inequality, climate change, environmental degradation, prosperity, peace and justice. (The SDGs Framework in Bosnia and Herzegovina, December 2019)

document, as well as the priorities and measures defined under this goal, contribute to the realization of target 2.4.

Furthermore, targets 2.5 and 2.6 correspond to the measures and priorities defined under Strategic Goal 3 of this document, which envisage the protection of genetic resources, traditional autochthonous products, as well as tangible and non-tangible heritage in general.

SDG12: Responsible consumption and production: Ensure sustainable consumption and production patterns. Strategic Goals 1 and 3 of this document, as well as the priorities and measures defined under these goals, contribute to the achievement of SDG12.

SDG15: Conserving life on land: Protect, establish and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and stop biodiversity loss. Strategic Goal 3 of this document, as well as the priorities and measures defined under this goal, contribute to the achievement of SDG15.

### ***BiH Strategic Plan for Rural Development (2022-2028) – Framework document***

At the time of writing the Gacko Municipality Local Agriculture and Rural Development Strategy, the development of the 2022-2028 BiH Strategic Plan for Rural Development was in progress. According to the draft document, six strategic goals for agriculture and rural development in BiH were defined for the period 2022-2028:

- Agriculture development based on increasing the productivity and income sustainability of agricultural farms;
- Encouraging competitiveness, digitization and innovation in agriculture;
- Sustainable management of natural resources and support for the development of climate-resilient agriculture;
- Revitalization, preservation and empowerment of rural areas;
- Development of rural development implementation and management systems;

These goals provide a broader framework for agriculture and rural development, while also striving to be consistent with the current strategic priorities set by the entities and Brčko District of BiH. All three strategic goals outlined by the Gacko Municipality Local Agriculture and Rural Development Strategy for the period until 2027 are aligned with the strategic framework at the BiH level.

### ***RS Strategic Plan for the Development of Agriculture and Rural Areas for the period until 2027***

According to the document, the priority goal of the new strategic framework is to determine directions, goals and methods for increasing sustainable agricultural production, improving and harmonizing its production structure, increasing agricultural product processing, improving and promoting more balanced rural development. The strategic goals for developing the agricultural sector and rural areas in RS from 2021 to 2027 respond to identified strengths, weaknesses, opportunities and threats, while taking account of the financial and other aspects foreseen for that period. The strategic framework comprises five strategic goals (SGs), 28 objectives and three cross-cutting priorities, further elaborated through 78 measures. The strategic goals are:

- Increasing the volume and productivity of agricultural production,
- Increasing competitiveness and developing value chains in the agricultural and food sectors,
- Protecting the environmental and sustainably using natural resources,
- Revitalizing rural areas,

- Improving the institutional and legislative environment for agriculture development.

All three strategic goals outlined by the Gacko Municipality Agriculture and Rural Development Strategy for the period until 2027 are aligned with the strategic framework at the RS level.

The strategic platform also includes cross-cutting priorities related to gender equality, improving the situation of rural women, demographic renewal, prioritizing small farmers, reducing poverty and caring for the elderly. Due to their comprehensive importance, these priorities cannot be attributed to a single strategic goal but represent general priorities taken into account in achieving all strategic goals and their associated measures and activities. All three strategic goals outlined by the Gacko Municipality Agriculture and Rural Development Strategy for the period until 2027 are aligned with the cross-cutting priorities.

### *2022-2028 Gacko Municipality Development Strategy*<sup>28</sup>

The strategic goals (SG) for the development of the Gacko municipality until 2028 revolve around three strategic goals:

Strategic Goal 1: *Continued, stable and sustainable economic development*

Strategic Goal 2: *Significantly improved quality of life of residents*

Strategic Goal 3: *Preserved natural resources and protected environment*

SG 1 of the municipal strategy highlights the development of intensive agricultural production and processing industry as a comparative advantage for Gacko. The strategy recognizes employment and job creation as the biggest challenge and the focus of development priorities and measures. SG 2 focuses on the social component of development, including the efficiency of public administration and healthcare, as well as social, educational, sports, cultural and general societal progress. The strategy places an equally important emphasis on the protection of natural resources, particularly those parts of nature identified as potential or declared national parks. Overall, the Gacko Municipality Agriculture and Rural Development Strategy is aligned with the Gacko Municipality Development Strategy until 2028.

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<sup>28</sup> <https://media.gacko-rs.info/2022/04/2.-Strategija-razvoja-opstine-Gacko.pdf>

## 6. FINANCIAL FRAMEWORK

Implementation of the Agriculture and Rural Development Strategy of the Municipality of Gacko 2023-2027 will be financed from the municipal budget and other sources of funding. The framework financial plan, which includes indicative amounts required for the achievement of strategic goals and measures, brings the total value for Strategy implementation to BAM 2,555,000, with 30 percent coming from the municipality's own funds, 30 percent from private users' funds and the remainder from other sources. This would require a municipal budget commitment of around BAM 153,300 per year for the implementation of this strategy.

*Table 54: Framework financial plan*

Strategic goals, priorities and measures	Financing structure	Total (BAM)	Institutional budget (BAM)	Other sources of financing (BAM)
	(in %)			
<b>1. Improving the competitiveness of agricultural production within selected value chains</b>	58.71%	1,500,000	450,000	1,050,000
1.1. Increasing productivity and improving the quality of agricultural products	32.49%	830,000	249,000	581,000
1.1.1. Investment support for improved agricultural production	20.35%	520,000	156,000	364,000
1.1.2. Improving the quality of agricultural production	2.35%	60,000	18,000	42,000
1.1.3. Improving access to knowledge and innovations in agricultural production, processing, marketing, communication, etc	1.96%	50,000	15,000	35,000
1.1.4. Provision of start-up packages for rural youth and women	7.83%	200,000	60,000	140,000
1.2. Development of value chains and improvement of product quality	26.22%	670,000	201,000	469,000
1.2.1. Investments in the development of agri-food value chains	19.57%	500,000	150,000	350,000
1.2.2. Investments in on-farm processing of agricultural products	3.91%	100,000	30,000	70,000
1.2.3. Improving capacity of producers' organisations	2.74%	70,000	21,000	49,000
<b>2. Improved quality of life in rural areas</b>	32.29%	825,000	247,500	577,500
2.1. Support for the diversification of economic activities in rural areas	12.72%	325,000	97,500	227,500
2.1.1. Investing in the provision of tourism services on farms	9.78%	250,000	75,000	175,000
2.1.2. Investing in the development of crafts and other supplementary activities in the rural settlements	1.96%	50,000	15,000	35,000
2.1.3. Protection of traditional autochthonous products	0.98%	25,000	7,500	17,500
2.2. Improvement of rural infrastructure and availability of public/social services	19.57%	500,000	150,000	350,000
2.2.1. Support for improving the availability of public services	9.78%	250,000	75,000	175,000
2.2.2. Support for improving physical infrastructure in rural areas	9.78%	250,000	75,000	175,000
<b>3. Responsible management of natural resources in rural areas</b>	9.00%	230,000	69,000	161,000

3.1. Protection of natural resources	9.00%	230,000	69,000	161,000
3.1.1. Soil protection from various forms of degradation	3.13%	80,000	24,000	56,000
3.1.2. Activating the agricultural land market	0.39%	10,000	3,000	7,000
3.1.3. Support for organic production system and the application of IPM approach	1.57%	40,000	12,000	28,000
3.1.4. Identification and protection of animal genetic resources	3.91%	100,000	30,000	70,000
IN TOTAL		2,555,000	766,500	1,788,500

Source: authors

The foregoing funds would be used for the proposed structural measures for agriculture and rural development, and would be co-financed from other sources of funding that were previously identified for each measure. These other sources include the RS Agrarian Budget, IPA funds (EU4Agri) and funds from other international organizations (IFAD, USAID, World Bank, etc.)

In accordance with the RS Law on Agriculture and the strategic commitments of both the previous and the new strategic frameworks (Draft Strategy for the Development of Agriculture and Rural Areas for the period until 2027), local communities should refrain from providing additional financial incentives in the form of direct support measures to producers, and instead concentrate the budget funds available for agriculture and rural development on the so-called second pillar measures, i.e. support for rural development, primarily to investments by agricultural farms and processors. In this sense, the structure of support measures would no longer include the milk premium and other support measures for current production. The funds of the Agrarian Budget are meant to replace the co-financing of capital investments, in accordance with farmers' requests. In the initial years, co-financing from the municipal budget may be higher for the municipal budget and lower for the beneficiary in order to encourage investments in the farm, which are currently at a very low level. Which model will ultimately be applied will depend on the availability of funds in the municipal budget as well as the nature and priority of investments.

The availability of funds from international organizations will depend on the readiness of local partners, primarily municipal departments, to provide – on the basis of well-prepared projects – co-financing for investment and infrastructure projects, construction of market infrastructure, improvement of the availability of public services in rural areas, promotion of rural products, diversification of the rural economy, etc.

The detailed conditions and method of implementation of the funds would be governed by special regulations adopted by the municipality in accordance with the applicable legislation.

The implementation of environmental protection and social development measures in rural areas, as outlined in this strategic document, would continue to be funded through existing dedicated budget lines, separately from the funding for agriculture and rural development support.

## 6.1. Alternative sources of financing

The funds of international donors are an important source of support for the improvement of agriculture and life in rural areas. A significant number of donors are active in BiH. Some of them have funds intended specifically for agriculture, while others can also improve the situation of the population living

in rural areas through support for vulnerable groups, women, youth and others. The following are the most important donors who were active in 2022:

**Table 55. Active donors in BiH**

<b>Donor/project name and comment</b>	<b>Contact (website)</b>
Food and Agriculture Organization of the UN (FAO)	<a href="https://www.fao.org/">https://www.fao.org/</a>
European Union (EU) A variety of funding opportunities are available for the development of agriculture and rural areas, and additional funds are likely to become available once the country is granted candidate status.	<a href="http://europa.ba/">http://europa.ba/</a> <a href="https://eu4agri.ba/">https://eu4agri.ba/</a> <a href="https://srb-bih.org/sr/serbian-pocetna/">https://srb-bih.org/sr/serbian-pocetna/</a> <a href="https://www.interreg-hr-ba-me.eu/">https://www.interreg-hr-ba-me.eu/</a> <a href="https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en">https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en</a>
United Nations Development Programme (UNDP) A very active donor	<a href="http://www.undp.ba">www.undp.ba</a> <a href="https://procurement-notice.undp.org/">https://procurement-notice.undp.org/</a>
Government of the Republic of Serbia Administration for Cooperation with the Diaspora and Serbs in the Region	<a href="https://www.dijaspora.gov.rs/">https://www.dijaspora.gov.rs/</a>
U.S. Agency for International Development (USAID) Developing Sustainable Tourism in BiH – a current project for sustainable tourism development	<a href="http://www.usaid.gov/ba">www.usaid.gov/ba</a> <a href="https://turizambih.ba/">https://turizambih.ba/</a>
Swedish Agency for International Development Swedish Government’s business improvement project – C2C	<a href="http://www.sida.se">www.sida.se</a> <a href="https://c2c.ba/">https://c2c.ba/</a>
German Agency for International Cooperation (GIZ) A very active donor	<a href="http://www.giz.de">www.giz.de</a>
Czech Republic Czech Development Agency (CZDA) Embassy of the Czech Republic	<a href="http://www.czda.cz/">http://www.czda.cz/</a> <a href="https://www.mzv.cz/sarajevo/bs/index.html">https://www.mzv.cz/sarajevo/bs/index.html</a>
Japanese International Cooperation Agency (JICA) A very active donor	<a href="http://www.jica.go.jp/">http://www.jica.go.jp/</a>
Turkish Cooperation and Coordination Agency (TIKA) A very active donor	<a href="https://www.tika.gov.tr/en">https://www.tika.gov.tr/en</a>
Swiss Agency for Development and Cooperation (SDC) SDC activities are mostly concentrated on FBiH, but a portion of funding is also implemented in RS	<a href="http://www.swiss-cooperation.admin.ch">www.swiss-cooperation.admin.ch</a>
Slovak Agency for International Development Cooperation (SLOVAKAID) The size of these funds is typically smaller	<a href="https://slovakaid.sk/">https://slovakaid.sk/</a>

Source: authors

To make better use of these opportunities, it is essential that relevant strategic and programmatic documents exist at the municipal, RS and BiH levels, which should be referenced in project proposals. It is also useful to refer to relevant international documents (e.g. Stabilization and Association Agreement – SAA, regional strategies for the development of the Danube area, SWG documents, EU regulations: <https://eur-lex.europa.eu/>, etc).

In RS and BiH, there are a growing number of firms that provide project preparation assistance. There are also many private consultants who may assist with the drafting of project proposals, and it is therefore advisable to maintain a database of consultants<sup>29</sup>.

<sup>29</sup> <https://www.gea.ba/la/>, <https://solvia.ba/>, <https://devcon.pro/>, <https://erbezconsulting.com/>, <https://empyriaconsulting.com/>, <https://www.centarzaekonomiju.com/>, <http://mdpinicijative.ba/>

## **7. FRAMEWORK FOR IMPLEMENTATION, MONITORING, REPORTING AND EVALUATION OF THE STRATEGIC DOCUMENT**

In accordance with the Gacko Municipality Development Strategy, the Development Management Unit of Gacko Municipality plays a key operational role in coordinating the implementation, monitoring and evaluation of the Gacko Municipality Local Agriculture and Rural Development Strategy. In close collaboration with the mayor (and deputy mayor), this unit will coordinate the design and implementation of the strategy implementation plan, as well as the alignment of the departments' annual work plans and the budget plan with the strategy implementation plan.

Apart from the Development Management Unit, the Department for Economy, Finance and Social Activities and other Departments in the municipality are key to the implementation of the Strategy. In addition to the municipal administration, in the implementation of the strategy, the contribution of other organizations at the local level is expected, through the elaboration and implementation of planned projects and measures, as well as public institutions and companies in other sectors. In addition, producer organizations should play a partner role as representatives of the civil sector, as well as entrepreneurs from the fields of agriculture, tourism, crafts and other important activities in the rural area as representatives of the business sector..

As outlined in the Gacko Municipality Development Strategy, the Municipal Development Team or the new Rural Development Partnership will play a crucial role in implementing, monitoring and evaluating the current Agriculture and Rural Development Strategy of the Municipality of Gacko 2023-2027. This partnership or the existing Municipal Team, which includes representatives from the municipal council and the executive, public institutions and enterprises, the private sector, local communities, NGOs, and others who have signed a joint declaration on local development partnership, is in accordance with the integrated rural development policy, which is based on the partnership of all local stakeholders in defining and implementing development priorities.

The method, form and dynamics of monitoring and evaluating the implementation of the current strategy will also be aligned with the Partnership's Rules of Procedure. The Rules stipulate that the Partnership meets at least twice a year – once to review the implementation of activities in the previous year and once to discuss the current or next year's work plan.

The Development Management Unit at the Mayor's Office provides technical and professional support to the Partnership and the Municipal Development Team.

The mid-term evaluation of the Strategy's implementation will be carried out at the end of the three-year period (2025), and the final evaluation will be carried out following the completion of the strategy implementation period (2027). As part of the mid-term evaluation, the strategic goals' continued validity will be examined, while the final evaluation will also serve as the foundation for the next strategic planning cycle.

After each year of implementation, it will be necessary to produce a progress report and convene a Partnership meeting. At the annual meeting, the Action Plan's measures and priorities will be revised and amended as needed based on the Action Plan implementation report.

The process of monitoring the implementation of the Agriculture and Rural Development Strategy aims to provide information on the following: to what extent what was planned was achieved, where there were difficulties in achieving what was planned, what this means for planning subsequent activities, whether resources were adequately used, to what extent the users participated in the realization of the planned activities.

Indicators are used as a tool to assess, at each level (output, outcome, impact), the extent to which measures, activities or the entire Agriculture and Rural Development Strategy contributed to the achievement of goals. Indicators must be specific, measurable, achievable in a cost-effective manner, relevant and time-bound. Monitoring indicators should provide essential inputs for annual reports and analyses of the immediate outcomes of implemented programmes and measures.

Input indicators pertain to the budget or other resources allocated at each level of support. Output indicators measure activities directly implemented within the programme. Activities are the first step towards achieving an intervention's operational objectives and are expressed in physical or monetary units. Outcome indicators measure the direct and immediate effects of an intervention. They provide information regarding changes in, for example, the behaviour, capabilities or actions of direct beneficiaries and are expressed as physical or monetary values. Impact indicators refer to the benefits of the programme both at the level of the intervention and in the programme area as a whole. They are linked to the overarching objectives of the Strategy and are part of the final evaluation of the impact of implemented programmes and measures. The list of indicators for each Strategy measure is given in the description of each measure.

The impact of implemented measures is evaluated periodically, primarily on the basis of qualitative analyses obtained from surveys such as the agricultural census, living standard measurement studies, household income surveys and other specialized surveys and studies.

The municipal Department for Finance and Department for Agriculture are the key departments in charge of monitoring the implementation of the Gacko Municipality Agriculture and Rural Development Strategy. The Department for Finance would be responsible for implementing the first phase of monitoring, which consists of the administrative oversight of budget allocation planning and execution. The Department for Economy should monitor and evaluate the qualitative and quantitative results of the implementation of individual activities using the monitoring indicators that accompany each measure.

## 8. ANNEXES TO THE STRATEGIC DOCUMENT

### Annex 1:

#### 8.1: Summary of strategic goals, priorities and measures

**Table 56. Summary of strategic goals, priorities and measures**

Number and designation	Name	Indicators and financial framework		
1. Strategic goal	Improving the competitiveness of agricultural production within selected value chains	Strategic goal indicators	Baseline	Target
		Amount of investments supported from the budget of local administration in agriculture production	129,000BAM	+20%
		Number of functioning value chains	No functioning value chains	At least two VC functioning
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		450,000	1,050,000	1,800,000
1.1. Priority	Increasing productivity and improving the quality of agricultural products	Priority indicators	Baseline	Target
		Productivity growth	2.888 kg milk per cow per year 3 t/ha of barley 9 t/ha of potato	+20%
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		249,000	581,000	996,000
1.1.1. Measure	Investment support for improved agricultural production	Measure indicators	Baseline	Target
		Amount of investment	BAM 10,000 per year	BAM 104,000 per year
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		156,000	364,000	520,000
1.1.2. Measure	Improving the quality of agricultural production	Measure indicators	Baseline	Target
		Number of farms that have received training	10% of registered	all farms registered in FR
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		18,000	42,000	60,000
1.1.3. Measure	Improving access to knowledge and innovations in agricultural production	Measure indicators	Baseline	Target
		Number of farms that have received training	10% of registered	all farms registered in FR
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		15,000.0	35,000	50,000
1.1.4. Measure	Provision of start-up packages for rural youth and women	Measure indicators	Baseline	Target
		Number of start-up packages	0	20 packages of 10,000 each
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		60,000	140,000	200,000
1.2. Priority	Development of the agri-food value chains	Priority indicators	Baseline	Target
		Number of sectors in which the value chain has been established	0 chains	2 value chains
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		201,000	469,000	670,000
1.2.1. Measure	Investments in the development of agri-food value chains	Measure indicators	Baseline	Target
		Number of agrifood value chains established in Gacko	0	2 chains established
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		150,000	350,000	500,000
		Measure indicators	Baseline	Target

1.2.2. Measure	Investments in on-farm processing of agricultural products	Amount of invested funds	BAM 0	BAM 20,000 per year
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		30,000	70,000	100,000
1.2.3. Measure	Improving capacity of producer organisations	Measure indicators	Baseline	Target
		Amount of invested funds Number of PO that have received support	0BAM 0PO	70.000BAM 5 PO
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		21,000	49,000	70,000
2. Strategic goal	Improved quality of life in rural areas	Strategic goal indicators	Baseline	Target
		The percentage of population living in rural areas	40%	+10%
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		247,500	577,500	990,000
2.1. Priority	Support for the diversification of economic activities in rural areas	Priority indicators	Baseline	Target
		Type of activity	predominantly agriculture	agriculture and non-agriculture activities
		Budget (BAM)	Other sources (BAM)	Total (BAM)
97,500	227,500	325,000		
2.1.1. Measure	Investing in the provision of tourist services on farms	Measure indicators	Baseline	Target
		-Amount of invested funds; - Number of registered agritourism service providers	BAM0 1 registred provider	50.000 per applicant 5 registered providers
		Budget (BAM)	Other sources (BAM)	Total (BAM)
75,000	175,000	250,000		
2.1.2. Measure	Investing in the development of crafts and other supplementary activities in rural settlements	Measure indicators	Baseline	Target
		Number of promotional activities	1	5
		Budget (BAM)	Other sources (BAM)	Total (BAM)
15,000	35,000	50,000		
2.1.3. Measure	Protection of traditional autochthonous products	Measure indicators	Baseline	Target
		Number of protected products with GI	0 products with GI protection	1 product with GI
		Budget (BAM)	Other sources (BAM)	Total (BAM)
7,500	17,500	25,000		
2.2. Priority	Improvement of rural infrastructure and availability of public/social services	Priority indicators	Baseline	Target
		Satisfaction with the quality of services	negative	positive
		Budget (BAM)	Other sources (BAM)	Total (BAM)
150,000	350,000	500,000		
2.2.1. Measure	Support for improving the availability of public services in rural areas	Measure indicators	Baseline	Target
		Amount of invested funds	BAM 10,000 per year	BAM 25,000 per year
		Budget (BAM)	Other sources (BAM)	Total (BAM)
75,000	175,000	250,000		
2.2.2. Measure	Support for improving physical infrastructure in rural areas	Measure indicators	Baseline	Target
		construction of a water wellfield	no construction exists	wellfield constructed
		Budget (BAM)	Other sources (BAM)	Total (BAM)
75,000.0	175,000	250,000		
3. Strategic goal	Sustainable management of natural resources in rural areas	Priority indicators	Baseline	Target
		Number of farms with organic certificate	0	5 farms
		Number of genetic protected and conserved plant or animal species	0	one animal species protected
		Land market data base established	No data base	Data base established
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		69,000	161,000	230,000
3.1. Priority	Protection of natural resources	Priority indicators	Baseline	Target
		hectares of protected area	0 hectares	20 hectares
		Budget (BAM)	Other sources (BAM)	Total (BAM)

		69,000	161,000	230,000
3.1.1. Measure	Soil protection from various forms of degradation	Measure indicators	Baseline	Target
		Degradation monitoring	not established	established
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		24,000	56,000	80,000
3.1.2. Measure	Establishing the agricultural land market	Measure indicators	Baseline	Target
		Database of land areas	not available	available
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		3,000	7,000	10,000
3.1.3. Measure	Support for organic production and application of IPM approach	Measure indicators	Baseline	Target
		Number of certified producers	0 producers	5 producers
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		12,000	28,000	40,000
3.1.4. Measure	Identification and protection of genetic resources	Measure indicators	Baseline	Target
		Number of identified plant and animal species included in the protection programme	0 species	1 animal species protected
		Budget (BAM)	Other sources (BAM)	Total (BAM)
		30,000	70,000	100,000

## 8.2: Detailed overview of measures

**Table 57. Detailed overview of measures**

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.1. Increasing productivity and improving the quality of agricultural production		
Name of the measure	<b>1.1.1. Investment support for improved agricultural production</b>		
Description of the measure with an indicative scope	Investments play a crucial role in driving development, including in the agricultural sector. To achieve progress and boost labour productivity, it is essential to invest in means of production, such as livestock or perennial crops, facilities for housing animals or storing products, irrigation systems, agricultural machinery and other means of work. The measure can be financed through various models, with the majority of funds coming from the RS and local levels as well as user contributions. The choice of financing model depends on the type of investment and general interest, and is subject to the prevailing circumstances at the time of measure implementation.		
Key strategic projects	PROVIDING START-UP PACKAGES FOR RURAL YOUTH AND WOMEN		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Amount of invested funds; - Number of farms that have received support funds;	- BAM 10,000 per household  - 4 farms per year	- 520,000 - 20 farms in the course of implementing the strategy
The measure's developmental effect and contribution to the achievement of priorities	Improved productivity, product quality and income for agricultural producers Giving priority or additional points to women and young people when allocating support funds, as well as to investments that have a positive impact on the environment and help reduce pollution		
Indicative financial projection and sources of funding	Amount: BAM 520,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (FAO, IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, agricultural producers		
Target groups	Agricultural producers registered in the Register of Agricultural Holdings		

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.1. Increasing the volume and productivity of agricultural production		
Name of the measure	<b>1.1.2. Improving the quality of agricultural production</b>		

Description of the measure with an indicative scope	In case of Gacko, agricultural production standardisation involves aligning production with the food quality and safety assurance systems required by the market destinations of items produced in the municipality of Gacko. The policy would require co-financing the implementation of a quality system in businesses on the municipality's territory, as well as individual and collective producer certification, the latter of which would be more economically advantageous for fragmented family farms.		
Key strategic projects	DEVELOPMENT OF THE VALUE CHAIN IN AGRICULTURAL PRODUCTION		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Number of farms that have received training in food safety standards	0 farms	all farms within functional value chains
The measure's developmental effect and contribution to the achievement of priorities	Market standards in agriculture and food industry today are linked to food security, food safety and the application of the concepts of good agricultural practise, good production practise, and other practises based on market demands. The list of quality standards in food industry is even longer, and it includes the fulfilment of requirements relating to facilities and applied technologies in product processing. Despite the fact that RS developed special Rules for On-farm Processing of Products, the essential principles of consumer health protection and safety must be met, which necessitates investments in achieving those standards. The effect refers to Improved productivity, product quality and income for agricultural producers		
Indicative financial projection and sources of funding	Amount: BAM 60,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 - 2027.		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality, Consortium		
The measure to be implemented by	Gacko Municipality, Ministry of Agriculture, Forestry and Water Management		
Target groups	Agricultural producers who are members of cooperatives and associations		

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.1. Increasing the volume and productivity of agricultural production		
Name of the measure	<b>1.1.3. Improving access to knowledge and innovations in agricultural production, processing, marketing, communication, etc</b>		
Description of the measure with an indicative scope	The model for implementing the measure entails the establishment of cooperation between producers and providers of extension services (state extension agents, private extension agents, scientists, etc.). The implementation model will depend on who the service providers are, and will involve regular visits to producers who invest in establishing new or expanding existing production, the creation of special support programmes for the transfer of knowledge and skills to rural youth and women, the inclusion of environmental protection and climate change adaptation as mandatory components of the education curriculum, as well as support for e.g. start-up package users.		
Key strategic projects	DEVELOPMENT OF THE VALUE CHAIN IN AGRICULTURAL PRODUCTION		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Number of agricultural holdings that have participated in at least one training programme	10% of registered farms	all registered farms
The measure's developmental effect and contribution to the achievement of priorities	The application of knowledge and innovation in agricultural production is a broad concept that can range from the application of basic agricultural production knowledge for novice producers to the application of advanced precision agriculture and production combined with IT technologies for advanced agricultural producers. In either case, the ultimate result is increased profit, higher productivity and more cost-effective production, as well as a better organized value chain.		
Indicative financial projection and sources of funding	Amount: BAM 50,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Ministry of Agriculture, Forestry and Water Management		
Target groups	Agricultural producers registered in the Register of Agricultural Holdings		

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.2. Development of the agri-food value chains		
Name of the measure	<b>1.2.1. Investments in the development of agrifood value chains</b>		
Description of the measure with an indicative scope	The development of a value chain requires market infrastructure, which includes storage		

	facilities, sales facilities, purchasing centres, packaging facilities, and transportation facilities. These investments are sometimes made by individuals and sometimes by the organizers of production, purchase and marketing of agricultural products. The investor may also be a municipality, which, after the investment period, transfers control of these market infrastructure facilities to the agricultural producers' organization. The method of implementation of the measure depends on the financing model, which can sometimes include 100% financing from the municipality or other sources of finance, and can sometimes include beneficiaries' own funds, depending on the type of investment.		
Key strategic projects	DEVELOPMENT OF THE VALUE CHAIN IN AGRICULTURAL PRODUCTION		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Number of agrifood value chains established in Gacko	0	2 chains established
The measure's developmental effect and contribution to the achievement of priorities	Improved agricultural products marketability and income for agricultural producers, and the achieved social effect of the measure by giving priority or additional points to women and youth when allocating support funds, as well as to investments that have a positive impact on the environment and contribute to pollution reduction		
Indicative financial projection and sources of funding	Amount: BAM 500,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality, Consortium		
The measure to be implemented by	Gacko Municipality, partner institutions		
Target groups	Agricultural producers, associations of agricultural producers, agricultural cooperatives, entrepreneurs and other entities in rural areas		

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.2. Development of agrifood value chains		
Name of the measure	<b>1.2.2. Investments in on-farm processing of agricultural products</b>		
Description of the measure with an indicative scope	The measure includes investments in construction/repurposing/reconstruction/adaptation of buildings, as well as technological equipment or the furnishing of processing rooms in accordance with sanitary and hygienic standards on the farm or in a special facility that can be given to beekeepers' associations or producers of Gatački kaymak, for use. The method of implementation depends on the agreed-upon investment models, which, like other investments on the farm, may follow the 50:40:10 model or a different model depending on the circumstances.		
Key strategic projects	DEVELOPMENT OF THE VALUE CHAIN IN AGRICULTURAL PRODUCTION		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Amount of invested funds in processing activities	BAM 0	BAM 100,000
	A functioning processing facility	No	Yes
The measure's developmental effect and contribution to the achievement of priorities	The construction of a processing and storage facility solves the marketing problem, allowing for the expansion of production and an increase in producers' income through value addition. In the long term, it ensures quick and efficient supply for customers, as well as for distributors and local producers (e.g. for beekeeping inputs).		
Indicative financial projection and sources of funding	Amount: BAM 100,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Consortium, Associations		
Target groups	Agricultural producers, associations of agricultural producers, agricultural cooperatives, entrepreneurs and other entities in rural areas		

Link to strategic goal	1. Improving the competitiveness of agricultural production within selected value chains		
Priority	1.2. Development of agrifood value chains		
Name of the measure	<b>1.2.3. Improving the capacity of producer organisations</b>		
Description of the measure with an indicative scope	Agricultural producers cannot improve their position in the market chain unless they organize themselves into a profitable organizational structure. In this sense, there is a need to build the capacity of the aforementioned organizations, both management capacity and technical-technological capacity for performing business activities or providing services to users.. Their role would primarily be to increase the marketability of products originating from Gacko, improve the knowledge and skills of		

	its members, introduce new technologies, implement digital solutions in production and promotion, and raise funds for agricultural development from domestic and international sources.		
Key strategic projects	ESTABLISHING VALUE CHAIN		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Amount of invested funds Number of PO that have received support;	BAM 0 0 PO	70,000 5 PO
The measure's developmental effect and contribution to the achievement of priorities	Improved market position for agri-food producers, tourist-hospitality sector and residents of rural areas.		
Indicative financial projection and sources of funding	Amount: BAM 70,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (FAO, IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Consortium		
Target groups	Agricultural producers, associations of agricultural producers, agricultural cooperatives, entrepreneurs and other entities in rural areas		

Link to strategic goal	2. Improved quality of life in rural areas		
Priority	2.1. Support for the diversification of economic activities in rural areas		
Name of the measure	<b>2.1.1. Investing in the provision of tourism services on farms</b>		
Description of the measure with an indicative scope	The measure involves investing in farm and hospitality equipment and amenities such as furniture and tools for tasting rooms and lodging, gardens, etc. The implementation model implies that investments will be co-financed according to a ratio determined by both the available budget and the specific circumstances.		
Key strategic projects	INVESTMENTS IN THE DEVELOPMENT OF RURAL TOURISM SUPPORT TO SELF-EMPLOYMENT IN RURAL AREAS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	-Amount of invested funds; -Number of registered agritourism service providers.	BAM 0 1 registered provider	BAM 250,000 BAM 50,000 per producer 5 registered providers
The measure's developmental effect and contribution to the achievement of priorities	The development of agrotourism or the provision of rural tourism services at farms presents a significant opportunity for rural households, both small and large. By combining agriculture and tourism, these households can achieve positive effects such as increased total farm income, income security in the event of natural disasters, employment for family members and other workers and improved marketing of their own agricultural products. Additionally, giving preference or additional points to women and youth when allocating support helps achieve the social effect of the measure.		
Indicative financial projection and sources of funding	Amount: BAM 250,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Tourist Organization, rural households		
Target groups	Rural households		

Link to strategic goal	2. Improved quality of life in rural areas		
Priority	2.1. Support for the diversification of economic activities in rural areas		
Name of the measure	<b>2.1.2. Investing in the development of crafts and other supplementary activities in the rural settlements</b>		
Description of the measure with an indicative scope	Such activities may include: craft activities, direct sales, wood processing, rural tourism and other forms of rural entrepreneurship, marketing and brand development, , etc. Due to the presence of industry in Gacko, there are many people who have the knowledge and skills to create additional value using local resources or even leftover materials from other industries. These resources can be used to produce various products that can enhance the overall tourist offer in Gacko and create new job opportunities in the municipality's rural areas.		
Key strategic projects	INVESTMENTS IN THE DEVELOPMENT OF RURAL TOURISM SUPPORT TO SELF-EMPLOYMENT IN RURAL AREAS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	- Number of promotional activities.	1 event per year	5 events per year
The measure's developmental effect and contribution to the achievement of priorities	The primary impact of this measure is the creation of new, innovative and artistic job opportunities in rural areas. These opportunities can improve the social status and		

	income of participants and encourage women to remain in rural areas. Additionally, the development of craft activities can provide retired individuals with a means of staying active.
Indicative financial projection and sources of funding	Amount: BAM 50,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds
Period of implementation of the measure	2023 – 2027
The institution responsible for coordinating the implementation of the measure	Gacko Municipality
The measure to be implemented by	Gacko Municipality, Tourist Organization
Target groups	All residents of rural areas

Link to strategic goal	2. Improved quality of life in rural areas		
Priority	2.1. Support for the diversification of economic activities in rural areas		
Name of the measure	<b>2.1.3. Protection of traditional autochthonous products</b>		
Description of the measure with an indicative scope	This measure would involve co-financing the process of obtaining geographical indication protection. This includes the costs associated with preparing a feasibility study for protection and conducting analyses to demonstrate the unique characteristics of the product in question.		
Key strategic projects	PROTECTION AND PROMOTION OF TRADITIONAL AUTOCHTHONOUS PRODUCTS INVESTMENTS IN THE DEVELOPMENT OF RURAL TOURISM		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Number and type of GI protected products.	0 products with protected GI	1 GI protected product
The measure's developmental effect and contribution to the achievement of priorities	In agriculture and the food industry today, market standards are focused on food security, food safety and the implementation of good agricultural practices. Autochthonous and traditionally produced products are in high demand, particularly in well-developed tourist markets such as Gacko. However, to meet market requirements, the quality of traditional products must be confirmed by a trademark that guarantees their geographical indication, tradition, quality, and production safety. This is why quality marks awarded by organizations such as the Food Safety Agency (for protecting geographical indication, traditional reputation or product recipe), the Institute for Intellectual Property (for protecting product names) and other certification bodies (depending on the type of protection) have been established. The intended effect is to 'Improve the marketability and recognition of agricultural products and increase income for agricultural producers.' Gatacko govodo, gata;ki kajmak but also special culinary specialties from Gacko, such as Gatačka cicvara with honey, boiled lamb, etc. can be protected in this way.		
Indicative financial projection and sources of funding	Amount: BAM 25,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Association of Agricultural Producers, Agricultural Cooperative		
Target groups	producers of traditional autochthonous products (kajmak, honey products, meat, medicinal herbs)		

Link to strategic goal	2. Improved quality of life in rural areas		
Priority	2.2. Improvement of rural infrastructure and availability of public/social services		
Name of the measure	<b>2.2.1. Support for improving the availability of public services (education, healthcare, social protection)</b>		
Description of the measure with an indicative scope	A well-balanced rural and territorial development can be achieved through various activities that aim to reduce rural depopulation and prevent the disappearance of rural communities. Some potential project activities include improving school equipment, furnishing kindergartens and implementing social protection projects for vulnerable rural populations such as the elderly and those living alone. Smart villages of EU or the Digital Village Initiative (DVI) of FAO can be a way to improve access to services through the use of smart solutions. These solutions are not limited to information technologies but can also include other initiatives to address the challenges faced by the local population. Instead of relying solely on the government, residents can organize themselves and, with support from state or local budgets, create products that improve their quality of life. Examples of such products include mobile clinics, distance learning programmes, digital platforms for promoting cultural heritage or optimizing transport, social enterprises, village shops, community hubs, etc.		
Key strategic projects			
Indicators for measuring the success of the measure	Indicators	Baseline	Target

	-Amount of invested funds per year; - Number of public service users;	BAM 10,000 All residents	BAM 25,000 All residents
The measure's developmental effect and contribution to the achievement of priorities	Improved quality of life for residents in rural areas, increased access to public services. This can be achieved by aligning public service projects with the needs of rural youth and women and conducting environmental impact studies during infrastructure project implementation. These efforts can help achieve a positive overall social effect.		
Indicative financial projection and sources of funding	Amount: BAM 250,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality		
Target groups	All residents of rural areas		

Link to strategic goal	2. Improved quality of life in rural areas		
Priority	2.2. Improvement of rural infrastructure and public services in rural areas		
Name of the measure	<b>2.2.2. Support for improving physical infrastructure in rural areas</b>		
Description of the measure with an indicative scope	The measure involves investments in infrastructure projects of varying sizes, which the municipality typically carries out in partnership with relevant ministries or international organizations. In some instances, residents may be asked to contribute to the financing of public infrastructure. The most crucial infrastructure project for the municipality of Gacko is the construction of a water wellfield. To achieve this, it is necessary to first prepare project documentation and present it to potential investors, with the aim of establishing strategic partnerships to address this issue.		
Key strategic projects			
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	construction of a water wellfield	no construction exists	wellfield constructed
The measure's developmental effect and contribution to the achievement of priorities	Improved quality of life for residents in rural areas, increased access to public services. This can be achieved by aligning public service projects with the needs of rural youth and women and conducting environmental impact studies during infrastructure project implementation. These efforts can help achieve a positive overall social effect.		
Indicative financial projection and sources of funding	Amount: BAM 250,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality		
Target groups	All residents of rural areas		

Link to strategic goal	3. Responsible management of natural resources in rural areas		
Priority	3.1. Protection of natural resources		
Name of the measure	<b>3.1.1. Soil protection from various forms of degradation</b>		
Description of the measure with an indicative scope	After evaluating the condition of agricultural land, as and where needed, it may be necessary to implement measures to protect it from various forms of degradation, including damage from internal and external waters and pollution from organic and inorganic substances. Soil fertility should be monitored through periodic checks on selected samples, with remediation measures implemented based on the findings of professional services. The responsibility for implementing these measures falls on relevant stakeholders: agricultural producers, local government and the relevant ministry. Establishing a monitoring system will enable better management of this resource and its more efficient use for the benefit of current and future generations.		
Key strategic projects	DEVELOPMENT OF RURAL TOURISM, DEVELOPMENT OF VALUE CHAINS, PROTECTION AND PROMOTION OF TRADITIONAL AUTOCHTHONOUS PRODUCTS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Degradation monitoring	No monitoring	Established monitoring
The measure's developmental effect and contribution to the achievement of priorities	Increased scope of agricultural land use; Improved quality of agricultural land and reduction in surfaces under the influence of degradation factors		
Indicative financial projection and sources of funding	Amount: BAM 80,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		

The measure to be implemented by	Gacko Municipality
Target groups	All residents of rural areas

Link to strategic goal	3. Responsible management of natural resources in rural areas		
Priority	3.1. Protection of natural resources		
Name of the measure	<b>3.1.2. Activate the agricultural land market</b>		
Description of the measure with an indicative scope	To establish a market for agricultural land, it is first necessary to take stock of the current situation: the ownership structure, degree of use and the needs of the owners. A database of supply and demand for agricultural land should also be created. At the same time, competent institutions must enforce the legal obligations of owners regarding the maintenance of agricultural land.		
Key strategic projects	DEVELOPMENT OF RURAL TOURISM, DEVELOPMENT OF VALUE CHAINS, START-UP PACKAGES FOR SELF-EMPLOYMENT IN RURAL AREAS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	Established database on agricultural land	No database in place	Established database
The measure's developmental effect and contribution to the achievement of priorities	Increased scope of agricultural land use;		
Indicative financial projection and sources of funding	Amount: BAM 10,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (FAO, IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality		
Target groups	All residents of rural areas		

Link to strategic goal	3. Responsible management of natural resources in rural areas		
Priority	3.1. Protection of natural resources		
Name of the measure	<b>3.1.3. Support for organic production system and the application of the IPM approach</b>		
Description of the measure with an indicative scope	The municipality of Gacko has excellent natural conditions for the development of organic production, including a well-preserved agricultural environment, untouched land, and unpolluted water. These are significant prerequisites for this type of production. Additionally, there is a growing consumer awareness of the importance of a healthy diet and an increasing demand for natural, organically grown agri-food products. Given the rising importance of organic production and demand for organic products, it is necessary to create a sustainable system for such production. IFOAM's <sup>30</sup> principles specifically mention the use of autochthonous animal breeds and plant species on organic farms, where Gatačko cattle can be a good example. Financial support will be provided to agricultural producers and processors who wish to become organic producers to help them cover certification costs and small investments.		
Key strategic projects	DEVELOPMENT OF VALUE CHAINS, START-UP PACKAGES FOR SELF-EMPLOYMENT IN RURAL AREAS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	- Financial support provided for producers applying IPM or having organic production; - Number of certificates awarded; - Number of organic certified products;	No support 0 certificates 0 products with organic certificate	Financial support introduced 5 certificates awarded 5 certified producers
The measure's developmental effect and contribution to the achievement of priorities	Direct benefit for the environment..		
Indicative financial projection and sources of funding	Amount: BAM 40,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Ministry of Agriculture, Forestry and Water Management		
Target groups	Agricultural producers registered in the Register of Agricultural Holdings, members of the Association of Breeders of Gatačko cattle		

<sup>30</sup> International Federation of Organic Agriculture Movements (<https://www.ifoam.bio/>)

Link to strategic goal	3. Responsible management of natural resources in rural areas		
Priority	3.1. Protection of natural resources		
Name of the measure	<b>3.1.4. Identification and protection of genetic resources</b>		
Description of the measure with an indicative scope	Endangered plant species and animal breeds should be protected and preserved through special <i>in situ</i> monitoring and protection programmes. The habitats of wild animals and plants should be safeguarded through agricultural practices that ensure their protection. Research on the characterization and inventory of original and protected domestic animal breeds should be continued by combining funds from different sources. This includes maintaining a domestic plant gene bank and establishing a domestic animal gene bank. Cooperation between the municipality, relevant ministry, RS Institute for Genetic Resources, and other institutions is necessary for implementing this measure. Gacko has already entered these protection programmes, with Gatačko cattle and Herzegovinian pramenka protected under the Animal Husbandry Law.		
Key strategic projects	PROTECTION AND PROMOTION OF TRADITIONAL AUTOCHTHONOUS PRODUCTS		
Indicators for measuring the success of the measure	Indicators	Baseline	Target
	The number of identified plant and animal species/breeds included in the protection programme	0 species	1 animal species protected
The measure's developmental effect and contribution to the achievement of priorities	Protected gene pool of plant and animal species from the municipality of Gacko		
Indicative financial projection and sources of funding	Amount: BAM 100,000 Source: municipal budget, RS Agrarian Budget, IPA funds (EU4Agri), other international organizations (IFAD, USAID, World Bank, etc.), agricultural producers' own funds		
Period of implementation of the measure	2023 – 2027		
The institution responsible for coordinating the implementation of the measure	Gacko Municipality		
The measure to be implemented by	Gacko Municipality, Ministry of Education and Culture, Institute for Genetic Resources		
Target groups	All residents of rural areas		

## Annex 2. Strategy evaluation plan

**Table 58. Detailed overview of measures**

Name of the strategic document	Agriculture and Rural Development Strategy of the Municipality of Gacko 2023-2027
Evaluation type designation	Preparation of the Annual Report on the Implementation of the Development Strategy, its adoption and release
Evaluation scope and objective	monitoring of the implementation of measures broken down by goals and priorities evaluation of the effects of implementation of measures broken down by goals and priorities
A summary of the intended evaluation criteria with questions, and methods planned to be used in the evaluation process	Criteria: initial and final indicator values broken down by measures, goals and priorities Methods: primary sources of data: surveys and interviews secondary sources of data obtained from official institutions upon request
List of available and intended sources of data for the implementation of evaluation	Official reports of municipal departments, public institutions and international organizations RS Institute of Statistics RS Ministry of Agriculture, Forestry and Water Management Agency for Intermediary, IT and Financial Services
Evaluation time frame	- calendar year for annual reports, - 2023-2025 for mid-term evaluation - 2027 for final evaluation
Indicative budget for the evaluation process (costs of external evaluation experts and, as necessary, costs of obtaining necessary data)	- BAM 2,000 annually

## Annex 3. Analyses of Gatački Kajmak Value Chain

### 1. Introduction

In Gacko municipality Gatački Kajmak has a long tradition of preparation. It is prepared mainly from the milk of autochthonous Gacko cattle, which is high in milk fat and has a specific aroma. In some cases, sheep milk is added in the process of the preparation, however this is very rare and not a rule. The influence of the climate and geological characteristics are also significant for the production of Gatački kajmak. In comparison with similar products, Gatački Kajmak is consumed mostly fresh or as part of some meals (cicvara, pies etc). It should be kept refrigerated and has a shelf life up to one year.

## 2. Short overview of the current situation

Estimated annual production of Gatački Kajmak in the municipality is around 8 tons worth of about 200.000 BAM to 240.000 BAM. It is produced by individual households mostly for home consumption and sales to local buyers, tourists or to buyers out of the municipality (e.g. former habitants of Gacko). Few households have sales agreements with the hospitality sector of the municipality.

## 3. Natural conditions

Natural conditions are very important for the production of Gatački kajmak. The combination of the mountain-Mediterranean climate and the karst soil create a specific biodiversity of the pastures, whose aroma and nutritional properties are transferred to the kajmak via milk. In terms of altitude, Gacko is the highest mountain part of Herzegovina, with an average altitude above 1.000 m. There are currently large area of pastures, which are used for grazing the cattle. Pastures are municipal property and all livestock farmers have access free of charge to them (communal grazing). An additional impetus to the development of this value chain is the idea of protecting the northern part of the municipality as a special natural reserve, where the largest quantities of this kajmak are produced.

## 4. Value chain actors

There are several **important actors** in this value chain.

On the first place are **milk producers** (inputs suppliers) of Gacko cattle. There are around 300 heads of the Gacko cattle in pure breed, and about 2.000<sup>31</sup> in type (mixed variants with Alpine Grey or Oberintall cattle). Men are mostly involved in moving animals to pastures and feeding them when in barns, yet women are mostly involved in milking the cows. Generally herds are between 5 and 20 dairy heads. More than 90 percent of the farms are in these limits. Milk and kajmak production is done within the same households.

The value chain on the second level involves **kajmak producers themselves**. It is estimated that there are more than 300 households involved in the production of Gatački kajmak. Within the households, it is the women who bear the knowledge of Gatački Kajmak preparation and are directly involved in its production from raw milk coming from their own farms. Most of the producers are small scale producers (30 – 60 kg annually), mostly producing for home consumption. There are few bigger producers (150 to 250 kg annually) who sell to hotels and restaurants in the municipality. Those producers who sell Gatački kajmak sell it by kilo in glass jars or plastic cups of different shape and size. Raw milk is almost always from our own production.

In August 2021, some Gatački kajmak producers joined into the "*Association of Gatački Kajmak Producers*". Today, the Association has 24 members (100 percent women). The main goals of the Association are: improvement of the life quality of women living in rural regions, obtaining the designation of the geographical origin for Gatački kajmak and improvement of the promotion and sale

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<sup>31</sup> [Program for the Protection of Genetic Resources in the Livestock farming \(Official Gazzettee of the RS: 87/20\)](#)

of this product. As part of the idea, they work on improving the traceability in the supply chain of Gatački kajmak. The association's special mission is to preserve the tradition of Kajmak production in this area, as well as the entire value chain associated with this product. In this way, immediate support will be provided in the preservation of life in the countryside.

**Distributors:** Actors involved in regular distribution of Gatački kajmak are women kajmak producers or their family members, who deliver the product to the buyers or selling points. There are no institutional actors involved in the distribution of Gatački kajmak.

***Actors supporting the development of Gatački kajmak value chain:***

The *General agricultural cooperative "Gacko"* was founded in 2006. The activities of the Cooperative are focused on facilitating agricultural producers' access to financial incentives awarded by the Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska. The main goal of the Cooperative is the rural development with a special emphasis on food production, the preservation of indigenous breeds (livestock) and the protection of indigenous products (cheese and Kajmak). The cooperative was founded by 20 agricultural producers, and today there are 84 cooperative members. It supported the establishment of the "*Association of Gatački Kajmak Producers*" and helps them in reaching their rights.

The "*Association of Breeders of Gacko cattle*" was founded in 2020, with the aim to preserve and protect this breed of cattle. So far, it includes about 30 agricultural producers from Gacko municipality. The owner of farms are generally men. The goal of the association is to unite agricultural producers who raise this breed, work on its genotyping, research, protection, as well as raising public awareness in order to save the breed from extinction and create preconditions for growing a stable population in the area of Gacko and Herzegovina. At the level of the Republic of Srpska, Gacko cattle is protected by the Law on Livestock (*Official Gazette of the RS: 44/15 and 63/21*) and the Program for the Protection of Genetic Resources in the Livestock farming (*Official Gazette of the RS: 87/20*)<sup>32</sup>.

*Institute for Genetic Resources (IGR) and Faculty of Agriculture, University of Banja Luka* are involved in the protection of the Gacko cattle genome and are supporting the application for the protection of Geographical origin of the Gatački Kajmak. Also in future, their role from the scientific and educative side will be crucial in sustainability of this value chain.

*Tourist organization of Gacko Municipality.* Their role is to disseminate information about Gatački Kajmak and the Gacko cattle as an integral part of their touristic offer.

## **5. Demand, marketing and distribution channels**

Although Gatački kajmak has a long history of production, there is no research or data regarding its marketing. But according to the data we received from the women involved in this production, there are no problems with sales of Gatački kajmak and the demand is currently greater than the supply. The biggest demand is from former residents of Gacko who now live in other cities and want to feel that taste that binds them to their birthplace. Also, foreign tourists who come to these parts are eager to consume this product with homemade bread, potatoes, or as ingredient in Cicvara (a local meal, made from maize and/or wheat flour and with Kajmak and cheese).

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<sup>32</sup> <https://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mps/%D0%B1.%D0%BA%D0%B5%D1%86%D0%BC%D0%B0%D0%BD/Documents/Program%20geneti%C4%8Dkih%20resursa.pdf>

Accordingly, there are three main distribution channels for Gatački Kajmak:

a) Local level: Sales at farms, markets and catering facilities in the municipality. Most of the sales (95 percent) is sold on the farm gate.

b) Tourist facilities: Gatački kajmak is included in the offer of the Herzegovina house as part of the tourist offer of the Herzegovina region. In cooperation with the tourism organizations of the region, prospectus materials were created that highlight this product as part of the gastronomic offer of this region. About 2-3 percent of total sales is sold through this channel.

c) At regional agricultural markets and/or tourist events in the region of Herzegovina (Trebinje, Mostar, Tjentište, Foča). At these events, mostly women, members of the association present and sell their products. About 2-3 percent of total sales is sold through this channel.

## 6. Competition

Given the uniqueness of the product, but also the lack of similar products on the market, it cannot be said that there are any direct competitors. However, the Pađeni dairy from the neighbouring municipality has a well-developed production of kajmak and some other traditional products from Eastern Herzegovina. They have a well-recognizable, trusted brand name and their products are available in most of the local shops and in the farmers' markets. Their produce is labelled as produced in accordance with food safety requirements. So, they can affect the competitiveness of Gatački kajmak to some extent. This is partly as the lack of awareness among consumer, also those are much more often available on the market (in shops, trade chains etc), so they are easier to buy. However, their Kajmak does not have a strict information about geographical origin, as this Dairy collect milk from wider region (from Bijeljina to Čapljina).

The price of Pađeni dairy kajmak is from 24 to 27 BAM per kilo, while the retail price of Gatački kajmak is from 25 to 30 BAM/kg.

## 7. Value added and opportunities for diversification

Table 1. Direct costs for the production of 1 kg of Gatački kajmak are:

Item	Unit	Quantity	Price per unit (BAM)	Value (BAM)
		(1)	(2)	(1)*(2)
Milk	litre	14,5 (12-17)	1	14,5
Salt	%	2%	1,2	0,024
Labour <sup>a</sup>	per hour	1,5	4	6
Packaging	1 kg jar or plastic dish	1	0,5	0,5
Utilities (electricity)	lumpsum			0,2
kitchenware and cleaning chemicals	lumpsum			0,2
Sheep or goat bag/skin (in average 45 kg/bag, price is 25 BAM) <sup>b</sup>	piece	1/45	25	0,55
<b>Direct costs for 1 kg</b>				21,974
Overhead (per kg)				0,2
<b>Total costs per kg</b>				22,174

a- Estimated required time for production of one kg of product

- b- Some of the producers are buying sheep bags, and some has their own. However, in this calculation we included market price. This means well prepared sheep bag. Thus, the production of the Gatački kajmak directly affects profitability of sheep breeders.

The production of Kajmak is a domestic activity, so the added value is essentially the labour (time) spent in the preparation of this product. As mentioned, above women producers are usually also the main distributors along with their family members. Much of the sale is on the farm gate, which spares women from spending time on travel.

Table 2. Value added for Gatački kajmak

Item	Producer	Sale price/Retailers
Price (BAM/kg)	22,174	25 - 30
Direct costs (BAM/kg)	21,974	N/A
Gross margin (BAM/kg)	2,8 – 7,8	N/A
Gross margin (as % of price)	23	N/A

## 8. Production technology of Gatački kajmak

Gatački kajmak has a unique production technology not known in other regions. After milking cows, the milk is strained and boiled, and then poured into wooden containers (possibly into enamelled dishes), where it cools, and the cream separates from the surface of the milk. Depending on the quality of the milk and the temperature of the room where the creaming takes place, this process lasts from 24 to 48 hours.

The cream is then removed from the milk and transferred to a wooden vat, and the scum is collected in a separate vessel. After each addition of cream to the wooden vat, the surface of the layer about 10 cm is salted, so that the salt content in the cream is up to three percent.

The Kajmak (cream) ripens in the wooden vat for about 20 days, with the fact that after two days an opening is released at the bottom of the vat through which the milk is squeezed. When it reaches the appropriate maturity, it is transferred to the bag from sheep skin, compacted well, poured with butter and the bag is tied well. The cream is left to mature in the bag for at least a month. During this period, the bag is turned every day and the fatty scum is removed from it with a spoon. Gatački kajmak in a bag can be stored for up to a year in airy, cold rooms. The seasonality of production has not been expressed.

Usually it takes around 12-17 liters of milk for 1 kg of Gatački kajmak (depending on the milk fat content).

## 9. Needs assessment for women farmers and entrepreneurs

The development of kaimak value chain is particularly important entry point for improving women's economic income, the preservation rural life, tradition and culture and must be the subject of support from different stakeholders in charge for rural development, including international donors.

In the assessment of this value chain, a form for the proposal of a short value chain according to FAO 2021 was used. This form was submitted electronically to the representatives of the municipal Working Group in charge for the Local agricultural and rural development program preparation, and thus the Association of Gatački Kajmak producers. The form for evaluation or selection of value chains consisted of 11 questions, of which two are general and nine questions are divided into three groups of questions, namely: a) market aspect of the value chain, b) social aspect (including political and institutional) and c) impact on the environment. Each question was answered textually, and the feasibility of that segment of the value chain was additionally evaluated. Additionally, on workshop the FAO team spoke to

several representatives of this association, including the president and women involved in administration jobs in association.

The biggest problems faced by majority of women are solving social and health insurance issues and business registration – or how to be able to regularly sell their products on the market (to shops, restaurants etc.). The food safety standards are not well implemented among all members, and producers of Gacko Kajmak are well aware of it.

In order to regulate women's health and social insurance, it is necessary to additionally promote the possibility of registration as an independent entrepreneur. This enables a higher level of utilization of incentives for the development of agriculture, as well as additional powers for women owners. The volume of production and sale of cream or other products should certainly be well planned here. An additional option can be the registration of the household on the wife, if the husband has other sources of income.

Food safety standards. Until recently, the same standards were valid for small producers as well as for large ones, what limited the development of small businesses. This issue is resolved through Rule book on special conditions for objects in business with food of animal origin approved under the special conditions (Official gazette of the Republic of Srpska, no. 108/22). However, the members of the association are still not well informed about it.

## **10. Challenges and opportunities for developing Gatački kajmak value chain**

### *Challenges*

Food safety regulations and their application by the producers: From November 2022, the registration and entry to the market will be facilitated for those producers who create products of animal origin on their farms<sup>33</sup>. The Rulebook refers to producers who directly sell or deliver to the end consumer, that is, to local retail stores that directly supply end consumers with primary products in certain quantities. Cooperation of the association and its members with relevant authorities, thus is needed, for successful implementation of this Rulebook among their producers. With the adoption of this Rulebook, it became mandatory for producers who produce on farms and enter the market to register and apply the standards of hygiene and quality prescribed by the Rulebook, which was not the case until now and all production and sales took place in the gray zone.

Uniform quality of production: The association of producers has adopted a specific guideline on the procedures in the production of this type of Kajmak, although there are still certain differences between different producers. Of course, this is conditioned by the diet of the animals, altitude, position, places where the process of kajmak formation occurs, etc. It is perhaps the management that is the special advantage of this kajmak, and provides a certain difference from the industrialization of food production. However, the association should give precise information to public about possible differences of taste of the product among different producers.

Absence of the brand name related to products from Gacko cattle. This product has long been known under this name. But respecting the fact that Bosnia and Herzegovina has only recently (2018) adopted

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<sup>33</sup> [Rule book on special conditions for objects in business with food of animal origin approved under the special conditions \(Official gazette of the Republic of Srpska, no. 108/22\).](#)

the first regulations related to geographical origin it was only in 2022 that the process of protecting the geographical origin for Gatački Kajmak began.

Aging population and emigration of young people. More and more young people are leaving these areas, which directly affects the number of working-age population. Therefore, this initiative regarding geographical protection and generally increasing activities in rural areas can be a good tool in improving the content of life in the countryside and motivating young people to stay there.

### *Opportunities*

Possibility for a premium price as a protected GI product: Gatački kajmak is in the process of protecting its geographical origin. Protection of the geographical origin can significantly help in product promotion and sale, increasing the number of the social events in the countryside, but also in providing additional sources of finance for the development of this value chain.

Protected genetic source: At the level of the Republic of Srpska, Gacko cattle is protected by the Law on Livestock and the Program for the Protection of Genetic Resources in the Livestock farming.

Possibility to raise awareness and recognition of Gatački kajmak in BiH via tourism: That area is also a more active touristic part of the municipality, and this move would bring together several different elements of importance for the rural development of the municipality. Gacko has significant tourist resources and a relatively good position (the road to Trebinje, the sea, and the Tjentište National Park is nearby).

Increasing the number of social events in rural areas. Increasing the number of social events in the village or related to the village in the organizing municipality, where Kajmak producers will be present, can help in reaching a larger number of people and thus better promotion of the Gatački Kajmak. One of the opportunities is regional Livestock exhibition in Gacko, where Kajmak producers are not present at all. This year will be 47th exhibition.

Income generation and business development. Agriculture accounts for about 50 percent of the total farm income in the Gacko area, with the rest of the income being generated from employment in the state sector (Hydroelectric Power Plant, municipality, etc.) as well as pension income. The production of Kajmak represents the addition of value to income from agriculture, increases the total income of the household, economically empowers the female members of the household and provides the opportunity to register a business activity in production and sales of branded cream.

## **11. Conclusions and recommendation**

Gatački kajmak as a food product that has all the prerequisites for creating a sustainable and competitive product with added value, but it is also necessary to undertake the following:

- Stronger promotion among tourist in Gacko and region, and among former Gacko inhabitants that now lives in other cities and countries, of Gacko cattle as a precursor to the creation of the gatački kajmak brand (construction of a statue or other piece of art that will be associated with this product somewhere in a visited place in Gacko Municipality). Promotion should be done through scientifically based facts together with IGR and other relevant stakeholders.
- To modernize the livestock exhibition in Gacko with the inclusion of women's and traditional crafts in general. In this context, it is necessary to create a better exhibition space, with traditional elements, in order to create the prerequisites for diversifying visitors and increasing their number. This can be a mobile space, and it can also be for example used at the regional Livestock exhibition in Gacko which takes place in August every year.

- To enrich the chain through the offer of meat products from this breed of cattle.
- Motivate additionally all stakeholders of the value chain through financial, professional and social support to take part in this value chain.
- Unify production among producers and modernize production. Modernization implies the use of e.g. devices for maintaining the temperature in the cream ripening rooms, use of renewable energy sources (solar panels), use of devices for quick detection of the presence of some pathogens, mini laboratories and the like.
- Promotion and marketing improvement of Gatački Kajmak and Gacko cattle.
- Alignment of production with relevant regulations that prescribe food safety and business.

## **Annex 4. Analysis of the honey production value chain in Gacko**

### **1.Introduction**

The production of honey and other bee products can be said to be one of the traditional agricultural productions in Gacko. The basis of production is based on honey production. In a smaller number of cases, other beekeeping products are produced. Some producers also produce honey brandy. However, it is mainly about terrain that is "stingy" with grazing, and yields are limited.

### **2.A brief overview of the current situation**

There are 65 honey producers in the Municipality, most of whom are members of the Association and are registered, with a total of 3,300 bee colonies and with an average annual production of 25,000 kg of honey, i.e. about 7.5-8 kg/bee colonies, worth about 500,000.00 BAM. The good side of beekeeping in Gacko is the very active Association of Beekeepers, which often organizes training and other types of support for its members, and participates in various domestic and international initiatives and projects.

### **3.Natural conditions**

According to the data of the Association of Beekeepers "Gacko", the whole region of Herzegovina has hundreds of species of medicinal and aromatic plants suitable for honey production and perhaps the best composition of grasses in this part of Europe for honey bees. The situation is similar in Gacko. On the other hand, the problem that occurs in Gacko is the air pollution produced by TE "Gacko", which has not yet been solved through complete filtration of the output gases. Also, the large areas left after mining the ore are unused, and maybe they can be used as areas where honey plants will be sown.

A positive idea that is being discussed at the municipal level is the possibility of protecting the northern part of the municipality as a special natural reserve. Due to the large geography of the area itself and the number of different micro-climatic conditions, it is difficult to monitor the honey production of all available crops, especially for beekeepers who do not have their own transport. There are no significant areas of industrial agricultural crops in the area of Gacko, and fruit production is not developed either. Therefore, it can be said that the basis of bee grazing is natural sources of food (meadow and forest plants). Also, this fact is good from the point of view of bee protection, because there is no significant use of plant protection agents, and it can be said that there is no risk, that is, the risk of that type of residue remaining in honey is completely reduced.

### **4.Value chain participants**

There are several important players in this value chain.

In the first place are the producers, whose activities are presented through the Association of Beekeepers "Gacko". This Association was founded in the middle of 2002. It currently has around 65 members registered in the competent ministry. In cooperation with international funds, the association participated in the implementation of significant projects. It gathers all registered beekeepers in Gack and is very active. The average beekeeper in Gacko has around 50 beehives, so it can be said that most of the beehives meet the conditions for receiving incentives from the Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska.

Participants supporting the development of the beekeeping value chain in Gacko:

General agricultural cooperative "Gacko" was founded in 2006. The Cooperative's activities are aimed at enabling agricultural producers to access financial incentives awarded by the Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska. The main goal of the Cooperative is rural development with a special emphasis on food production, preservation of indigenous breeds (cattle) and protection of indigenous products (cheese and cream). The cooperative was founded by 20 agricultural producers, and today there are 84 cooperative members. The cooperative also provides support in the work of the Association of Beekeepers "Gacko".

Tourist organization of Gacko municipality. Their role is to promote beekeeping products produced in the Gack area. As part of the project "Typical products as a driving force for the development of rural areas - TERRA - Routes of honey through Durmitor and Herzegovina", a house was built for the sale of beekeeping products from Gack, which is located on the main road leading to Trebinje, Foča and Mostar. It is managed by the tourist organization Gacko. However, this point of sale is not in operation and it is planned to move it to a better location.

*Distributors of inputs:* production and sale of beekeeping equipment, cakes, wax bases, tools, equipment for spinning and processing honey, centrifuges and equipment for refining honey, literature and packaging for honey.

## **5.Demand, marketing and distribution channels**

When it comes to current sales channels, currently most of the honey is sold on farms. These are mostly well-known customers, and quite often a part of the product is pre-arranged or sold. A smaller portion is sold at events or to "random" customers.

However, beekeeping is a specific form of agriculture, which implies a high level of independence of beekeepers, as is often the case in the market. High demand, durability and a wide range of final products are the basic conditions for this. However, in recent years, beekeepers have less and less time to deal with the market. Also, the families of beekeepers are no longer large, so farms rarely have the capacity to "charge" some family members for production, and others for sales. Namely, climate changes, which intensified nomadic beekeeping, increased the volume of work operations, and thus deprived beekeepers of time for promotional and marketing activities. At the same time, as a result of weather conditions, the absence of the most important honey pastures is evident, whereby the volume of bee products, and thus the income for beekeepers, has drastically decreased in recent years.

Therefore, one of the sales models can be sales through a joint distributor, who will have the role of purchasing inputs, with possible credit support or the possibility for the beekeeper to pay for what he has purchased through the product he markets. In this way, on the one hand, the market is offered standardized honey and other bee products, of known origin and with some principle of traceability. On the other hand, product placement is facilitated and the beekeeper is given time to fully devote himself to his production. Nevertheless, it is recommended that the beekeeper remains involved in

communication with the market, both for information and market requirements, and for monitoring the development of prices and inputs and products.

## 6. Competitors

It should be emphasized that Herzegovinian honey has a good reputation and, thanks to its peculiarities, it already has some additional value compared to competitors from the territory of Bosnia or other countries in the surrounding area and beyond, whose honey is available on our market. According to available research, the entire region of Herzegovina has hundreds of species of medicinal and aromatic plants suitable for honey production and perhaps the best composition of grasses in this part of Europe for honey bees. Most often, that, Herzegovinian honey, is at least 10, and even up to 25 percent more expensive compared to competitors from, say, Bosnia or Serbia. But despite the higher price, the same one is most often chosen. However, it should be emphasized that there is adulterated honey on the market or honey with illegal additives, which is sold under the name of Herzegovinian. It sends a bad image to current and potential customers. Therefore, the beekeepers themselves, who work according to the law, must help the competent authorities in solving this illegal market. The production of honey is well regulated by the Law on Beekeeping of the Republic of Srpska, and there are legal elements and measures that can limit or completely prohibit the appearance of such honey on the market.

## 7. Added value and opportunities for diversification

The following table presents the profit of beekeepers in Gack based on the reported average production of honey per hive and calculated for 50 bee colonies.

Table 1. profitability of honey and propolis production

Income	Quantity	Unit	Price per unit	Total BAM
Honey	7,0	kg	22,5	7.875,0
Propolis	0,1	kg	100,0	500,0
<b>Total income</b>				<b>8.375,0</b>
<b>Variable costs</b>				
Sugar:				20
Sugar bread:				14
Oxalic acid:				5
Packing:				7
Depreciation per hive (including equipment):				12,5
Other costs (including branding):				10
<b>Total – variable costs</b>				<b>3.425,0</b>
<b>Profit</b>				<b>4.950,0</b>
<b>Costs per unit of production/kg</b>				9,8

As can be seen from the above table, with 50 beehives from production, a beekeeper can earn approx. 4 average net salaries in Srpska or only 2.7 monthly gross salaries (RZS, January 2023, net salary 1217 BAM, gross, 1845 BAM), which indicates either the need to increase the number of hives or additional employment.

Although most of the produced honey is sold at the doorstep, i.e. sold by the producer himself, a part of the honey also goes through third parties. In this case, the reseller is given a certain discount on the price, which usually amounts to 10 - 12 percent.

Based on that, the calculation presented in table number 2 was calculated:

Table 2. Added value for honey and propolis

Item	Producer	Selling price/ Distributor
Price (KM/kg)	20	25
Direct costs (KM/kg)	9,8	N/A
Gross margin (KM/kg)	12,7	5
Gross margin ( % of the price)	63,57	36,43
Share in total value (%)	80,00	20,00

It has already been discussed before that beekeepers in Gacko sell honey through other sales channels to a lesser extent, and the calculation presented in table 2 is more indicative.

## 8.Honey production and technology

As in other areas in Republika Srpska, i.e. Bosnia and Herzegovina, between 80 and 90 percent of hives are LR type. In the structure of this value chain, over 80 percent is still honey, although beekeeping in our region, including Gacko, has the potential for a wider range of products, including: pollen, royal jelly, propolis, wax, queens and swarms, and apitherapy, i.e. api chambers.

In this value chain, we can distinguish 4 levels of technologies used during product formation. And those are:

1. Technologies within primary production. It is about the production of honey, propolis and pollen, and then the spinning and packaging of honey and other products. This is the most common level of honey production currently developed in Gacko.
2. Higher production level technology. Production of royal jelly and bee venom and other products (based on bee products). They are partially used and it is to be expected that with the development of production, more will be in use.
3. Technologies in the production of semi-products - inputs of beekeeping production. Production of watch bases, beehives, protective means, wire for drowning watch bases and more. Underutilized and there is interest from local beekeepers in developing this production, primarily due to the sometimes questionable quality of inputs and certain ingredients in the hourly bases they receive, which affect the quality of honey and can endanger the health of users (paraffin).
4. Advanced technologies - includes weather stations, forecasting systems, means of transport and digital scales. Technologies that are available or partially available, but are not used enough in the Gack area, and certainly due to climate change and the increase in the need for pasture, they should be used more often.

## 9.Assessment of needs for women farmers and entrepreneurs

Women are generally poorly involved in this value chain. There is only a smaller number of women who are active in the same, most often within the farm, where they help male family members in their work. Women can be involved in the production of additional products from beekeeping, including cosmetics, and perhaps in the work of the "future" plant for processing wax and making watch bases.

When it comes to the development of entrepreneurship, the new rulebook on incentives for the development of agriculture and villages in the Republic of Srpska foresees higher limits of support for registered entrepreneurs, and this can be an additional stimulus for opening micro and small businesses

in rural areas. However, some training and education on business legislation will be required. Therefore, it would be good for the local administration to appoint an official or a service, which will be intended to support the improvement of entrepreneurship among women who are involved in honey production.

## **10. Challenges and opportunities for the development of the value chain of the fortune-telling cream**

### **Challenges**

Uniform production quality: When we talk about this, we most often think of mixed honey and its placement through retail chains. This issue remains debatable, primarily due to the still really high independence of honey producers in Gacko, and it can be said that the placement of honey is ensured on the one hand, and limited quantities on the other. Furthermore, the price in retail chains is usually lower compared to the price of honey sold on the farm, and this is also one of the reasons for the weaker motivation of beekeepers to join together in terms of unified honey processing and packaging under the same brand and joint appearance on the market.

Expanding the range of products: Expanding the range of products (royal jelly, pollen, propolis, bee venom, cosmetics) and services through apitherapy and apiturism on bee farms would provide many beekeepers with an additional source of income. However, certain investments are also necessary, as well as the involvement of other participants in this value chain, so that even before the investment and the start of production, i.e., the provision of services, the market is somehow familiar with the new offer, that is, to have information about whether the market is interested in these products and services.

Population aging and youth migration. More and more young people are leaving these areas, which directly affects the number of working-age population. In this regard, improving the income from beekeeping through either increasing the volume of production or the number of products, or both, could influence the increase in the interest of young people to stay in the countryside.

### ***Opportunities***

Development of tourism in the area. Selling products to tourists in smaller packages can generate more profit. In the wider region, the number of tourists has been increasing for the past few years (Trebinje, Mostar, Tjentište, Tara (rafting), Zelengora), which represents a good market for products that carry this potential of healthy food, such as honey products.

Recognizability of honey from Herzegovina. As already elaborated, honey from Herzegovina is recognizable and has its own market, and with additional promotion and possible protection of origin, it would be a really good opportunity to ensure stable sales.

## **11. Conclusions and recommendation**

Beekeeping production has certain prerequisites for development in this municipality, but it is necessary to improve some elements of production:

- It would be necessary to additionally strengthen smaller producers, so that they reach 30+ beehives, and so that they can also use incentives from the Republic level.
- One of the possibilities for the improvement of honey production in Gacko is the cultivation of the abandoned pits of the Mine and the Gacko thermal power plant and the sowing of honey-bearing species of flora.

- To support the procurement of means of transport for beekeepers, in order to ensure the arrival of grazing as much as possible.
- It is necessary to finish the investment in the production of beehive frames made of wax from the area of Gacko and surrounding municipalities. The holder of this activity can be an existing Cooperative or a private person. The construction of this plant can create new jobs for young people and women.
- Support the modernization of production through the acquisition and implementation of digital scales and the development and acquisition of weather forecasting systems.
- Support the expansion of the different products (pollen, royal jelly, propolis, wax, queens and swarms, and apitherapy or api chambers).

## REFERENCES

Bogdanov N. (2007): Small rural households in Serbia and rural non-farm economy, UNDP Serbia, Publication

Census 2013, Institute of Statistics of Bosnia and Hercegovina, [www.statistica.ba](http://www.statistica.ba)

Cities and Municipalities of Republika Srpska, Republika Srpska, Institute of Statistics, Banja Luka, 2021

DEMOGRAPHIC STATISTICS, 2021, Second, revised edition, Republika Srpska, Institute of Statistics, STATISTICAL BULLETIN, Banja Luka, 2021

ECONOMIC ACCOUNTS AND PRICES FOR AGRICULTURE, 2021, STATISTICAL BULLETIN, Republika Srpska, Institute of Statistics, Banja Luka, 2021

ECONOMIC ACCOUNTS AND PRICES FOR AGRICULTURE, Republika Srpska, Institute of Statistics, STATISTICAL BULLETIN, Banja Luka, 2022

Erbez M., Chládek G., Šarovská L., Walterová L. Erbez M., et al. (XXXX2007).: Exterior and Production Characteristics in Gacko Cattle Breed. [https://mnet.mendelu.cz/mendelnet08agro/files/articles/zoo\\_erbez.pdf](https://mnet.mendelu.cz/mendelnet08agro/files/articles/zoo_erbez.pdf)

GACKO MUNICIPALITY DEVELOPMENT STRATEGY 2022-2028. YEAR, GACKO MUNICIPALITY, FEBRUARY, 2021.

HOUSEHOLD BUDGET SURVEY, Republika Srpska, Institute of Statistics, Banja Luka, 2021

LIST OF POPULATION, HOUSEHOLDS AND DWELLINGS IN REPUBLIC OF SRPSKA IN 2013, CENSUS RESULTS, CITIES, MUNICIPALITIES, SETTLED PLACES, Republika Srpska, Institute of Statistics, Banja Luka, 2021

Local Environmental Action Plan of the Municipality of Gacko 2010 - 2015, Municipality of Gacko, 2015

Records of categorized objects, Ministry of Trade and Tourism of the Republic of Srpska, 2022

REGULATION ON STRATEGIC DOCUMENTS IN THE REPUBLIC OF SRPSKA, Official Gazette of the Republic of Srpska, No. 94/2021

REGULATIONS ON THE ALLOCATION OF SUBSIDY IN AGRICULTURE, REPUBLIC OF SERBIA, MUNICIPALITY G A C K O, MUNICIPAL HEAD, Gacko, 02.09.2021. years

SPATIAL PLAN OF GACKO MUNICIPALITY 2014 - 2034, URBIS CENTAR d.o.o. BANJALUKA, PLANNING, DESIGNING AND CONSULTING, Banja Luka, July, 2016. Year

STRATEGIC PLAN OF RURAL DEVELOPMENT OF BOSNIA AND HERZEGOVINA (2018-2021) - Framework document, Ministry of Foreign Trade and Economic Relations, Sarajevo, 2018 year

STRATEGY AND ACTION PLAN FOR BIODIVERSITY PROTECTION OF BOSNIA AND HERZEGOVINA (2015-2020), Operational Focal Point for the Global Environment Facility: Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, December 2014

STRATEGY FOR DEVELOPMENT OF AGRICULTURE AND RURAL AREAS REPUBLIC OF SRPSKA 2021–2027. Year, Government of Republic of Srpska Ministry of Agriculture, Forestry and Water Management, Republika Srpska, June, 2021

Structure of entrepreneurs by activities, UNIFORM INFORMATION SYSTEM FOR REGISTRATION OF BUSINESS ENTITIES, Municipality of Gacko, 2017-2022

The SDGs Framework in Bosnia and Herzegovina. December 2020. <https://www.undp.org/bosnia-herzegovina/publications/sdgs-framework-bosnia-and-herzegovina>

Vasko, Zeljko & Rokvić, Gordana. (2021). Economic valuation of grassland utilization improvement in the Western Balkans. SHS Web of Conferences. 95. 01002. 10.1051/shsconf/20219501002.